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# UNDERGRADUATE BULLETIN

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# ABOUT THE BULLETIN

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## Inquiries

### For questions regarding admission information, campus tours, and transfer of credits, contact:

Office of Admissions (<https://www.uakron.edu/admissions/undergraduate/>)  
The University of Akron  
Akron, OH, 44325-2001  
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Fax (330) 972-7022

### For questions regarding financial aid, scholarships, contact:

Office of Student Financial Aid (<https://www.uakron.edu/finaid/>)  
The University of Akron  
Akron, OH 44325-6211  
(330) 972-7032  
toll-free (800) 621-3847  
Fax (330) 972-7139

### For questions regarding Athletics (<https://www.uakron.edu/campus-life/athletics/>), contact:

Director of Athletics  
The University of Akron  
Akron, OH, 44325-5201.  
(330) 972-7080;

### For questions regarding registration, records, graduation, degree progress reporting, and scheduling, contact:

Office of the University Registrar (<https://www.uakron.edu/registrar/>)  
The University of Akron  
Akron, OH 44325-6208.  
(330) 972-8300.

### For questions regarding student advocacy and support, off-campus living and commuter resources, parents and family association, and financial wellness education, contact:

ZipAssist (<https://www.uakron.edu/zipassist/>)  
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Akron, OH 44325-6208.  
(330) 972-7272.

### For questions regarding Graduate study, contact:

Graduate School (<https://www.uakron.edu/gradsch/>)  
The University of Akron  
Akron, OH 44325-2101.  
(330) 972-7663.

The University switchboard number is (330) 972-7111.

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Higher Learning Commission  
Dr. Barbara Gellman-Danley, President  
230 S. LaSalle Street, Suite 7-500  
Chicago, IL 60604

800-621-7440

[www.hlcommission.org](http://www.hlcommission.org) (<http://www.hlcommission.org>)

For information on accreditation or to review copies of the accreditation documents, contact the

Executive Vice President/Chief Administrative Officer  
The University of Akron  
Buchtel Hall 106  
Akron, OH 44325-4703  
(330) 972-8584.

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### EEO/AA Office

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Akron, OH 44325-4709  
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### Title IX - Policy Information and Inquiries Concerning the Application of Title IX

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or

The United States Department of Education, Office of Civil Rights Policy  
Information on the Americans with Disabilities Act may be obtained from

ADA Coordinator

ASB 125C

Phone: (330) 972-5146

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# ACADEMIC CALENDAR

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The Official Academic Calendar is maintained by the Office of the University Registrar (<https://www.uakron.edu/registrar/>) and can be viewed at <https://www.uakron.edu/registrar/dates/acadcal.dot>.

A pdf of the Academic Calendar is also available: Download the pdf (<http://www.uakron.edu/registrar/docs/AcadCal.pdf>)

# IMPORTANT POLICIES

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## Intent to Enroll and New Student Orientation

<http://www.uakron.edu/nso/>  
330-972-2622  
[orientation@uakron.edu](mailto:orientation@uakron.edu)

The University of Akron requires students to submit a University Confirmation fee, indicating their acceptance of the University's offer of Admission. When the Confirmation fee is received, students are emailed their advising and registration information. This email includes their assigned dates to attend New Student Orientation: Advising & Registration, a full-day program where they meet with their academic advisors and register for classes. They also receive full student access to UA's online services, where they can view their class schedules, financial information, grades, and more.

All new freshmen, transfer students and students enrolled in the College Credit Plus program are required to attend an orientation program prior to registering for classes at The University of Akron. Orientation is conducted as a one-day program and is intended to ensure a smooth transition to the University. Content includes information about academic policies and procedures, registration and financial responsibility, and campus involvement. The weekend before classes begin, all incoming freshmen are also encouraged to attend New Roo Weekend for a chance to meet the rest of the incoming class, find out about campus involvement opportunities, and kick off their Akron Experience.

Multiple orientation sessions are available prior to each term and are filled on a first come, first served basis. Students should attend orientation as soon as possible to ensure the best selection of classes.

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## Veterans Policy

To prevent institutions from charging late fees or preventing facility access to student veterans due to delay in payment for Chapter 33 Post 9/11 and Chapter 31 Vocational Rehab by the Department of Veterans Affairs (VA), the following policy has been adopted. While this policy addendum takes effect August 1, 2019, The University of Akron is already complying with the requirements.

### SEC. 103. DISAPPROVAL FOR PURPOSES OF EDUCATIONAL ASSISTANCE PROGRAMS OF DEPARTMENT OF VETERANS AFFAIRS OF CERTAIN COURSES OF EDUCATION THAT DO NOT PERMIT INDIVIDUALS TO ATTEND OR PARTICIPATE IN COURSES PENDING PAYMENT.

- (a) In General.—Section 3679 of title 38, United States Code, is amended by adding at the end the following new subsection:
  - “(e) (1) Notwithstanding any other provision of this chapter, beginning on August 1, 2019, a State approving agency, or the Secretary when acting in the role of the State approving agency, shall disapprove a course of education provided by an educational institution that has in effect a policy that is inconsistent with any of the following:
    - “(A) A policy that permits any covered individual to attend or participate in the course of education during the period beginning on the date on which the individual provides to the educational institution a certificate of eligibility for entitlement to educational assistance under chapter 31 or 33 of this title and ending on the earlier of the following dates:
      - “(i) The date on which the Secretary provides payment for such course of education to such institution.
      - “(ii) The date that is 90 days after the date on which the educational institution certifies for tuition and fees following receipt from the student such certificate of eligibility.
    - “(B) A policy that ensures that the educational institution will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individual's inability to meet his or her financial obligations to the institution due to the delayed disbursement of a payment to be provided by the Secretary under chapter 31 or 33 of this title.
  - “(2) For purposes of this subsection, a covered individual is any individual who is entitled to educational assistance under chapter 31 or 33 of this title.
  - “(3) The Secretary may waive such requirements of paragraph (1) as the Secretary considers appropriate.
  - “(4) It shall not be inconsistent with a policy described in paragraph (1) for an educational institution to require a covered individual to take the following additional actions:
    - “(A) Submit a certificate of eligibility for entitlement to educational assistance not later than the first day of a course of education for which the individual has indicated the individual wishes to use the individual's entitlement to educational assistance.
    - “(B) Submit a written request to use such entitlement.
    - “(C) Provide additional information necessary to the proper certification of enrollment by the educational institution.”.
- (b) Prompt Payments.—
  - (1) IN GENERAL.—The Secretary of Veterans Affairs shall take such actions as may be necessary to ensure that the Secretary makes a payment to an educational institution on behalf of an individual, who is entitled to educational assistance under chapter 31 or 33 of title 38, United States Code, and who is using such assistance to pursue a program of education at the educational institution, not later than 60 days after the date on which the educational institution certifies to the Secretary the applicable tuition and fees for the individual.
  - (2) SEMIANNUAL REPORTS.—Not later than May 1 and October 1 of each year, the Secretary shall submit to the Committee on Veterans' Affairs of the Senate and the Committee on Veterans' Affairs of the House of Representatives a semiannual report summarizing any cases in which the Secretary failed to make a payment described in paragraph (1) within the period set forth in such paragraph and an explanation for each delayed disbursement of payment.
  - (c) Rule Of Construction.—In a case in which an individual is unable to meet a financial obligation to an educational institution due to the delayed disbursement of a payment to be provided by the Secretary under chapter 31 or 33 of such title and the amount of such disbursement is less than anticipated, nothing in section 3679(e) of such title, as added by subsection (a), shall be construed to prohibit an educational institution from requiring additional payment or imposing a fee for the amount that is the difference between the amount of the financial obligation and the amount of the disbursement.
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## Registration

Each term it is necessary for a student to select courses, formally register for those courses, and pay the appropriate tuition and fees. The student must register online via My Akron (<http://my.uakron.edu>).

## Student Enrollment Status

Status	Undergraduate Credit Hours
Full-time	12 or more hours
Three Quarter-time	9-11.99 hours
Half-time <sup>1</sup>	6-8.99 hours
Less than half-time	0.5-5.99 hours

<sup>1</sup> For undergraduate aid award determination purposes, a three-quarter time student is registered for 9 - 11.99 credit hours.

## Level Status

The level status of each student is dependent upon the number of credit hours earned. The University identifies the following levels:

Will be Designated	If the Overall Credits Earned Are
Senior	90 credit hours or higher
Junior	60-89.99 credit hours earned
Sophomore	30-59.99 credit hours earned
Freshman	0-29.99 credit hours earned

## Class Attendance

A student is expected to attend all class meetings for which the student is registered. A student may be dropped from a course in the current term by the dean if absence is repeated and the instructor recommends this action; a student can gain re-admission only with permission of both the instructor and the dean. A student dropped from a course receives an "F" which counts as work attempted whenever grade-point ratio calculations are made.

## Student Schedules

### Adding Courses

A student must register for a course in person before the end of the fifth day of a fall or spring term or online via My Akron (<http://my.uakron.edu>) by the end of the first week of the fall or spring term. Additions to the student's official schedule may be made through the end of the 14th calendar day, only with the permission of the student's advisor, instructor and dean or the dean's designee. Students who have not registered by this deadline may not attend classes or receive credit for the course. This deadline applies to all regular 15-week courses offered in the fall and spring semesters. For all other courses, such as those in intersessions or those which are flexibly scheduled, courses must be added, with appropriate permission, by the date when 20% of the course has been completed. Details regarding Summer session information may be found via My Akron (<http://my.uakron.edu>).

### Withdrawal Policy

Students may drop a course through the second week (14th calendar day) of a semester or proportionally equivalent dates during summer

session, intersession, and other course terms. No record of the course will appear on the student's transcript. For purposes of this policy, the course term for a course that meets during a semester but begins after the beginning of a semester and/or ends before the end of a semester begins when its class meetings begin and ends when its class meetings end. After the 14-day drop period, and subject to the limitations below, students may withdraw from a course through the seventh week (49th calendar day) of a semester or proportionally equivalent dates during summer session, intersession, or other course terms. A course withdrawal will be indicated on the student's official academic record by a grade of "WD."

Withdrawing from courses – applicable to undergraduate students only:

- Undergraduate students may not withdraw from the same course more than twice. If a student attempts to withdraw from a course after having withdrawn from it twice before, he or she will continue to be enrolled in the course and will receive a grade at the end of the semester.
- Full-time undergraduate students who need to withdraw from all courses for documented extraordinary non-academic reasons (e.g., medical treatment or convalescence, military service) must obtain the permission of the dean of their college. For purposes of this paragraph:
  - Students are considered full-time if they were enrolled as full-time students at the beginning of the term; and
  - Courses for which the student has completed all requirements are excluded.
- Undergraduate students who withdraw from two courses either before they have earned 30 credits, or after they have earned 30 credits but before they have earned 60 credits, are not permitted to register for additional courses until they have consulted with their academic advisor. The purpose of this consultation is to discuss the reasons for the course withdrawals and to promote satisfactory academic progress by helping students develop strategies to complete their courses successfully.
- Except as otherwise provided below, undergraduate students may not withdraw from more than four courses before they have earned 60 credits. Students who attempt to withdraw from more than four courses will continue to be enrolled in those courses and will receive grades at the end of the semester.
- Undergraduate students who need to withdraw from all courses for documented extraordinary, non-academic reasons (e.g. medical treatment or convalescence, military service) may, after consulting with their advisor, submit a written petition to the dean of their college requesting that these courses not be counted toward the four-course withdrawal limit. The dean may grant this permission if, in the dean's judgment, it is consistent with the best academic interests of the student and the best interests of the University.
- After the withdrawal deadline, undergraduate students may submit a written petition to the dean of their degree-granting college requesting partial withdrawal, after the deadline, for documented extraordinary, non-academic reasons (e.g. medical treatment or convalescence, military service). If the student is not yet admitted to a degree-granting college, the withdrawal request must be submitted to the dean of the student's intended degree-granting college or, if the student has not declared a major, from the deans of the degree-granting colleges offering the courses. The dean may grant this permission if the dean finds that the withdrawal is necessitated by circumstances beyond the student's control and is consistent with

the best academic interests of the student and the best interests of the university.

7. Undergraduate students who have reached the four-course withdrawal limit as noted above may, after consultation with their advisor, submit a written petition to the dean of their college seeking permission to withdraw from one or more additional courses. The dean may grant this permission if the dean finds that the withdrawal is necessitated by circumstances beyond the student’s control and is consistent with the best academic interests of the student and the best interests of the University.
8. Withdrawing from a course shall not reduce or prevent a penalty accruing to a student for misconduct as defined in the Student Code of Conduct.
9. Degree granting colleges may supplement this policy with more stringent requirements.

academic discipline and will be applied toward graduation where such elective credit options exist within the academic major

- Additional courses or credits may be available when a score of 4 or 5 is obtained. Award of credit for higher score values varies depending on the institution and academic discipline
- In academic disciplines containing highly dependent sequences (Sciences, Technology, Engineering and Mathematics –STEM) students are strongly advised to confer with their academic advisor to ensure they have the appropriate foundation to be successful in advanced coursework within the sequence. The advanced placement table (p. 22) lists disciplines available for Advanced Placement Testing, scores required for accruing credit and courses at The University of Akron for which credit may be earned. For questions concerning Advanced Placement Credit call 330-972-8300 or email registrar@uakron.edu.

## Alternative Credit Options

### American Council on Education’s College Credit Recommendation

The University of Akron accepts the American Council on Education’s College Credit Recommendation Service (CREDIT). CREDIT evaluates and makes credit recommendations for formal educational programs and courses offered by organizations including business and industry, labor unions, professional and voluntary associations, schools, training suppliers, and government agencies. The program is based on the idea that it is sound educational practice for colleges and universities to grant academic credit for high-quality educational programs conducted by a variety of organizations provided that the courses are appropriate to an individual’s degree program.

### Advanced Placement Credit

Many high schools offer Advanced Placement courses through the auspices of the College Board for possible college credit. By enrolling in such courses during high school and taking Advanced Placement Tests at the end of each course, high school students may earn undergraduate credits in a number of different academic areas. The test score required to receive credit for a specific course is determined by the Ohio Board of Regents and the Academic Department in which the course resides. Credits earned in this manner are included in the total credits completed, but are not assigned a grade and do not count in the quality point ratio, class standing, or graduation with honors calculations. Students must take the tests while they are in high school. It is not possible to take the tests once a student is enrolled at The University of Akron. The State of Ohio, working through the University System of Ohio, has initiated policies to facilitate the ease of transition from high school to college as well as between and among Ohio’s public colleges and universities.

### Beginning in the Fall term 2009

- Students obtaining an Advanced Placement (AP) exam score of 3 or above will be awarded the aligned course(s) and credits for the AP exam area(s) successfully completed
- Credits received will be applied toward graduation and may also satisfy a General Education or Honor’s Distribution requirement if the course(s), to which the AP area is equivalent, fulfill those requirements
- If an equivalent course is not available for the AP exam area completed, elective or area credit will be awarded in the appropriate

### Bypassed Credit

Certain courses designated in this bulletin by each academic department enable a student to earn "bypassed" credit. A degree-seeking undergraduate student who completes such a course with a grade of "C" or better is entitled to credit for designated prerequisite courses which carry the same departmental code number. Credit for such bypassed prerequisite shall be included in the total credits earned, but shall not count in the quality point ratio, or class standing, or hours required for graduation with honors. Bypassed credit is not awarded on the basis of completing a course either by credit-by-examination or credit/noncredit. Bypassed credit may not be used to repeat for change of grade.

### Buchtel College of Arts and Sciences

Discipline	Course	Prerequisite	Approved for Bypass Credit
English	2020:222	2020:121	2020:121
	3300:112	3300:111	3300:111
Geography and Planning	3350:314	3350:310	3350:310
	3350:442	3350:305	3350:305
	3350:444	3350:305	3350:305
Mathematics	2030:152	2030:151	2030:151
	2030:153	2030:152	2030:151 & 2030:152
	2030:154	2030:153	2030:152 & 2030:153
	2030:161	2030:151	2030:151
	2030:216	2030:153	2030:152 & 2030:153
	2030:255	2030:154	2030:152, 2030:153 & 2030:154
	2030:356	2030:255	2030:154 & 2030:255
Theoretical and Applied Mathematics	3450:210	3450:145	3450:145
	3450:215	3450:145 or 3450:149	3450:145
	3450:221	3450:149	3450:149

	3450:222	3450:221	3450:149 & 3450:221				
	3450:223	3450:222	3450:221 & 3450:222				
Modern Languages	3500:102	3500:101	3500:101				
	3500:201	3500:102	3500:101 & 3500:102				
	3500:202	3500:201	3500:101, 3500:102 & 3500:201				
	3500:422	3500:202	3500:101, 3500:102, 3500:201 & 3500:202				
	3500:497	3500:202	3500:101, 3500:102, 3500:201 & 3500:202				
Arabic	3501:102	3501:101	3501:101				
	3501:201	3501:102	3501:101 & 3501:102				
	3501:202	3501:201	3501:101, 3501:102 & 3501:201				
	3501:301, 3501:302, 3501:303 or 3501:304	3501:202	3501:101, 3501:102, 3501:201 & 3501:202				
Chinese	3502:102	3502:101	3502:101				
	3502:201	3502:102	3502:101 & 3502:102				
	3502:202	3502:201	3502:101, 3502:102 & 3502:201				
	3502:301, 3502:302, 3502:303 or 3502:304	3502:202	3502:101, 3502:102, 3502:201 & 3502:202				
Latin	3510:102	3510:101	3510:101				
	3510:201	3510:102	3510:101 & 3510:102				
	3510:202	3510:201	3510:101, 3510:102 & 3510:201				
	3510:303 or 3510:304	3510:202	3510:101, 3510:102, 3510:201, & 3510:202				
French	3520:102	3520:101	3520:101				
	3520:201	3520:102	3520:101 & 3520:102				
	3520:202	3520:201	3520:101, 3520:102 & 3520:201				
					3520:300, 3520:301, 3520:302, 3520:303, 3520:304, 3520:305, 3520:306, 3520:311, 3520:312, 3520:351, 3520:402, 3520:403, 3520:422	3520:202	3520:101, 3520:102, 3520:201 & 3520:202
					3520:352	3520:351	3520:101, 3520:102, 3520:201 & 3520:202
					3520:413	3520:301 or 3520:302	3520:101, 3520:102, 3520:201 & 3520:202
					3520:427	3520:305 or 3520:306	3520:101, 3520:102, 3520:201 & 3520:202
				German	3530:102	3530:101	3530:101
					3530:201	3530:102	3530:101 & 3530:102
					3530:201 or 3530:202	3530:102	3530:101, 3530:102 & 3530:201
					3530:301, 3530:302 or 3530:422	3530:202	3530:101, 3530:102, 3530:201 & 3530:202
					3530:403 or 3530:404	3530:302	3530:101, 3530:102, 3530:201 & 3530:202
					3530:406 or 3530:407	3530:302 or 3530:306	3530:101, 3530:102, 3530:201 & 3530:202
				Italian	3550:102	3550:101	3550:101
					3550:201	3550:102	3550:101 & 3550:102
					3550:202	3550:201	3550:101,3550:102 & 3550:201
					3550:301 or 3550:302	3550:202	3550:101, 3550:102, 3550:201 & 3550:202
				Japanese	3560:102	3560:101	3560:101
					3560:201	3560:102	3560:101 & 3560:102
					3560:202	3560:201	3560:101, 3560:102 & 3560:201

	3560:422	3560:202	3560:101, 3560:102, 3560:201 & 3560:202
Russian	3570:102	3570:101	3570:101
	3570:201	3570:102	3570:101 & 3570:102
	3570:202	3570:201	3570:101, 3570:102 & 3570:201
Spanish	3580:102	3580:101	3580:101
	3580:112	3580:101 or 3580:111	3580:101
	3580:201	3580:102	3580:101 & 3580:102
	3580:202	3580:201	3580:101, 3580:102 & 3580:201
	3580:211	3580:102 or 3580:112	3580:101 & 3580:102
	3580:212	3580:201 or 3580:211	3580:101, 3580:102 & 3580:201
	3580:301, 3580:302, 3580:303, 3580:307 or 3580:308	3580:202	3580:101, 3580:102, 3580:201 & 3580:202
	3580:340	two of 3580:301, 3850:302 & 3580:303	3580:101, 3580:102, 3580:201 & 3580:202
	3580:351	3580:301, 3850:302 and 3580:303	3580:101, 3580:102, 3580:201 & 3580:202
	3580:401, 3580:402 or 3580:403	3580:301 & {3580:302 or 3580:303}	3580:101, 3580:102, 3580:201 & 3580:202
	3580:404, 3580:405, 3580:406 or 3580:410	3580:340 and two of 3580:401, 3580:402 & 3580:403	3580:101, 3580:102, 3580:201 & 3580:202
	3580:409, 3580:411, 3580:412, 3580:416, 3580:418, 3580:419, 3580:422, 3580:425, 3580:427 or 3580:430	3580:407 or 3580:408	3580:101, 3580:102, 3580:201 & 3580:202

	3580:431 or 3580:432	two of 3580:401, 3580:402 & 3580:403	3580:101, 3580:102, 3580:201 & 3580:202
Statistics	3470:262	3470:261	3470:261

### College of Business Administration

Discipline	Course	Prerequisite	Approved for Bypass Credit
Economics	3250:400	3250:201	3250:201
	3250:410	3250:200	3250:200

### College of Engineering and Polymer Science

Discipline	Course	Prerequisite	Approved for Bypass Credit
Computer Information Systems	2440:202	2440:201	2440:201
	2440:203	2440:201	2440:201
	2440:204	2440:202 & 2440:203	2440:201, 2440:202, & 2440:203
	2440:400	2440:201 & 2440:204	2440:201, 2440:202, 2440:203, & 2440:204
Computer Science	3460:210	3460:209	3460:209

### College of Health Professions

Discipline	Course	Prerequisite	Approved for Bypass Credit
American Sign Language	7700:102	7700:101	7700:101
	7700:201	7700:101 & 7700:102	7700:101 & 7700:102
RN-BSN Sequence (Limited to Licensed Registered Nurses)	8200:336		8200:211, 8200:217, 8200:230, 8200:350, 8200:360, 8200:370, 8200:380 & 8200:410

## College Level Examination Program (CLEP)

The College Level Examination Program (CLEP) is a national program that offers the opportunity to obtain college credit by examination. A variety of experiences may have prepared a person to earn college credit. The qualifying score required to receive credit for a specific course is determined by the Ohio Board of Regents and the Academic Department in which the course resides. Credits earned in this manner are included in the total credits completed but are not assigned a grade and do not count in the quality-point ratio, class standing, or graduation with honors calculations. Credit by CLEP may not be used to repeat for change of grade. CLEP tests are administered Monday through Friday. Contact the



Counseling Center at 330-972-7084 to make a reservation and/or obtain more information.

The following guidelines outline the terms under which The University of Akron will accept the results of specified CLEP tests for college credit. Students may also refer to their academic advisor to determine whether CLEP and other prior learning exams apply toward University of Akron transcripts.

## Business

CLEP Test	Qualifying Score	Course(s) Awarded	Credit Awarded
Financial Accounting	65 and above	6200:201 Principles of Accounting I	3
Introduction to Business Law	60 and above	6400:220 Legal and Social Environment of Business	3
Principles of Management	50 and above	2420:103 Essentials of Management Technology	3
Principles of Marketing	65 and above	6600:205 Marketing Principles	3

## Composition and Literature

CLEP Test	Qualifying Score	Course(s) Awarded	Credit Awarded
American Literature	53 and above	OTM Arts and Humanities Credit	3
Analyzing and Interpreting Literature	59 and above	OTM Arts and Humanities Credit	3
College Composition/College Composition Modular	50 and above	Remediation Free 0 (Ready to Enroll in 2020:121 or 3300:111)	0
English Literature	62 and above	OTM Arts and Humanities Credit	3

## History and Social Sciences

CLEP Test	Qualifying Score	Course(s) Awarded	Credit Awarded
American Government	56-62	OTM Social Sciences Credit	4
	63 and above	3700:100 Government and Politics in the United States	4
History of the United States I	56 and above	3400:250 U.S. History to 1877	4
History of the United States II	57 and above	3400:251 U.S. History since 1877	4

Human Growth and Development	58 and above	3750:230 Developmental Psychology	4
Humanities	55 and above	OTM Arts and Humanities Credit	3
Introduction to Educational Psychology	62 and above	OTM Social Sciences Credit	3
Introductory Psychology	59 and above	3750:100 Introduction to Psychology	3
Introductory Sociology	56 and above	3850:100 Introduction to Sociology	3
Principles of Macroeconomics	56 and above	3250:201 Principles of Macroeconomics	3
Principles of Microeconomics	57 and above	3250:200 Principles of Microeconomics	3
Social Sciences and History	63 and above	OTM Social Science Credit	3
Western Civilizations I	55 and above	3400:210 Humanities in Western Traditions I	4
Western Civilizations II	54 and above	OTM Arts and Humanities Credit	3

## Modern Languages

CLEP Test	Qualifying Score	Course(s) Awarded	Credit Awarded
French Language	55 to 64	3520:101 Beginning French I	4
		3520:102 Beginning French II	4
	65 and above	3520:101 Beginning French I	4
		3520:102 Beginning French II	4
		3520:201 Intermediate French I	3
		3520:202 Intermediate French II	3
German Language	59 to 66	3530:101 Beginning German I	4
		3530:102 Beginning German II	4

	67 and above	3530:101 Beginning German I	4
		3530:102 Beginning German II	4
		3530:201 Intermediate German I	3
Spanish Language	56 to 62	3580:101 Beginning Spanish I	4
		3580:102 Beginning Spanish II	4
	63 to 67	3580:101 Beginning Spanish I	4
		3580:102 Beginning Spanish II	4
		3580:201 Intermediate Spanish I	3
	68 and above	3580:101 Beginning Spanish I	4
		3580:102 Beginning Spanish II	4
		3580:201 Intermediate Spanish I	3
		3580:202 Intermediate Spanish II	3
Spanish Language with Writing	50 to 57	3580:101 Beginning Spanish I	4
		3580:102 Beginning Spanish II	4
	58 to 64	3580:101 Beginning Spanish I	4
		3580:102 Beginning Spanish II	4
		3580:201 Intermediate Spanish I	3
	65 and above	3580:101 Beginning Spanish I	4
		3580:102 Beginning Spanish II	4

	3580:201 Intermediate Spanish I	3
	3580:202 Intermediate Spanish II	3

## Science and Mathematics

CLEP Test	Qualifying Score	Course(s) Awarded	Credit Awarded
Biology	50 and above	OTM Natural Sciences without Labs Credit	3
Calculus	64 and above	3450:221 Analytic Geometry- Calculus	4
Chemistry	50 to 64	OTM Natural Sciences without Labs Credit	3
	65 and above	3150:151 Principles of Chemistry I	3
College Algebra	63 and above	3450:145 Algebra for Calculus	4
College Mathematics	57 and above	OTM Mathematics, Statistics, and Logic Credit	3
Precalculus	61 and above	3450:149 Precalculus	4
Information Systems	50 and above	General Elective	3

## Credit by Examination

A student interested in earning credits by special examination may do so with the permission of the dean of the student's college and the dean of the college in which a particular course is offered and by payment of the special examination fee. The grade obtained in such an examination is recorded on the student's permanent academic record. Credit by examination is not permitted in the semester before graduation. Credit by examination may not be used to repeat for change of grade.

## International Baccalaureate

The University of Akron recognizes the academic quality of the International Baccalaureate (IB) program and the efforts of students enrolled in IB coursework by awarding advanced-standing credit for the completion of the IB Diploma. Higher level examination scores are considered for departmental credit in the areas of French, Spanish, German, Geography, Latin, Greek, Economics, Chemistry, History, English, Social Anthropology, Mathematics, Music and Physics. Although minimum scores for the awarding of credit may vary by subject area, generally scores of four or five are sufficient. No credit is awarded for IB Subsidiary examinations, with the exception of some foreign languages.

IB Test	IB Score	Course No	Title	Hours
Biology	HL 4	3100:103	Natural Science: Biology	4
	HL 5	3100:111	Principles of Biology I	4
	HL 6 or 7	3100:111 & 3100:112	Principles of Biology I & II	8
	HL 6 or 7	3100:100 & 3100:103	Introduction of Botany & Natural Science: Biology (for non-science majors)	8
Business Management	HL 4 or higher	6100:101	Business Issues in a Connected World	3
Chemistry	HL 4	3150:101 or 3150:152	Chemistry for Everyone or Principles of Chemistry I Lab	4 or 1
	HL 5	3150:110 & 3150:111	Introduction to General, Organic & Biochemistry I & Lab	4
	HL 6	3150:151 & 3150:152	Principles of Chemistry I & Lab	4
	HL 7	3150:151, 3150:152 & 3150:153	Principles of Chemistry I & Lab and Principles of Chemistry II	7
Economics	HL 4 or higher	3250:244	Introduction to Economic Analysis	3
English A1	HL 4 or 5	3300:111	English Composition I	3
	HL 6 or 7	3300:111 & 3300:112	English Composition I & II	6
English A: Language & Literature	HL 4 or 5	3300:111	English Composition I	3
	HL 6 or 7	3300:111 & 3300:112	English Composition I & II	6
English A: Literature	HL 4 or 5	3300:111	English Composition I	3
	HL 6 or 7	3300:111 & 3300:112	English Composition I & II	6
French	SL 4	3520:101	Beginning French I	4
	SL 5	3520:101 & 3520:102	Beginning French I & II	8
	SL 6	3520:101, 3520:102 & 3520:201	Beginning French I & II and Intermediate French I	11
	SL 7	3520:101, 3520:102, 3520:201 & 3520:202	Beginning French I & II and Intermediate French I & II	14
German	SL 4	3530:101	Beginning German I	4
	SL 5	3530:101 & 3530:102	Beginning German I & II	8
	SL 6	3530:101, 3530:102 & 3530:201	Beginning German I & II and Intermediate German I	11
	SL 7	3530:101, 3530:102, 3530:201 & 3530:202	Beginning German I & II and Intermediate German I & II	14
History of the Americas	HL 4 or 5	3400:250	United States History to 1877	4
	HL 6 or 7	3400:250 & 3400:251	United States History to 1877 & United States History since 1877	8
History of Europe/ME	HL 4 or higher	3400:289	World Civilization: Middle East	2
Mathematics	HL 4 or higher	3450:145	College Algebra	4
Physics	HL 5	3650:291	Elementary Classical Physics I	4
	HL 6 or 7	3650:291 & 3650:292	Elementary Classical Physics I & II	8
Psychology	HL 4 or higher	3750:100	Introduction to Psychology	3
Social & Cultural Anthropology	HL 4 or higher	3230:150	Human Cultures	3
Spanish	SL 4	3580:101	Beginning Spanish I	4
	SL 5	3580:101 & 3580:102	Beginning Spanish I & II	8

SL 6	3580:101, 3580:102 & 3580:201	Beginning Spanish I & II and Intermediate Spanish I	11
SL 7	3580:101, 3580:102, 3580:201 & 3580:202	Beginning Spanish I & II and Intermediate Spanish I & II	14

Please note: All required textbooks must be returned to the secondary school at the end of the term.

## Admission Requirements

### Eligibility

**Preferred Requirements for 7th through 12th grade applicants:**

- 3.0 cumulative GPA and a 21 ACT composite or 1060 SAT math and Evidenced-based Reading & Writing combined score.
- The Office of Admissions will evaluate the cumulative GPA and ACT or SAT scores to determine college readiness for applicants.
- All applicants MUST meet at least one of the minimum College Readiness Standards in Writing, Reading or Mathematics as determined by the Ohio Department of Higher Education.

### Application Deadlines

Application deadline for the summer and fall semesters is **April 15**. The application deadline for the spring semester is **October 15**.

### Steps to apply for admission

1. Complete the Undergraduate Admission Application; select College Credit Plus as the type of student.
2. Complete the Signature Page. Signatures are required by the student, parent or guardian, and the school counselor.
3. Submit an official school transcript. For applicants in the 7th grade, the transcript should include 6th and 5th grades. For applicants in the 8th grade, transcripts should include 7th and 6th grades.
4. Submit ACT or SAT test score results (testing must be completed prior to the application deadline).

## Military Credit

Ohio GI promise, created through Executive Order 2008-17S in July 2008, calls for all University System of Ohio institutions to participate in the Servicemembers Opportunity Colleges (SOC) Consortium. This membership guarantees that The University of Akron will work with veterans to award military credit towards degree completion.

Veteran students should request a copy of their credit from The American Council on Education (ACE) and send this transcript to the Transfer Student Services Center, Akron, Ohio 44325-2001. The credit will be evaluated and posted to the student's record upon enrollment at The University of Akron. Students should consult with academic advisors to determine how military training, experience and coursework credits can be used most effectively in meeting degree requirements.

## The College Credit Plus Program (CCP)

The College Credit Plus program was created by the Ohio Legislature to allow secondary school students in Ohio to enroll in a college or university. The program is available to qualified public, nonpublic and home schooled students in grades 7-12.

Through the College Credit Plus Program, students are eligible to enroll in classes at The University of Akron during the summer, fall and spring semesters. It is recommended that prospective students work with their school counselors to discuss specific school policies.

### About the program

Advantages for college-level learning during 7th through 12th grade:

- Strengthening the middle and high school curriculum and raising expectations for high school students.
- Reducing the total number of credits needed to be earned in college.
- Potentially reducing the time required for the baccalaureate and costs to parents, students and taxpayers.
- Enriching the undergraduate college curriculum by lessening the need to take introductory courses, consequently allowing earlier entry into advanced courses, facilitation of double majors, or permitting additional electives.

CCP pays the following for students receiving dual credit:

- All tuition and fees applied to the bill at the time of registration.
- Registration fees including changes in a UA course schedule if changes are due to secondary school schedule conflicts initiated by a UA administrator.
- All required textbooks for public and nonpublic school students. (Home schooled students are responsible for purchasing textbooks.)

## College Tech Prep

College Tech Prep is value-added education. This program integrates technical training and college preparatory academics beginning in high school and continuing through a minimum of an associate degree. College Tech Prep prepares students for highly skilled occupations supported by regional business and industry in the areas of business, information, health and engineering technologies. The College Tech Prep pathway is a skill-building curriculum jointly designed by business, high schools and colleges. The pathway links the high school experience with a college degree program.

For additional information regarding the College Tech Prep programs, contact Kelly Herold at 330-972-8832.

## Transfer Credit

The Transfer Credit policy is subject to the appropriate approval process and as such may be subject to change.

The University of Akron awards transfer credit for non-remedial, non-developmental college-level coursework completed with earned grades of "D-" or better at an institution of higher learning in the United States which is fully accredited or has been granted candidacy status by one of the following regional institutional accrediting agencies: Middle States Association of Colleges and Schools, Commission on Higher Education; New England Association of Schools and Colleges, Commission on Institutions of Higher Education; North Central Association of Colleges and Schools, Higher Learning Commission; Northwest Commission on Colleges and Universities; Southern Association of Colleges and Schools, Commission on Colleges; Western Association of Schools and Colleges,

Accrediting Commission for Community and Junior Colleges; Western Association of Schools and Colleges, Accrediting Commission for Senior Colleges and Universities. A summary of the number of credits accepted will be listed on the official academic transcript along with the name of the institution and dates of attendance.

No grade point value will appear on the record, and no grade point average will be calculated for the coursework listed. Transfer students shall be accorded the same class standing and other privileges as all other students on the basis of the number of credits earned. All residency requirements must be completed successfully at the receiving institution prior to the granting of a degree.

CLEP or Advanced Placement Credit posted on transcripts from previously attended regionally accredited Ohio colleges and universities is eligible for credit at The University of Akron. CLEP or Advanced Placement credit posted on transcripts from previously attended regionally accredited non-Ohio colleges and universities is not eligible for credit at The University of Akron. Students must present original documentation attesting to scores earned prior to receiving alternative credit considerations.

The University of Akron does not guarantee that a transfer student automatically will be admitted to all majors, minors or fields of concentration at the institution. For courses that have been taken at an institution of higher education noted in the reference above, the dean of the college in which the student intends to obtain a degree will specify which courses, other than General Education courses, will apply toward the degree requirements of the University. The office responsible for transfer student services will specify which courses listed will apply toward the General Education program requirements.

Transfer students must meet all University of Akron residency requirements.

For other types of transferable credit, please see the section on Alternative Credit Options.

Note: Official transcripts and/or documentation for alternative credit can be obtained from the following web sites:

- [www.acenet.edu](http://www.acenet.edu) (<http://www.acenet.edu>)
- [www.collegeboard.com](https://www.collegeboard.com) (<https://www.collegeboard.com>)
- [www.collegeboard.org/clep](https://www.collegeboard.org/clep) (<https://www.collegeboard.org/clep/>)
- [www.getcollegecredit.com](https://www.getcollegecredit.com) (<https://www.getcollegecredit.com>)

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## Ohio Transfer Module (OTM)

The Ohio Transfer Module (OTM), which is a subset or the complete set of a public college's or university's general education requirement and that represents a common body of knowledge and academic skills to be acquired by students, is comprised of 36-40 semester (54-60 quarter) hours of courses in the following fields: English composition and oral communication; mathematics, statistics and logic; arts and humanities; social and behavioral sciences; and natural sciences. Additional elective hours from among the five areas make up the total hours for a completed Ohio Transfer Module. Students are guaranteed the transfer of OTM credits among Ohio's public colleges and universities and equitable treatment in the application of credits to admissions and degree requirements. The Ohio Transfer Module (OTM) Approved Courses Reporting System ([https://reports-cems.transfercredit.ohio.gov/pg\\_6/?::NO:6:](https://reports-cems.transfercredit.ohio.gov/pg_6/?::NO:6:)) will help you identify Transfer Module approved courses

that are guaranteed to transfer and apply toward related general education subject areas at Ohio's public colleges and universities.

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## Transfer Assurance Guides (TAGs)

Transfer Assurance Guides (TAGs) comprise Transfer Module courses and additional courses required for an academic major. A TAG is an advising tool to assist Ohio university and community and technical college students planning specific majors to make course selections that will ensure comparable, compatible, and equivalent learning experiences across the state's higher-education system. A number of area-specific TAG pathways in the arts, humanities, business, communication, education, health, mathematics, science, engineering, engineering technologies, and the social sciences have been developed by faculty teams.

TAGs empower students to make informed course selection decisions and plans for their future transfer. Advisors at the institution to which a student wishes to transfer should also be consulted during the transfer process. Students may elect to complete the full TAG or any subset of courses from the TAG. Because of specific major requirements, early identification of a student's intended major is encouraged.

Students should also check with their department about which courses have received approval from ODHE as part of the Transfer Assurance Guides program. Only those courses that have received such approval can be guaranteed transfer credit as part of the major. Students may also check with the ODHE TAG (<https://www.ohiohighered.org/transfer/tag/>) website.

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## Career-Technical Credit Transfer (CT)<sup>2</sup> / CTAG

Students who successfully complete specified high school technical programs are eligible to have technical credit transfer to Ohio public colleges and universities. This transfer of credit is described in the Career Technical Assurance Guides (<https://www.ohiohighered.org/transfer/ct2/ctags/>) (CTAG). Students are guaranteed the transfer of applicable credits among Ohio's public colleges and universities and equitable treatment in the application of credits to admissions and degree requirements. (CT)<sup>2</sup> helps more high school and adult career-technical students to go to college and enter with college credit; technical credit saves students money and time; and Ohio business and industry will benefit from more employees with higher education and advanced skills.

To access credit, students will need to request a Verification Form be sent by the career-institution from which they attended/graduated to The University of Akron. For more information on how to access (CT)<sup>2</sup> credit visit the Ohio Department of Higher Education Career-Technical Credit Transfer (CT) (<https://www.ohiohighered.org/transfer/ct2/how-to-access-ct2-credit/>)<sup>2</sup> Verification of Course/Program Completion Form webpage.

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## Ohio Guaranteed Transfer Pathways (OGTPs)

The Ohio Guaranteed Transfer Pathways (OGTPs) are designed to provide a clearer path to degree completion for students pursuing associate degrees who plan to transfer to an Ohio public university to complete their bachelor's degree. The OGTPs also constitute an agreement

between public community colleges and universities confirming that community college courses meet major preparation requirements and will be counted and applied toward the bachelor's degree. Students still must meet all university program admission requirements.

A student who completes all of the coursework within a major-specific Ohio Guaranteed Transfer Pathway (OGTP) will be eligible to earn an Associate of Arts, Associate of Science, or Associate of Applied Science degree from an Ohio public community college. The completion of the OGTP will be recorded on the student's transcript, and upon transfer to an Ohio public university, all coursework taken as part of the pathway will transfer to the university toward the completion of a bachelor's degree in an equivalent field. Explore the pathways by visiting the ODHE Guaranteed Transfer Pathways (<https://www.ohiohighered.org/OGTP/>) website.

## Credit Appeals

**Appeals Regarding Transfer Credit:** Following the evaluation of the student's transcript from another higher education institution or from ACE, the student will meet with an adviser or the Assistant Director of the Transfer & Adult Students Enrollment Center, to discuss how the credits apply. Should the student not be satisfied with the way the credits articulate to UA graduation requirements, the student may submit an appeal in writing to the Director of the Transfer and Adult Student Enrollment Center. The appeal should include a statement of why the appeal is being made, and should provide a syllabus of the course that the student completed, or the material that was covered in the course, including the amount of time devoted to various topics. The learning objectives of the course of study should also be provided.

If the appeal concerns transfer credit related to discipline requirements, the written appeal will be reviewed by the Chair/Director of the relevant department/school, or dean, as appropriate. If the appeal concerns transfer credit related to General Education requirements, the appeal will be directed to the appropriate individual at the University responsible for the General Education program.

**Appeals Regarding UA Credit:** In the event that a student seeks redress for the way in which a UA course is applied to General Education or degree requirements, students should first speak with their adviser. Any subsequent appeal would then be directed to the appropriate individual at the University (e.g. the person responsible for the General Education program, or the relevant Chair/Director/Dean).

Final appeals in all cases will be handled by the Office of Academic Affairs.

## AP Information

AP Exam	AP Score	Course(s) Awarded	Credits Awarded
Art History	3	7100:210, Visual Arts Awareness	3
	4 or 5	7100:100, Survey of History of Art I	3
		7100:101, Survey of History of Art II	3
Biology	3 or 4	3100:103, Natural Science: Biology	4

	5	3100:111, Principles of Biology I	4
Calculus AB	3, 4, or 5	3450:221, Analytic Geometry-Calculus I	4
Calculus BC <sup>1</sup>	3, 4, or 5	3450:221, Analytic Geometry-Calculus I	4
		3450:222, Analytic Geometry-Calculus II	4
Capstone Research	3, 4, or 5	General Elective	3
Capstone Seminar	3, 4, or 5	General Elective	3
Chemistry	3	3150:101, Chemistry for Everyone	4
	4 or 5	3150:151, Principles of Chemistry I	3
		3150:152, Principles of Chemistry I lab	1
Chinese Language and Culture	3	3502:101, Beginning Chinese I	4
		3502:102, Beginning Chinese II	4
	4	3502:101, Beginning Chinese I	4
		3502:102, Beginning Chinese II	4
		3502:201, Intermediate Chinese I	3
	5	3502:101, Beginning Chinese I	4
		3502:102, Beginning Chinese II	4
		3502:201, Intermediate Chinese I	3
		3502:202, Intermediate Chinese II	3
Comparative Government & Politics	3	General Education Social Science	3

	4 or 5	3700:300, Comparative Politics	4
Computer Science A	3 or 4	3460:209, Computer Science I	4
	5	3460:209, Computer Science I	4
		3460:210, Computer Science II	4
Computer Science AB	3 or 4	3460:209, Computer Science I	4
	5	3460:209, Computer Science I	4
		3460:210, Computer Science II	4
Computer Science Principles	3, 4, or 5	3460:101, Essentials of Computer Science	3
English Language	3, 4, or 5	3300:111, English 3 Composition I	
English Literature	3, 4, or 5	3300:111, English 3 Composition I	
English Language & English Literature	3, 4, or 5	3300:111, English 3 Composition I <b>and</b> 3300:112, English 3 Composition II	
Environmental Science	3, 4, or 5	3370:211, Introduction to Environmental Science	3
European History	3	General Education Social Sciences	3
	4 or 5	General Education Social Sciences	3
		General Education Humanities	3
French Language	3	3520:101, Beginning French I	4
		3520:102, Beginning French II	4
	4	3520:101, Beginning French I	4

		3520:102, Beginning French II	4
		3520:201, Intermediate French I	3
	5	3520:101, Beginning French I	4
		3520:102, Beginning French II	4
		3520:201, Intermediate French I	3
		3520:202, Intermediate French II	3
French Literature	3	3520:101, Beginning French I	4
		3520:102, Beginning French II	4
		3520:201, Intermediate French I	3
	4 or 5	3520:101, Beginning French I	4
		3520:102, Beginning French II	4
		3520:201, Intermediate French I	3
		3520:202, Intermediate French II	3
German Language	3	3530:101, Beginning German I	4
		3530:102, Beginning German II	4
	4	3530:101, Beginning German I	4
		3530:102, Beginning German II	4
		3530:201, Intermediate German I	3
	5	3530:101, Beginning German I	4

		3530:102, Beginning German II	4
		3530:201, Intermediate German I	3
		3530:202, Intermediate German II	3
Human Geography	3, 4, or 5	3350:275, Geography of Cultural Diversity	2
Italian Language and Culture	3	3550:101, Beginning Italian I	4
		3550:102, Beginning Italian II	4
	4	3550:101, Beginning Italian I	4
		3550:102, Beginning Italian II	4
		3550:201, Intermediate Italian I	3
	5	3550:101, Beginning Italian I	4
		3550:102, Beginning Italian II	4
		3550:201, Intermediate Italian I	3
		3550:202, Intermediate Italian II	3
Japanese Language and Culture	3	3560:101, Beginning Japanese I	4
		3560:102, Beginning Japanese II	4
	4	3560:101, Beginning Japanese I	4
		3560:102, Beginning Japanese II	4
		3560:201, Intermediate Japanese I	3
	5	3560:101, Beginning Japanese I	4

		3560:102, Beginning Japanese II	4
		3560:201, Intermediate Japanese I	3
		3560:202, Intermediate Japanese II	3
Latin	3	3510:101, Beginning Latin I	4
		3510:102, Beginning Latin II	4
	4	3510:101, Beginning Latin I	4
		3510:102, Beginning Latin II	4
		3510:201, Intermediate Latin I	3
	5	3510:101, Beginning Latin I	4
		3510:102, Beginning Latin II	4
		3510:201, Intermediate Latin I	3
		3510:202, Intermediate Latin II	3
Latin Literature	3	3510:101, Beginning Latin I	4
		3510:102, Beginning Latin II	4
	4	3510:101, Beginning Latin I	4
		3510:102, Beginning Latin II	4
		3510:201, Intermediate Latin I	3
	5	3510:101, Beginning Latin I	4
		3510:102, Beginning Latin II	4
		3510:201, Intermediate Latin I	3
		3510:202, Intermediate Latin II	3
Latin: Vergil	3	3510:101, Beginning Latin I	4
		3510:102, Beginning Latin II	4
	4	3510:101, Beginning Latin I	4



		3510:102, Beginning Latin II	4
		3510:201, Intermediate Latin I	3
5		3510:101, Beginning Latin I	4
		3510:102, Beginning Latin II	4
		3510:201, Intermediate Latin I	3
		3510:202, Intermediate Latin II	3
Macroeconomics	3, 4 or 5	3250:201, Principles of Macroeconomics	3
Microeconomics	3, 4 or 5	3250:200, Principles of Microeconomics	3
Music Theory	3	General Elective	3
	4 or 5	7500:121, Theory and Musicianship I	4
Physics 1	3, 4 or 5	3650:160, Technical Physics: Mechanics	4
Physics 2	3, 4 or 5	3650:163, Technical Physics: Electricity and Magnetism	2
		3650:164, Technical Physics: Heat and Light	2
Physics B	3, 4 or 5	3650:160, Tech Physics: Mech	4
		3650:163, Tech Physics: Electricity & Magnetism/lab	2
		3650:164, Tech Physics: Heat and Light/lab	2
Physics C: Electricity & Magnetism	3, 4 or 5	3650:292, Elem. Classical Physics II	4
Physics C: Mechanics	3, 4 or 5	3650:291, Elem. Classical Physics I	4
Psychology	3, 4 or 5	3750:100, Introduction to Psychology	3

Spanish Language	3	3580:101, Beginning Spanish I	4
		3580:102, Beginning Spanish II	4
	4	3580:101, Beginning Spanish I	4
		3580:102, Beginning Spanish II	4
		3580:201, Intermediate Spanish I	3
	5	3580:101, Beginning Spanish I	4
		3580:102, Beginning Spanish II	4
		3580:201, Intermediate Spanish I	3
		3580:202, Intermediate Spanish II	3
Spanish Literature	3	3580:101, Beginning Spanish I	4
		3580:102, Beginning Spanish II	4
		3580:201, Intermediate Spanish I	3
		3580:202, Intermediate Spanish II	3
	4 or 5	3580:101, Beginning Spanish I	4
		3580:102, Beginning Spanish II	4
		3580:201, Intermediate Spanish I	3
		3580:202, Intermediate Spanish II	3
Statistics	3, 4 or 5	3470:261, Introductory Statistics I	2
		3470:262, Introductory Statistics II	2
Studio Art: 2-D Design	3, 4 or 5	7100:xxx, Studio Elective	3
Studio Art: 3-D Design	3, 4 or 5	7100:xxx, Studio Elective	3

Studio Art: Drawing	3, 4 or 5	7100:xxx, Studio Elective	3
U.S. Government & Politics	3, 4, or 5	3700:100, Government & Politics in the US	3
U.S. History	3, 4, or 5	3400:250, United States History to 1877	4
		3400:251, United States History Since 1877	4
World History	3	General Education Humanities	3
	4 or 5	General Education Humanities	6

<sup>1</sup> Students who intend to major in a STEM discipline and earn a 3 on the Calculus BC exam should consult with an advisor prior to accepting the credits

## Grade Policy and Credit Grades and the Grading System

A student will receive grades on various types of classroom performance during the progress of most courses and a final grade at the end of the term. At the end of the term, grades are available online. Individual tests are usually graded with percentage or letter marks, but official academic records are maintained with a grade-point system. Overall scholastic averages are computed on a quality point ratio basis, wherein the sum of the quality points earned is divided by the sum of the credits attempted. The quality point value per credit for each letter grade is shown in the following tables:

Grade	Quality Points	Key
A	4.0	
A-	3.7	
B+	3.3	
B	3.0	
B-	2.7	
C+	2.3	
C	2.0	
C-	1.7	
D+	1.3	
D+	0.0	Graduate Courses Only
D	1.0	
D	0.0	Graduate Courses Only
D-	0.7	
D-	0.0	Graduate Courses only
F	0.0	Failure
I	0.0	Incomplete
IP	0.0	In Progress
AUD	0.0	Audit
CR	0.0	Credit
NC	0.0	No Credit

WD	0.0	Withdrawn
NGR	0.0	No grade reported
INV	0.0	Invalid grade reported
PI	0.0	Permanent Incomplete
R	0.0	Repeat

**Notes:** Prior to Fall Semester 1973 cumulative grade point averages included transfer work. A student cannot raise a grade through re-examination.

**I - Incomplete:** Indicates that the student has done passing work in the course but that some part of the work is, for good and acceptable reason, not complete at the end of the term. Failure to make up the omitted work satisfactorily by the end of exam week of the following term, not including summer sessions, converts the "I" to an "F." When the work is satisfactorily completed within the allotted time, the "I" is converted to whatever grade the student has earned. It is the responsibility of the student to make up the incomplete work. The faculty member should submit the new grade to the Office of the University Registrar via the grade roster, which is available through MyAkron. If the instructor wishes to extend the "I" grade beyond the following term for which the student is registered, the instructor should submit an incomplete extension form, which is available through MyAkron, before the end of the semester.

**IP - In Progress:** Indicates that the student has not completed the scheduled coursework during the semester because the nature of the course does not permit completion within a single semester, such as work toward a thesis. An "IP" grade should be assigned only in graduate courses.

**PI - Permanent Incomplete:** Indicates that the student's instructor and the dean with jurisdiction over the course may for special reason authorize the change of an incomplete "I" to a permanent incomplete "PI."

**WD - Withdraw:** Indicates that the student registered for the course but withdrew officially after the 15th day of the term.

**NGR - No Grade Reported:** Indicates that, at the time grades were processed for the current issue of the record, no grade had been reported by the instructor.

**INV - Invalid:** Indicates the grade reported by the instructor of the course was improperly noted and thus unacceptable for proper processing.

### Special Credit/No Credit grading basis for Spring 2020 only:

**CRX - Credit:** Indicates that the student earned a letter grade of C- or higher and was awarded credit. Grade does not impact the GPA

**NCX - No Credit:** Indicates that the student earned a letter grade of D+ or lower and was not awarded credit. Grade does not impact the GPA

## Credit/Noncredit Option (undergraduate and post baccalaureate only)

A student who takes a course on a "credit" or "noncredit" (CR/NC) basis, and who earns a grade equivalent to "A" through "C-," shall receive credit ("CR") for the course and have the grade, "CR," placed on the permanent record; a grade equivalent to "D+" through "F" will be recorded with the noncredit grade, "NC."

For the baccalaureate degree, no more than 16 credits of non-language courses and no more than 20 credits in total (including language courses)

are permitted to be taken on a CR/NC basis. For the associate degree, no more than eight credits of non-language courses and no more than 10 credits in total, including language courses, is permitted.

A student is eligible for the CR/NC option if the student has:

- Completed 50% of the number of credits required for a degree
- A GPA of at least 2.30
- The consent of an advisor

The CR/NC option is available only at the time of registration for the course. After the first week of the term or first two days of a summer session, the status cannot be changed. The University Registrar will notify the instructor of those students utilizing the CR/NC option by means of the final class list.

Courses that can be taken on a CR/NC basis:

- One free elective (not in major field) course per term
- Any first- and/or second-year foreign language course at any time, regardless of grade-point average

Courses that cannot be taken CR/NC:

- Any General Education courses
- Courses required by colleges and departments of all undergraduate majors

Courses for which "CR" is awarded will be counted as hours completed only; courses for which "NC" is awarded shall not be counted as hours attempted; in neither case shall "CR" or "NC" be considered in calculating grade-point average, but in both instances the course shall be entered on the student's official academic record. A student may repeat a course for credit (CR), or a grade (A-F) after receiving a grade of "NC." A college may designate in the printed schedule, on an annual basis, a course as not available to be taken on a "CR/NC" basis. A student taking a course on a "CR/NC" basis is expected to meet the full requirements of the course as required by the instructor.

## Changing Grades

A student who wishes to appeal a final grade must initiate the procedure by the end of the fifth week of the spring semester for grades received during the preceding fall semester, and by the fifth week of the fall semester for grades received during the preceding spring or summer semesters. For grades earned during the semester in which a student graduates, grade appeals must be initiated and completed before the degree is posted to the student's permanent record. Students must first review the matter with the instructor. If the matter is not resolved, or if the instructor is not available, the student must submit a written appeal to the department chair or school director.

Re-examination for the purpose of raising a grade is not permitted.

## Audit Policy

A student choosing to audit a course must elect to do so at the time of registration. The student pays the enrollment fee and may be expected to do all the work prescribed for students taking the course for credit, except that of taking the examination. Any faculty member may initiate withdrawal for a student not meeting these expectations.

## Importance of Grades

Grades determine whether a student is either eligible or ineligible to remain at the University. Eligibility to participate in the 200-plus registered student organizations and other co-curricular activities is dependent on the student's maintenance of good academic standing at the University. A student who has not been placed on probation or dismissed from the University is deemed to be in good academic standing. Some selective organizations such as honoraries and varsity athletics require special eligibility criteria. On the basis of grades, a student receives opportunities to take additional courses to accelerate academic progress. Acceptance for admission to a college depends on the approval of the dean of the college which the student chooses to enter and on the student's academic performance to date.

## President's and Dean's List

Undergraduate students who carry 12 graded credits or more without receiving an "Incomplete" or "In Progress" grade and earn a grade point average of 4.0 are eligible for inclusion on the President's List. This is an undergraduate academic honor recognizing excellence in the classroom prior to the completion of the degree. Developmental Program course load hours do not carry academic credit toward a degree and are not considered in determining President's List honors but do count in computing a student's course load for financial aid or student employment, and are used in probation and dismissal decisions.

Undergraduate students who carry 12 graded credits or more without receiving an "Incomplete" or "In Progress" grade and earn a grade point average of 3.5 or better are eligible for inclusion on the Dean's List of their respective college. This is an undergraduate academic honor recognizing excellence in the classroom prior to the completion of the degree. Developmental Program course load hours do not carry academic credit toward a degree and are not considered in determining Dean's List honors but do count in computing a student's course load for financial aid or student employment, and are used in probation and dismissal decisions.

## Probation-Dismissal

Probation is a warning to the student whose academic record is unsatisfactory and who is in danger of being dismissed from the university. A student may, however, be dismissed without having previously been placed on probation.

An undergraduate student whose cumulative GPA falls below 2.0 is placed on academic probation and is subject to such academic action, including but not limited to mandatory repeat for change of grade, credit hour restriction, and student success programming, as may be imposed by the dean of the student's degree-granting college, or by the dean's designee.

An undergraduate student whose cumulative grade point average falls below 2.0 for consecutive semesters (excluding summer semesters) will be evaluated at the end of each of the second and third consecutive semesters for dismissal from the university by the dean of the student's degree-granting college, or by the dean's designee. The dean may retain an undergraduate student for the third or fourth consecutive semester if the term grade point average has improved significantly but the cumulative grade point average remains below 2.0. An undergraduate student whose cumulative grade point average falls below 2.0 for each of four consecutive semesters will be dismissed from the university.

An undergraduate student not yet enrolled in a degree-granting college will be evaluated for dismissal, according to the criteria above, by the head of the division of student success, or by the head's designee.

Decisions regarding retention or dismissal will be made by the dean of a student's degree-granting college, or by the dean's designee.

To be eligible for readmission, previously dismissed students must have either:

- completed at a regionally accredited college or university at least 18 credit hours, with a 2.5 GPA or higher, that will apply toward a degree at the University of Akron or,
- waited a minimum of two calendar years from the date of dismissal and submitted a written statement outlining the causes of poor academic performance and steps taken toward improvement.

Students readmitted on probation will be evaluated for retention or dismissal immediately following the first semester after readmission, with the option to retain for one additional semester if the term GPA has improved significantly but the cumulative GPA remains below 2.0.

## Repeating Courses

Any course may be repeated twice by an undergraduate student subject to the following conditions:

- To secure a grade ("A-F") a student may repeat a course in which the previously received grade was a "C-," "D+," "D," "D-," or "F," "CR," "NC," or "AUD." Registrations under the "CR/NC" option are subject to the restrictions in the "CR/NC" policy
- To secure a "CR," a student may repeat a course in which the previously received grade was a "NC." Registrations under the "CR/NC" option are subject to the restrictions in the "CR/NC" policy
- To secure a grade ("A-F"), "CR," "NC," a student may repeat a course in which the previously received grade was an "AUD." Registrations under the "CR/NC" option are subject to the restrictions in the "CR/NC" policy
- A graded course ("A-F") may not be repeated for a grade of "AUD"
- A course taken under the "CR/NC" option may not be repeated for a grade of "AUD"
- With the dean's permission, a student may substitute another course if the previous course is no longer offered. Courses must be repeated at The University of Akron
- Grades for all attempts at a course will appear on the student's official academic record
- Only the grade for the last attempt will be used in the grade-point average
- For purposes of this section, credit for this course or its equivalent will apply only once toward meeting degree requirements

## Course Substitution Policy

The University of Akron recognizes that some students may be unable to satisfy specific coursework requirements for degree completion. Therefore, the student may request a course substitution. A course substitution is not appropriate when the specific course(s) is essential to the degree being sought and a substitution would represent a fundamental alteration of the program. The process for requesting a course substitution is as follows:

The student contacts his/her advisor and requests a course substitution.

- If the request(s) is based on a disability, the Office of Accessibility shall be consulted and shall assist the advisor and student in the facilitation of a solution
- If the advisor approves, an appropriate substitution is agreed upon and the recommendation with rationale is forwarded to the department chair or school director for approval
- The student shall be advised of and sign an informed consent form which is forwarded with the recommendation and which states the following:
  - You have been advised that this substitution is only applicable in this college and is not binding on any other college within the University
  - You understand that a course substitution may ultimately affect further studies at this university or other colleges and universities including graduate studies
- If the department chair or school director approves, the recommendation with rationale is forwarded to the Dean
- If the Dean approves, the office of the Dean shall notify all parties concerned
- Approved course substitutions should be entered in the Degree Progress Report by the appropriate office
- If the Dean disapproves, the student may request a review by the Senior Vice President and Provost and Chief Operating Officer

## Academic Reassessment

### Due to Leave of Absence

To be eligible for academic reassessment due to leave of absence, a student shall:

- Have not attended The University of Akron for at least two calendar years. A semester or summer session in which the student received all "WD" grades cannot be counted as part of the separation period; and
- Have re-enrolled and maintained a grade point average of 2.5 or higher for the first 24 letter-graded ("A" through "F") hours attempted at The University of Akron; and
- Have not used academic reassessment due to leave of absence before at The University of Akron; and
- Submit a written request for academic reassessment to the student's college dean's office. To apply for academic reassessment, the student shall complete the appropriate form in consultation with his/her academic advisor. The Office of the University Registrar shall confirm eligibility and make the adjustments to the student's academic record.
- The student begins with a new cumulative grade point average and adjusted credit hour totals. Credit hours are defined as semester hours. Only grades with a "C-" or lower may be reassessed. The student, in consultation with his/her academic advisor, shall identify the courses to be reassessed. For reassessment due to leave of absence, grades to be reassessed shall come from the time period prior to the student's re-enrollment following the two-year absence.
- Grades earned for the courses that are reassessed at The University of Akron are excluded from the calculation of the cumulative "GPA," but will remain on the student's official transcript
- Credit hours earned for courses at The University of Akron during the previous enrollment with a grade of "C" or better, including "CR," are retained
- For reassessment due to leave of absence, credit hours from all reassessed courses taken during the previous enrollment at The

University of Akron with a grade of “C-” or lower are removed from the calculation of the cumulative “GPA” (although the grades are retained on the academic transcript with the notation “academic reassessment policy”)

## Due to Change of Major

To be eligible for academic reassessment due to change of major, a student shall:

- Have changed major during the first sixty credit hours attempted at The University of Akron; and
- Have maintained a grade point average of 2.5 or higher for the first 24 letter-graded (“A” through “F”) hours attempted subsequent to the student’s change of major; and
- Have not used academic reassessment due to change of major before at The University of Akron; and
- Submit a written request for academic reassessment to the student’s college dean’s office. To apply for academic reassessment, the student shall complete the appropriate form in consultation with his/her academic advisor. The Office of the University Registrar shall confirm eligibility and make the adjustments to the student’s academic record.
- The student begins with a new cumulative grade point average and adjusted credit hour totals. Credit hours are defined as semester hours. Only grades with a “C-” or lower may be reassessed. The student, in consultation with his/her academic advisor, shall identify the courses to be reassessed. For reassessment due to change of major, grades to be reassessed shall come from the time period prior to the student’s change of major.
- Grades earned for the courses that are reassessed at The University of Akron are excluded from the calculation of the cumulative “GPA,” but will remain on the student’s official transcript
- Credit hours earned for courses at The University of Akron during the previous enrollment with a grade of “C” or better, including “CR,” are retained
- For reassessment due to change of major, up to three courses may be reassessed. Credit hours from all reassessed courses taken prior to the change of major at The University of Akron with a grade of “C-” or lower are removed from the calculation of the cumulative “GPA” (although the grades are retained on the academic transcript with the notation “academic reassessment policy”)

### The Office of the University Registrar will apply the following provisions of the academic reassessment policy:

- When counting the first 24 credits attempted, if the 24th credit is part of other credits earned during a semester, the entire number of credits earned for that semester will be calculated into the grade-point average
- An undergraduate student may utilize each academic reassessment policy only one time in his/her career at The University of Akron
- This policy applies to undergraduate course work taken at The University of Akron and only for undergraduate students earning a first undergraduate degree
- Any academic probation, suspensions or dismissals from reassessed semesters shall not be forgiven. They will count when the probation-dismissal policy is applied to the student’s record after readmission

- A student may seek an exception to this policy through an appeal to the senior vice president and provost and chief operating officer whose decision will be final

## Academic Misconduct

It is each student’s responsibility to know what constitutes academic misconduct. The University of Akron’s Code of Student Conduct (<http://www.uakron.edu/ogc/UniversityRules/pdf/41-01.pdf>) defines academic misconduct as any activity that compromises the academic integrity of the student and university, and undermines the educational process. Academic misconduct includes but is not limited to:

Cheating, including but not limited to:

- Use of unauthorized assistance in taking quizzes, tests, or examinations.
- Submitting substantially the same work to satisfy requirements for one course or academic requirement that has been submitted in satisfaction of requirements for another course or academic requirement, without permission of the faculty member of the course for which the work is being submitted or supervising authority for the academic requirement.
- Use of sources prohibited by the faculty member in writing papers, preparing reports, solving problems, or carrying out other assignments.
- Inappropriate acquisition and/or improper distribution of tests or other academic materials without the permission of the faculty member.
- Engaging in any behavior specifically prohibited by a faculty member in the course syllabus or during class discussion.

Plagiarism, including but not limited to:

- Intentional or unintentional representation of ideas or works of another author or creator in whole or in part as the student’s own without properly citing the original source for those ideas or works.
- The use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials.

An incident of academic misconduct may be resolved and a sanction assessed in a meeting between the faculty member and student. The faculty member should confer with the Department of Student Conduct and Community Standards (<https://www.uakron.edu/sja/>) to determine whether any prior academic misconduct has occurred. If there is no history of prior academic misconduct and the student and faculty member agree on the facts of the incident and the proposed sanction, the matter can be resolved informally through the use of the Academic Misconduct Notification Form located on the Department of Student Conduct and Community Standards webpage (<https://www.uakron.edu/sja/>). If agreement has been reached and the Academic Misconduct Notification Form has been signed by both the student and faculty member a copy should be retained by the faculty member and student, and the original should be sent to the Department of Student Conduct and Community Standards (<https://www.uakron.edu/sja/>).

If the student and faculty member disagree about the facts of the incident or the proposed sanction, or the student chooses not to sign the form, or the faculty member chooses not to resolve the matter informally, then the matter should be referred to the Department of Student Conduct and Community Standards for adjudication as provided in the Code

of Student Conduct (<http://www.uakron.edu/ogc/UniversityRules/pdf/41-01.pdf>).

For additional information or resources concerning academic misconduct or the Code of Student Conduct, please contact the Department of Student Conduct and Community Standards (<https://www.uakron.edu/sja/>).

Department of Student Conduct and Community Standards  
Simmons Hall, Room 302  
(330)972-6380  
studentconduct@uakron.edu  
[www.uakron.edu/studentconduct](http://www.uakron.edu/studentconduct) (<http://www.uakron.edu/studentconduct/>)

## Transient Work at Another University

The purpose of transient work is to provide The University of Akron student with opportunity to:

1. take a course that is not offered at The University of Akron; or,
2. if the student is away in the summer, to take a course in a distant location; or,
3. in rare cases, a student who is only a few credits shy of graduation and must leave The University of Akron due to extenuating circumstances.

These courses will be listed on The University of Akron official academic record. Each course will reflect the course number, title, grade and credit value; no grade-point value will appear on the record and the grade for such course will not be included in The University of Akron grade-point calculation. The name of the institution will be listed on The University of Akron official academic record as well as the date that the coursework was taken.

Any University of Akron student who wishes to take coursework at another regionally accredited institution of higher education must receive prior approval by the academic dean of the appropriate unit if the student intends to apply this coursework toward a degree at The University of Akron.

- A student can make an official request for transient credit by submitting a Transient Permission Form. If the coursework taken at another institution will be used to satisfy The University of Akron General Education requirements, prior written permission to take the course must be received from the office responsible for transfer student services unless the course has been previously approved as an equivalency by The University of Akron.
- If the coursework taken at another institution will be used to satisfy a degree granting college degree requirement or as elective credit, prior written permission to take the course must be received from the dean of the student's degree granting college unless the course has been previously approved as an equivalency by The University of Akron.
- A student must earn a grade of "D-" or better in the course at the other institution in order for the credits to apply toward the student's degree requirements at The University of Akron unless otherwise specified by the degree-granting college. The student must provide the official transcript for the course in order to receive credit.
- No more than 18 total credit hours of transient work may be approved prior to the granting of a baccalaureate degree. No more than nine total credit hours of transient work may be approved prior to the granting of an associate degree.

- Approvals for transient attendance at other institutions are valid for only the requested term and are subject to all restrictions of the dean of the college approving the request for transient credit.
- Students who are on probation, dismissed or are in the last 30 hours of a baccalaureate degree or are in the last 15 hours of an associate degree are restricted or denied transient permission by either the dean of the degree granting college or the dean of the University College except in rare and compelling circumstances.

**Note:** Coursework taken at another institution cannot be considered for The University of Akron's *Repeat for Change of Grade* policy or *Academic Reassessment* policy and will not be calculated into the UA grade point average.

## Graduation Requirements

### Requirements for Baccalaureate and Associate Degrees

A candidate for the baccalaureate or the associate degree must:

- File an application for graduation online with the Office of the University Registrar; If the candidate plans to complete degree requirements at the end of the fall semester, submit an application by or before July 1; If the plan is to complete degree requirements at the end of the spring semester, submit an application by or before December 1; Submit an application by or before April 1 for Summer Commencement
- Earn a minimum of 120 credits for a baccalaureate degree, 60 credits for an associate degree (some programs of study may require more credits) with a minimum 2.00 grade point average as computed by the Office of the University Registrar for work attempted at the University consistent with the Repeating Courses policy; Some of the colleges may have by action of their faculties, adopted a higher grade-point average for graduation with a degree from that college; The grade point average achieved at the time of completion of requirements for a degree will include repeated and reassessed courses which will be used to calculate graduation honors
- Meet all degree requirements including grade-point averages that are in force at the time a transfer is made to a degree-granting college; If the student should transfer to another major, then the requirements should be those in effect at the time of the transfer; For a student enrolled in an associate degree program, the requirements shall be those in effect upon entrance into the program
- For purposes of meeting foreign language requirements, all foreign language and "American Sign Language" courses can fulfill the foreign language requirement for those programs that have a non-specific foreign language requirement; For those majors or programs that specify specific language requirements, the applicable specific language requirement must be met to satisfy graduation requirements for that major or program
- Be approved for graduation by appropriate college faculty, Faculty Senate and Board of Trustees
- Complete the requirements for a degree in not more than five calendar years from the date of transfer, as defined below; In the event the student fails to complete the degree requirements within five calendar years from the date of transfer, the University reserves the right to make changes in the number of credits and/or courses required for a degree
- The date of transfer for a student in a baccalaureate program will be the date that the student is accepted by the degree-granting college;

For a student enrolled in an associate degree program, the date of transfer refers to the date of entrance into the program

- Earn the last 30 credits in the baccalaureate degree total or 15 credits in the associate degree total in residence at The University of Akron unless excused in writing by the dean of the college in which the student is enrolled
- Earn a minimum of 30 credits in the baccalaureate degree total or 15 credits in the associate degree total in residence at The University of Akron
- If a student who has transferred from another institution wishes to present for the student's major fewer than 14 credits earned at The University of Akron, written permission of both the dean and the head of the department concerned is required
- Discharge all other obligations at the University

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## Requirements for Additional Baccalaureate and Associate Degrees

- Meet all of the requirements given above - Requirements for Baccalaureate and Associate Degrees
- Earn a minimum of 30 credits which have not counted toward a baccalaureate degree, for an additional baccalaureate degree, or 15 credits which have not counted toward an associate degree, for an additional associate degree; These credits shall be earned in residence at The University of Akron

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## Requirements for Minor Areas of Study

The University of Akron has approved minor fields of study that may be placed on a student's record when all requirements have been completed.

The following rules apply to all minors:

- The student must complete at least 18 credits. (Note: some minors may require additional credits).
- At least six of the 18 credits must be at the 300/400 level, except where the department does not offer 300/400 level courses.
- A minimum grade-point average of 2.0 in each minor is required.
- A minor may be designated at any time during the student's career up to and including the time the degree clearance is processed.
- A minor will be placed on the student's record only at the time the student receives a baccalaureate degree and only if an application was processed.
- Courses to be applied toward the granting of a minor may not be taken credit/non-credit. A maximum of 6 bypassed credits may be used, but all other credits must be earned.
- The student must earn at least nine credits at The University of Akron in courses approved by the faculty granting the minor. Written permission of the dean and the head of the department which grants the minor is required for an exception.
- Courses required for a minor may carry prerequisites, which must be honored before the student may enroll.

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## Change of Requirements

To better accomplish its objectives and serve our students, the University reserves the right to alter, amend or revoke any rule or regulation.

The policy of the University is to give advance notice of such change, whenever feasible.

Unless the change in a rule or regulation specifies otherwise, it shall become effective immediately with respect to the student who subsequently enters the University, whatever the date of matriculation.

Without limiting the generality of its power to alter, amend or revoke rules and regulations, the University reserves the right to make changes in degree requirements of the student enrolled prior to the change by:

- Altering the number of credits and/or courses required in a major field of study
- Deleting courses
- Amending courses by increasing or decreasing the credits of specific courses, or by varying the content of specific courses
- Offering substitute courses in the same or cognate fields

The Dean of the college, in consultation with the Department or Division Head of the student's major field of study, may grant waivers in writing if a change in rules affects degree requirements of a student enrolled before the change was effective. The action of the Dean of the college in granting or refusing a waiver shall be reviewed by the Senior Vice President and Provost and Chief Operating Officer on his motion, at the request of the Dean of the college of the student affected, or at the request of the student.

Credit and grade-point requirements for graduation as adopted by the college faculties are listed in this bulletin.

When deemed necessary and only in rare and unique circumstances that do not undermine the overall integrity of the various graduation requirements, the Senior Vice President and Provost and Chief Operating Officer, in consultation with the President, may waive specific requirements contained in this rule and report such waivers to the Board of Trustees for its information.

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## Graduation with Honors

Honors announced at the commencement ceremony are based on the grade point average as of one week prior to commencement. The number of credit hours for the commencement ceremony includes the total number of credit hours completed at The University of Akron plus the number of credit hours in progress at The University of Akron. Official honors are determined after all final grades have been reported on the academic record. The official honors designation will be posted to the diploma and academic transcript.

- The grade point average will be rounded to the nearest hundredth for the purposes of determining graduation with honors.
- Where deemed necessary, the Senior Vice President and Provost and Chief Operating Officer may waive these requirements for rare and unique circumstances and report such waivers to the Board of Trustees for its information.

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## Baccalaureate Degree

For a student who is being awarded a baccalaureate degree and who has completed 60 or more credits at The University of Akron, the degree:

Will be Designated	If the Overall Grade Point Average Is
Cum Laude	between 3.4 and 3.59
Magna Cum Laude	between 3.60 and 3.79
Summa Cum Laude	3.80 or higher

- A student who holds a baccalaureate degree from an accredited institution, including The University of Akron, and who earns a subsequent baccalaureate degree at The University of Akron per the academic policy requirements for second degrees, is eligible to graduate with honors.

## Associate Degree

For a student who is being awarded an associate degree and who has completed 30 or more credits at The University of Akron and for a student who is being awarded a baccalaureate degree who has completed between 30 - 59.9 credits at The University of Akron, the degree:

Will be Designated	If the Overall Grade Point Average Is
with distinction	between 3.4 and 3.59
with high distinction	between 3.60 and 3.79
with highest distinction	3.80 or higher

- A student who holds an associate degree from an accredited institution, including The University of Akron, and who earns a subsequent associate degree at The University of Akron per the academic policy requirements for second degrees, is eligible to graduate with honors.



# GENERAL EDUCATION

## General Education Program

General Education provides a common intellectual experience for all university students. The program develops strong communication and critical thinking skills, a broad understanding of disciplinary areas, and the knowledge and skills necessary for responsible citizenship in an interconnected world. General Education is the foundation of all undergraduate degree programs at The University of Akron.

## Program Learning Outcomes

### Intellectual Skills

Students will gain intellectual skills and practice them in increasingly challenging contexts throughout the general education program and the major, including:

- Effective communication
- Information literacy
- Critical and complex reasoning
- Integration and application of knowledge

### Breadth of Knowledge

Students will gain broad knowledge and practice disciplinary methods of inquiry in the Arts, Humanities, Natural Sciences, and Social Sciences.

### Responsible Citizenship

Students will gain skills and knowledge required for responsible citizenship through the analysis of diversity within domestic and global contexts, and the application of interdisciplinary perspectives to a complex social issue

## Integration with Major

The UA General Education program is designed to support and enhance the major course of study. Majors may require particular General Education coursework, and some major courses may fulfill General Education requirements. Students should consult their program curriculum guides and Degree Progress Reports, as well as meet with an advisor, for the recommended General Education courses to take.

## Transfer and Alternative Credit Options

Student may fulfill General Education requirements through appropriate transfer coursework from accredited institutions of higher education, external credit-conferring testing programs such as the College Board Advanced Placement and College Level Examination Program (CLEP), and other programs. For more information, see the transfer policies (p. 14).

Students who plan to transfer to another Ohio public college or university should select coursework from the Ohio Transfer Module (<https://www.ohiohighered.org/transfer/transfermodule/modules/>). This set of coursework will satisfy specified General Education requirements at any public institution.

## Requirements

Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse

perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

### Tier 1: Academic Foundations—12 credits

- Quantitative Reasoning (3)
- Speaking (3)
- Writing (6)

### Tier 2: Disciplinary Areas—22 credits

- Arts and Humanities (9)
- Natural Science (7)
- Social Science (6)

### Tier 3: Tags—4 courses

- Complex Systems Affecting Individuals in Society
- Critical Thinking
- Domestic Diversity
- Global Diversity

## Requirements for Associate Degrees

Students in the Associate of Arts and Associate of Sciences degree programs must complete the following 36 credit-hour set of General Education coursework:

Code	Title	Hours
	Quantitative Reasoning	3
	Speaking	3
	Writing	6
	Arts and Humanities	9
	including one course from each	
	Natural Science	7
	including one lab	
	Social Science	6
	Additional General Education credits to equal 36 credit hours	2
	<b>Total Hours</b>	<b>36</b>

Students in applied associate degree programs must complete the following 15 credit-hour set of General Education coursework:

Code	Title	Hours
	Quantitative Reasoning	3
	Speaking	3
	Writing	3
	Natural Science	3
	Social Science	3
	<b>Total Hours</b>	<b>15</b>

## Curriculum

### Tier I: Academic Foundations

#### Quantitative Reasoning - 3 credit hours

Course	Fulfills Requirements For
2030:152 Technical Mathematics II	Tier 1 - Quantitative Reasoning
2030:153 Technical Mathematics III	Tier 1 - Quantitative Reasoning
2030:154 Technical Mathematics IV	Tier 1 - Quantitative Reasoning

2030:161 Mathematics for Modern Technology	Tier 1 - Quantitative Reasoning
2030:255 Technical Calculus I	Tier 1 - Quantitative Reasoning, Tier 3 - Critical Thinking
2030:356 Technical Calculus II	Tier 1 - Quantitative Reasoning
3450:135 Mathematics for Everyday Life	Tier 1 - Quantitative Reasoning
3450:145 Algebra for Calculus	Tier 1 - Quantitative Reasoning
3450:149 Precalculus Mathematics	Tier 1 - Quantitative Reasoning
3450:208 Introduction to Discrete Mathematics	Tier 1 - Quantitative Reasoning
3450:210 Calculus with Business Applications	Tier 1 - Quantitative Reasoning
3450:215 Concepts of Calculus	Tier 1 - Quantitative Reasoning
3450:221 Analytic Geometry-Calculus I	Tier 1 - Quantitative Reasoning
3450:222 Analytic Geometry-Calculus II	Tier 1 - Quantitative Reasoning
3450:223 Analytic Geometry-Calculus III	Tier 1 - Quantitative Reasoning
3450:240 Mathematical Foundations for Early Childhood Educators	Tier 1 - Quantitative Reasoning
3450:312 Linear Algebra	Tier 1 - Quantitative Reasoning
3450:335 Introduction to Ordinary Differential Equations	Tier 1 - Quantitative Reasoning
3470:250 Statistics for Everyday Life	Tier 1 - Quantitative Reasoning
3470:260 Basic Statistics	Tier 1 - Quantitative Reasoning
3470:261 Introductory Statistics I	Tier 1 - Quantitative Reasoning
3470:262 Introductory Statistics II	Tier 1 - Quantitative Reasoning

*Students who successfully complete a mathematics or statistics course with a prerequisite on the above list satisfy the Quantitative Reasoning requirement.*

### Speaking - 3 credit hours

Course	Fulfills Requirements For
2420:263 Professional Communications and Presentations	Tier 1 - Speaking
7600:105 Introduction to Public Speaking	Tier 1 - Speaking
7600:106 Effective Oral Communication	Tier 1 - Speaking

### Writing - 6 credit hours

#### First Course

Course	Fulfills Requirements For
2020:121 English	Tier 1 - Writing First Course
3300:110 English Composition I + Workshop	Tier 1 - Writing First Course
3300:111 English Composition I	Tier 1 - Writing First Course

#### Second Course

Course	Fulfills Requirements For
2020:222 Technical Report Writing	Tier 1 - Writing Second Course
3300:112 English Composition II	Tier 1 - Writing Second Course

*Students who are placed in the second writing course and successfully complete it satisfy the Writing requirement.*

## Tier II: Disciplinary Area Courses

### Fine Arts and Humanities - 9 credit hours

#### Fine Arts - at least one course

Course	Fulfills Requirements For
3300:283 Film Appreciation	Tier 2 - Arts
7100:100 Survey of History of Art I	Tier 2 - Arts, Tier 3 - Critical Thinking
7100:101 Survey of History of Art II	Tier 2 - Arts, Tier 3 - Global Diversity
7100:210 Visual Arts Awareness	Tier 2 - Arts
7500:154 Music Literature I	Tier 2 - Arts
7500:201 Exploring Music: Bach to Rock	Tier 2 - Arts
7800:100 Experiencing Theatre	Tier 2 - Arts
7800:264 Playscript & Performance Analysis	Tier 2 - Arts
7900:200 Viewing Dance	Tier 2 - Arts

#### Humanities - at least one course

Course	Fulfills Requirements For
3200:230 Sports & Society in Ancient Greece and Rome	Tier 2 - Humanities
3200:289 Mythology of Ancient Greece	Tier 2 - Humanities
3300:252 Shakespeare & His World	Tier 2 - Humanities
3300:281 Fiction Appreciation	Tier 2 - Humanities
3400:200 Empires of the Ancient World	Tier 2 - Humanities, Tier 3 - Global Diversity
3400:210 Humanities in the Western Tradition from Ancient Times to 1500	Tier 2 - Humanities, Tier 3 - Critical Thinking
3400:221 Humanities in the World since 1300	Tier 2 - Humanities, Tier 3 - Global Diversity
3501:210 Arabic Culture through Film	Tier 2 - Humanities
3502:210 Chinese Culture Through Film	Tier 2 - Humanities
3560:210 Japanese Culture through Film	Tier 2 - Humanities, Tier 3 - Global Diversity
3580:250 Hispanic Literature in Translation	Tier 2 - Humanities
3600:101 Introduction to Philosophy	Tier 2 - Humanities, Tier 3 - Critical Thinking
3600:120 Introduction to Ethics	Tier 2 - Humanities, Tier 3 - Critical Thinking
3600:125 Theory & Evidence	Tier 2 - Humanities, Tier 3 - Critical Thinking
3600:150 Critical Thinking	Tier 2 - Humanities, Tier 3 - Critical Thinking
3600:170 Introduction to Logic	Tier 2 - Humanities, Tier 3 - Critical Thinking
3600:211 History of Ancient Philosophy	Tier 2 - Humanities, Tier 3 - Critical Thinking

Students must take at least one Arts course and at least one Humanities course. The second Arts or Humanities course may be in the same department or in a different one.

### Natural Science - 7 credit hours, including one lab

Course	Fulfills Requirements For
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3100:106 Exploring Biology	Tier 2 - Natural Science
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3100:108 Introduction to Biological Aging	Tier 2 - Natural Science
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3100:200 Human Anatomy & Physiology I	Tier 2 - Natural Science
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3100:202 Human Anatomy & Physiology II	Tier 2 - Natural Science
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3150:110 Introduction to General, Organic & Biochemistry I (Lecture)	Tier 2 - Natural Science
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3150:112 Introduction to General, Organic & Biochemistry II (Lecture)	Tier 2 - Natural Science
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3150:151 Principles of Chemistry I	Tier 2 - Natural Science
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3150:153 Principles of Chemistry II	Tier 2 - Natural Science
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3370:100 Earth Science	Tier 2 - Natural Science
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3370:121 Dinosaurs	Tier 2 - Natural Science
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3370:122 Mass Extinctions & Geology	Tier 2 - Natural Science
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3370:130 Geologic Record of Climate Change	Tier 2 - Natural Science
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3370:133 Caves	Tier 2 - Natural Science
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3370:135 Geology of Energy Resources	Tier 2 - Natural Science
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3370:137 Earth's Atmosphere & Weather	Tier 2 - Natural Science
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3370:171 Introduction to the Oceans	Tier 2 - Natural Science
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3370:200 Environmental Geology	Tier 2 - Natural Science
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3370:211 Introduction to Environmental Science	Tier 2 - Natural Science
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3650:163 Technical Physics: Electricity & Magnetism	Tier 2 - Natural Science
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3650:164 Technical Physics: Heat & Light	Tier 2 - Natural Science
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7760:133 Nutrition Fundamentals	Tier 2 - Natural Science
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Course	Fulfills Requirements For
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2780:206 Applied Human Anatomy & Physiology I	Tier 2 - Natural Science w/LAB
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2780:207 Applied Human Anatomy & Physiology II	Tier 2 - Natural Science w/LAB
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2780:210 Applied Human Anatomy & Physiology Lab I	Tier 2 - Natural Science w/LAB
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2780:211 Applied Human Anatomy & Physiology Lab II	Tier 2 - Natural Science w/LAB
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2820:105 Basic Chemistry	Tier 2 - Natural Science w/LAB
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2820:111 Introductory Chemistry	Tier 2 - Natural Science w/LAB
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2820:112 Introductory & Analytical Chemistry	Tier 2 - Natural Science w/LAB
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3100:103 Natural Science: Biology	Tier 2 - Natural Science w/LAB
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3100:111 Principles of Biology I	Tier 2 - Natural Science w/LAB
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3100:112 Principles of Biology II	Tier 2 - Natural Science w/LAB
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3100:130 Principles of Microbiology	Tier 2 - Natural Science w/LAB
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3100:265 Introductory Human Physiology	Tier 2 - Natural Science w/LAB
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3150:101 Chemistry for Everyone	Tier 2 - Natural Science w/LAB
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3150:111 Introduction to General, Organic & Biochemistry I (Laboratory)	Tier 2 - Natural Science w/LAB
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3150:113 Introduction to General, Organic & Biochemistry II (Laboratory)	Tier 2 - Natural Science w/LAB
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3150:152 Principles of Chemistry I Laboratory	Tier 2 - Natural Science w/LAB
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3230:151 Human Evolution	Tier 2 - Natural Science w/LAB
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3370:101 Introductory Physical Geology	Tier 2 - Natural Science w/LAB
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3370:102 Introductory Historical Geology	Tier 2 - Natural Science w/LAB
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3370:201 Exercises in Environmental Geology I	Tier 2 - Natural Science w/LAB
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3370:203 Exercises in Environmental Geology II	Tier 2 - Natural Science w/LAB
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3370:230 Mineral Science	Tier 2 - Natural Science w/LAB
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3650:130 Descriptive Astronomy	Tier 2 - Natural Science w/LAB
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3650:133 Music, Sound & Physics	Tier 2 - Natural Science w/LAB
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3650:137 Light	Tier 2 - Natural Science w/LAB
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3650:160 Technical Physics: Mechanics	Tier 2 - Natural Science w/LAB
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3650:161 Technical Physics: Mechanics I	Tier 2 - Natural Science w/LAB
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3650:162 Technical Physics: Mechanics II	Tier 2 - Natural Science w/LAB
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3650:261 Physics for Life Sciences I	Tier 2 - Natural Science w/LAB
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3650:262 Physics for Life Sciences II	Tier 2 - Natural Science w/LAB
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3650:291 Elementary Classical Physics I	Tier 2 - Natural Science w/LAB
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3650:292 Elementary Classical Physics II	Tier 2 - Natural Science w/LAB
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*A majors-track course in the natural sciences can substitute for a general education natural science course.*

*Students may fulfill the Natural Sciences requirement with any coursework that adds up to seven credit hours and includes a lab, using courses from the same department or different ones.*

### Social Science - 6 credit hours

Course	Fulfills Requirements For
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2040:242 American Urban Society	Tier 2 - Social Science
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2040:243 Contemporary Global Issues	Tier 2 - Social Science, Tier 3 - Global Diversity
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2040:247 Survey of Basic Economics	Tier 2 - Social Science, Tier 3 - Critical Thinking
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3002:252 The Black Experience 1619-1918	Tier 2 - Social Science, Tier 3 - Domestic Diversity
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3002:253 The Black Experience 1918-Present	Tier 2 - Social Science, Tier 3 - Domestic Diversity	3230:460 Field Methods in Cultural Anthropology	Tier 3 - Complex Systems
3002:254 The Black Experience from 1619-1877	Tier 2 - Social Science, Tier 3 - Domestic Diversity	3250:385 Economics of Natural Resources & the Environment	Tier 3 - Complex Systems
3002:256 Diversity in American Society	Tier 2 - Social Science, Tier 3 - Domestic Diversity	3250:430 Labor Market and Social Policy	Tier 3 - Complex Systems
3002:257 The Black Experience 1877 - 1954	Tier 2 - Social Science, Tier 3 - Domestic Diversity	3370:421 Coastal Geology	Tier 3 - Complex Systems
3002:258 The Black Experience 1954 - Present	Tier 2 - Social Science, Tier 3 - Domestic Diversity	3370:443 Rivers	Tier 3 - Complex Systems
3230:150 Human Cultures	Tier 2 - Social Science, Tier 3 - Global Diversity	3370:452 Geology and Environmental Science Service Learning	Tier 3 - Complex Systems
3230:251 Human Diversity	Tier 2 - Social Science, Tier 3 - Global Diversity	3580:308 Spanish Composition: Health Professions & First Responders	Tier 3 - Complex Systems
3240:100 Introduction to Archaeology	Tier 2 - Social Science	3600:207 Food Ethics	Tier 3 - Complex Systems
3250:100 Introduction to Economics	Tier 2 - Social Science	3600:361 Biomedical Ethics	Tier 3 - Complex Systems
3250:200 Principles of Microeconomics	Tier 2 - Social Science	3600:365 Environmental Ethics	Tier 3 - Complex Systems
3250:244 Introduction to Economic Analysis	Tier 2 - Social Science	3600:366 Engineering Ethics	Tier 3 - Complex Systems
3350:100 Introduction to Geography	Tier 2 - Social Science	3750:425 Psychology of Hate	Tier 3 - Complex Systems
3400:250 U.S. History to 1877	Tier 2 - Social Science, Tier 3 - Domestic Diversity	3760:401 American Families in Poverty	Tier 3 - Complex Systems
3400:251 U.S. History since 1877	Tier 2 - Social Science, Tier 3 - Domestic Diversity	3850:320 Social Inequalities	Tier 3 - Complex Systems
3400:296 Global Societies: Latin America	Tier 2 - Social Science, Tier 3 - Global Diversity	3850:330 Criminology	Tier 3 - Complex Systems
3400:297 Global Societies: Middle East	Tier 2 - Social Science, Tier 3 - Global Diversity	3850:342 Sociology of Health & Illness	Tier 3 - Complex Systems
3700:100 Government & Politics in the United States	Tier 2 - Social Science	3850:433 Sociology of Deviant Behavior	Tier 3 - Complex Systems
3700:150 World Politics & Government	Tier 2 - Social Science	4300:490 Senior Design in Civil Engineering	Tier 3 - Complex Systems
3750:100 Introduction to Psychology	Tier 2 - Social Science	4400:402 Senior Design Project II - Electrical Engineering	Tier 3 - Complex Systems
3850:100 Introduction to Sociology	Tier 2 - Social Science, Tier 3 - Domestic Diversity	4450:402 Senior Design Project II - Computer Engineering	Tier 3 - Complex Systems
7750:230 Human Relations	Tier 2 - Social Science, Tier 3 - Critical Thinking	4600:461 ME Senior Design Project I	Tier 3 - Complex Systems
7750:244 Death & Dying	Tier 2 - Social Science, Tier 3 - Domestic Diversity	4600:497 Honors Project in Mechanical Engineering	Tier 3 - Complex Systems
7750:344 Death & Dying	Tier 2 - Social Science, Tier 3 - Domestic Diversity	4800:491 Biomedical Engineering Design I	Tier 3 - Complex Systems
		4900:490 Aerospace Design Project	Tier 3 - Complex Systems
		4900:497 Aerospace Honors Project	Tier 3 - Complex Systems
		5500:223 Urban Youth Mentoring	Tier 3 - Complex Systems
		8200:440 Nursing of Communities	Tier 3 - Complex Systems
		8200:445 Nursing of Communities - RN Only	Tier 3 - Complex Systems
		9821:310 Impacts of Polymers on Modern Life	Tier 3 - Complex Systems

*Students may fulfill the Social Science area requirement using courses from the same department or different ones.*

### Tier III: Tagged Courses

#### Complex Systems Affecting Individuals in Society - one course

Course	Fulfills Requirements For
2040:241 Technology & Human Values	Tier 3 - Complex Systems
3230:370 Globalization and Culture	Tier 3 - Complex Systems
3230:420 The Anthropology of Food	Tier 3 - Complex Systems
3230:457 Medical Anthropology	Tier 3 - Complex Systems

#### Critical Thinking - one course

Course	Fulfills Requirements For
2030:255 Technical Calculus I	Tier 1 - Quantitative Reasoning, Tier 3 - Critical Thinking
2040:247 Survey of Basic Economics	Tier 2 - Social Science, Tier 3 - Critical Thinking
3100:423 Population Biology	Tier 3 - Critical Thinking

3100:486 Cell Physiology Laboratory	Tier 3 - Critical Thinking	7500:371 Analytical Techniques	Tier 3 - Critical Thinking
3230:359 Anthropological Theory	Tier 3 - Critical Thinking	7600:245 Argumentation	Tier 3 - Critical Thinking
3240:400 Archaeological Theory	Tier 3 - Critical Thinking	7600:360 Theories of Rhetoric	Tier 3 - Critical Thinking
3250:226 Computer Skills for Economic Analysis	Tier 3 - Critical Thinking	7750:230 Human Relations	Tier 2 - Social Science, Tier 3 - Critical Thinking
3250:380 Money & Banking	Tier 3 - Critical Thinking	7750:349 Integrated Human Behavior and Health	Tier 3 - Critical Thinking
3250:400 Intermediate Macroeconomics	Tier 3 - Critical Thinking		
3250:410 Intermediate Microeconomics	Tier 3 - Critical Thinking	<b>Domestic Diversity - one course Course</b>	<b>Fulfills Requirements For</b>
3250:426 Applied Econometrics	Tier 3 - Critical Thinking	3001:200 Introduction to Women's Studies	Tier 3 - Domestic Diversity
3300:300 Critical Reading & Writing	Tier 3 - Critical Thinking	3002:201 Introduction to Pan-African Studies	Tier 3 - Domestic Diversity
3370:231 Silicate Mineralogy and Petrology	Tier 3 - Critical Thinking	3002:252 The Black Experience 1619-1918	Tier 2 - Social Science, Tier 3 - Domestic Diversity
3370:350 Structural Geology	Tier 3 - Critical Thinking	3002:253 The Black Experience 1918-Present	Tier 2 - Social Science, Tier 3 - Domestic Diversity
3370:444 Environmental Magnetism	Tier 3 - Critical Thinking	3002:254 The Black Experience from 1619-1877	Tier 2 - Social Science, Tier 3 - Domestic Diversity
3400:210 Humanities in the Western Tradition from Ancient Times to 1500	Tier 2 - Humanities, Tier 3 - Critical Thinking	3002:256 Diversity in American Society	Tier 2 - Social Science, Tier 3 - Domestic Diversity
3400:323 Europe from Revolution to World War, 1789-1914	Tier 3 - Critical Thinking	3002:257 The Black Experience 1877 - 1954	Tier 2 - Social Science, Tier 3 - Domestic Diversity
3600:101 Introduction to Philosophy	Tier 2 - Humanities, Tier 3 - Critical Thinking	3002:258 The Black Experience 1954 - Present	Tier 2 - Social Science, Tier 3 - Domestic Diversity
3600:120 Introduction to Ethics	Tier 2 - Humanities, Tier 3 - Critical Thinking	3230:358 Indians of North America	Tier 3 - Domestic Diversity
3600:125 Theory & Evidence	Tier 2 - Humanities, Tier 3 - Critical Thinking	3250:487 Urban Economics:Theory & Policy	Tier 3 - Domestic Diversity
3600:150 Critical Thinking	Tier 2 - Humanities, Tier 3 - Critical Thinking	3300:350 Black American Literature	Tier 3 - Domestic Diversity
3600:170 Introduction to Logic	Tier 2 - Humanities, Tier 3 - Critical Thinking	3350:350 Geography of the United States & Canada	Tier 3 - Domestic Diversity
3600:210 Logic for Lawyers	Tier 3 - Critical Thinking	3350:443 Urban Applications in GIS	Tier 3 - Domestic Diversity
3600:211 History of Ancient Philosophy	Tier 2 - Humanities, Tier 3 - Critical Thinking	3400:250 U.S. History to 1877	Tier 2 - Social Science, Tier 3 - Domestic Diversity
3600:312 History of Medieval Philosophy	Tier 3 - Critical Thinking	3400:251 U.S. History since 1877	Tier 2 - Social Science, Tier 3 - Domestic Diversity
3600:313 History of Modern Philosophy	Tier 3 - Critical Thinking	3400:350 U.S. Women's History	Tier 3 - Domestic Diversity
3600:374 Symbolic Logic	Tier 3 - Critical Thinking	3580:307 Spanish Conversation: Health Professions & First Responders	Tier 3 - Domestic Diversity
3750:110 Quantitative Methods in Psychology	Tier 3 - Critical Thinking	3600:455 Philosophy of Feminism	Tier 3 - Domestic Diversity
3750:220 Introduction to Experimental Psychology	Tier 3 - Critical Thinking	3750:250 Psychology of Diversity	Tier 3 - Domestic Diversity
3750:441 Clinical & Counseling Psychology I	Tier 3 - Critical Thinking	3750:435 Cross-Cultural Psychology	Tier 3 - Domestic Diversity
3850:301 Methods of Social Research I	Tier 3 - Critical Thinking	3750:474 Psychology of Women	Tier 3 - Domestic Diversity
4400:401 Senior Design Project I - Electrical Engineering	Tier 3 - Critical Thinking	3850:100 Introduction to Sociology	Tier 2 - Social Science, Tier 3 - Domestic Diversity
4450:401 Senior Design Project I - Computer Engineering	Tier 3 - Critical Thinking	7500:155 Music Literature II	Tier 3 - Domestic Diversity
6400:200 Foundations of Personal Finance	Tier 3 - Critical Thinking	7600:325 Intercultural Communication	Tier 3 - Domestic Diversity
6600:335 Marketing Research	Tier 3 - Critical Thinking	7750:244 Death & Dying	Tier 2 - Social Science, Tier 3 - Domestic Diversity
7100:100 Survey of History of Art I	Tier 2 - Arts, Tier 3 - Critical Thinking	7750:270 Diversity and Social Work	Tier 3 - Domestic Diversity

7750:344 Death & Dying Tier 2 - Social Science, Tier 3 - Domestic Diversity  
 7800:467 Multi-Cultural Theatre Tier 3 - Domestic Diversity

**Global Diversity - one course**

**Course**

2040:243 Contemporary Global Issues Tier 2 - Social Science, Tier 3 - Global Diversity  
 3230:150 Human Cultures Tier 2 - Social Science, Tier 3 - Global Diversity  
 3230:251 Human Diversity Tier 2 - Social Science, Tier 3 - Global Diversity  
 3230:416 Anthropology of Sex and Gender Tier 3 - Global Diversity  
 3250:460 Economics of Developing Countries Tier 3 - Global Diversity  
 3300:362 World Literatures Tier 3 - Global Diversity  
 3300:367 The Rhetoric of God Tier 3 - Global Diversity  
 3350:275 Geography of Cultural Diversity Tier 3 - Global Diversity  
 3400:200 Empires of the Ancient World Tier 2 - Humanities, Tier 3 - Global Diversity  
 3400:221 Humanities in the World since 1300 Tier 2 - Humanities, Tier 3 - Global Diversity  
 3400:292 Global Societies: Africa Tier 3 - Global Diversity  
 3400:294 Global Societies: India Tier 3 - Global Diversity  
 3400:295 Global Societies: Japan Tier 3 - Global Diversity  
 3400:296 Global Societies: Latin America Tier 2 - Social Science, Tier 3 - Global Diversity  
 3400:297 Global Societies: Middle East Tier 2 - Social Science, Tier 3 - Global Diversity  
 3400:324 Europe from World War I to the Present Tier 3 - Global Diversity  
 3400:337 France from Napoleon to De Gaulle Tier 3 - Global Diversity  
 3400:377 History of Women in Latin America Tier 3 - Global Diversity  
 3400:395 Modern Iran Tier 3 - Global Diversity  
 3400:489 Ottoman State and Society Tier 3 - Global Diversity  
 3400:499 Women and Gender in Middle Eastern Societies Tier 3 - Global Diversity  
 3520:210 French and Francophone Cultures Through Film Tier 3 - Global Diversity  
 3560:210 Japanese Culture through Film Tier 2 - Humanities, Tier 3 - Global Diversity  
 3580:360 Hispanic Culture through Film Tier 3 - Global Diversity  
 3600:200 Philosophy of World Religions Tier 3 - Global Diversity  
 3600:340 Eastern Philosophy Tier 3 - Global Diversity  
 3700:300 Comparative Politics Tier 3 - Global Diversity  
 3850:321 Population Tier 3 - Global Diversity  
 7100:101 Survey of History of Art II Tier 2 - Arts, Tier 3 - Global Diversity

7800:335 History of Theatre and Dramatic Literature: Origins through 18th Century Tier 3 - Global Diversity  
 7800:435 History of Theatre and Dramatic Literature: 1800 to Present Tier 3 - Global Diversity

**Fulfills Requirements For**

# COLLEGES AND PROGRAMS

The University of Akron offers comprehensive programs of instruction leading to the associate (two-year), bachelor's (four-year), master's (graduate), and doctoral (graduate or professional) degrees.

## Buchtel College of Arts and Sciences

- About the College (p. 40)
- College Website (<https://www.uakron.edu/bcas/>)

Buchtel College of Arts and Sciences is the largest and oldest degree-granting college at The University of Akron. In addition to providing a world-class education in an array of bachelor's, master's and doctoral degree programs, Buchtel College provides the majority of general education courses for the University. E.J. Thomas Performing Arts Hall (<https://www.uakron.edu/ej/>), the region's flagship performance venue, is home to many arts performances for the college.

Qualified students seeking hands-on career exploration experiences can enroll in internships and co-op opportunities. All students are encouraged to pursue experiential learning through curricular and co-curricular experiences on campus, in research settings, and in the community.

Students wishing to enrich their majors by completing a certificate, a minor or a double major are encouraged to do so. Interdisciplinary studies are readily available to Arts and Sciences students through the Biomedical Science major, the Humanities Division major, the Social Sciences Division majors and the Bachelor of Arts in Multidisciplinary Studies program.

The College has four administrative divisions:

- Fine Arts Division includes:
  - Mary Schiller Myers School of Art (<https://www.uakron.edu/art/>)
  - School of Dance, Theatre, and Arts Administration (<https://www.uakron.edu/dtaa/>)
  - School of Music (<https://www.uakron.edu/music/>)
- The Humanities Division includes:
  - English (<https://www.uakron.edu/english/>)
  - Modern Languages (<https://www.uakron.edu/modlang/>)
  - Philosophy (<https://www.uakron.edu/philosophy/>)
- (<https://www.uakron.edu/philosophy/>)The Natural Sciences Division includes:
  - Biology (<https://www.uakron.edu/biology/>)
  - Chemistry (<https://www.uakron.edu/chemistry/>)
  - Computer Science (<https://www.uakron.edu/computer-science/>)
  - Geosciences (<https://www.uakron.edu/geology/>)
  - Physics (<https://www.uakron.edu/physics/>)
  - Mathematics (<https://www.uakron.edu/math/>)
  - Statistics (<https://www.uakron.edu/statistics/>)
- The Social Sciences Division includes:
  - Anthropology (<https://www.uakron.edu/anthropology-classics/>)
  - Child and Family Development (<https://www.uakron.edu/child-family/>)
  - School of Communication (<https://www.uakron.edu/schlcomm/>)
  - Criminal Justice Studies (<https://www.uakron.edu/ccj/>)
  - History (<https://www.uakron.edu/history/>)
  - LeBron James Family Foundation School of Education (<https://www.uakron.edu/education/>)

- Political Science (<https://www.uakron.edu/polisci/>)
- Psychology (<https://www.uakron.edu/psychology/>)
- Public Administration and Urban Studies (<https://www.uakron.edu/paus/>) (graduate only)
- Sociology (<https://www.uakron.edu/sociology/>)

## College of Business Administration

- About the College (p. 296)
- College Website (<https://www.uakron.edu/cba/>)

The College of Business Administration (CBA) is a professional college of the University that is dedicated to teaching, business research and public service. The College is accredited by AACSB International - The Association to Advance the Collegiate Schools of Business and offers accredited baccalaureate and master's degree programs during the day and evening.

CBA is home to:

- George W. Daverio School of Accountancy (<https://www.uakron.edu/cba/departments/accountancy/>)
- Economics (<https://www.uakron.edu/economics/>)
- Finance (<https://www.uakron.edu/cba/departments/finance/>)
- Management (<https://www.uakron.edu/cba/departments/management/>)
- Marketing (<https://www.uakron.edu/cba/departments/marketing/>)

## College of Engineering and Polymer Science

- About the College (p. 353)
- College Website (<https://www.uakron.edu/engineering/>)

The College of Engineering and Polymer Science provides educational opportunities at both the undergraduate and graduate levels for students who wish to pursue careers in engineering. The faculty perform research with the purpose of contributing new knowledge to the fields encompassed by engineering principles. The College's co-op program, one of the oldest in the nation, enables student engineers to integrate classroom learning with on-the-job experience while they earn their degrees. Students can alternate semesters of paid employment in their major fields of interest with semesters on campus after they have completed five semesters of study.

## College of Health Professions

- About the College (p. 457)
- College Website (<https://www.uakron.edu/health/>)

Students in nursing, dietetics, audiology, speech-language pathology, social work and other fields learn side by side so that as professionals, it will be natural to treat patients collaboratively.

Students benefit from close college ties with such health systems as the Cleveland Clinic Foundation, Summa Health System, Akron Children's Hospital, the Northeast Ohio Medical University and the Austin BiInnovation Institute in Akron. Students engage in state-of-the-art simulation experiences, gain clinical experience and spend ample time learning collaboratively with fellow students and seasoned professionals in many disciplines.

## Williams Honors College

- About the College (p. 539)
- College Website (<https://www.uakron.edu/honors/>)

The Williams Honors College supports high achieving and highly motivated students with challenging curriculum options, honors classes, academic scholarships, priority in registration, an opportunity to live in the Honors Residence Hall Complex, and enhanced computer and study facilities. Williams Honors College students who complete the requirements of their academic majors and of the Williams Honors College with cumulative grade-point averages of at least 3.40 are recognized at graduation as Williams Honors Scholars.

## Graduate School

[www.uakron.edu/gradsch](http://www.uakron.edu/gradsch) (<http://www.uakron.edu/gradsch/>)

The Graduate School offers advanced study to students who wish further education beyond the baccalaureate degree with programs leading to the master's degree as well as the doctoral degree. A separate publication detailing admission procedures and individual study requirements for graduate work is available from the Graduate School.

### Graduate School

The University of Akron  
Polsky Building, Room 469  
Akron, OH 44325-2101

## School of Law

[www.uakron.edu/law](http://www.uakron.edu/law) (<http://www.uakron.edu/law/>)

The School of Law provides legal education through day and evening classes and full and part-time programs leading to the Juris Doctor degree. JD candidates typically begin studies in the fall semester, but they may begin in January. They may obtain Certificates in Litigation, Constitutional Law, Intellectual Property, and Health Law. JD candidates may also pursue the following joint degrees with other colleges: JD/MBA, JD/MTax, or JD/MSA in Financial Forensics (with the College of Business Administration), JD/MPA (Master of Public Administration, with the Department of Public Administration and Urban Studies), JD/MAP (Master of Applied Politics, with the Bliss Institute). The School of Law also offers an advanced degree, the LL.M. in Intellectual Property. JD students may enroll in the Joint JD/LL.M. Program, in which they can earn both degrees in three years. Otherwise, an applicant for the LL.M. program must have a JD degree from an American law school or an equivalent degree from a foreign law school. An applicant to the JD program must take the Law School Admission Test and have a baccalaureate degree from an accredited college or university for JD admission. No particular course of undergraduate study is required for admission. Also, an applicant with a foreign law degree may apply for an accelerated program to receive the JD in two years. The School of Law has recently added a Masters in the Studies of Law. An applicant to the MSL program is not required to take the Law School Admission Test. A separate publication detailing admission requirements and the procedure for applying may be obtained by calling (330)972-7331, or (800) 4-AKRON-U, or by e-mail: [lawadmissions@uakron.edu](mailto:lawadmissions@uakron.edu).

## Buchtel College of Arts and Sciences

### College Requirements

#### Admission

The Buchtel College of Arts and Sciences admits current University students who are not already in the college if they have satisfied the following criteria:

- Completed a minimum of 30 semester credit hours
- Completed at least 6 credits of English Composition for the general education requirement
- Completed at least 3 credits of mathematics or statistics applicable to the general education requirement
- Have a minimum grade-point average of 2.00 in all work attempted in the major field, including transfer work until 30 UA credits are earned (excluding Political Science which requires 2.2)
- Have a minimum grade-point average of 2.00 in all University work, including transfer work until 30 UA credits are earned (excluding Political Science, English, and Sociology which require 2.2; and excluding Communication which requires 2.1)
- Computer Science students must successfully complete 3450:208 Introduction to Discrete Mathematics and 3450:221 Analytic Geometry-Calculus I and 3460:209 Computer Science I and 3460:210 Computer Science II. Child Development students must complete 3760:201 Intimate Relationships and 3760:265 Child Development with a C or better.
- Music students must test into at least Theory I Placement and audition into at least 100 Applied Instruction; Dance students must successfully audition
- Received approval of the Dean of the College

#### Transfer Students

Students transferring into the Buchtel College of Arts and Sciences from universities other than The University of Akron must satisfy the same Buchtel College of Arts and Sciences admission requirements as University of Akron students.

A student transferring to the School of Art from another institution must submit a portfolio of work for approval before admission. A student transferring from another college or institution into the music program must complete a placement examination and perform an audition. A student transferring from another college or institution into the Dance program must perform an audition.

#### Other Admission

Students accepted into the Williams Honors College as arts and sciences majors are automatically admitted into the Buchtel College of Arts and Sciences. Incoming freshmen with appropriate credentials may receive direct admission to the Buchtel College of Arts and Sciences upon application.

#### Baccalaureate Degrees

Requirements for the bachelor's degree include:

- Completion of the General Education (<https://www.uakron.edu/general-education/>) requirement
- Completion of requirements in a major field of study in the college. A major consists of a specified number of credits in addition to the required General Education and, in the case of most Bachelor of



Arts and Bachelor of Science degrees, foreign language courses/proficiency. The exact requirements for each major are found in the respective curriculum guide

- All degrees require a minimum of 40 credits of:
  - 300/400-level courses in the student's major department, except workshops
  - 300/400-level courses outside the student's major department, except workshops
  - Courses outside the major department as specified and approved by the student's major advisor and the department chair or school director (permission should be obtained prior to enrollment), except workshops
  - For programs with restrictive external accreditation requirements, 200 level courses within the major may be identified as constituting advanced work by the student's advisor and department chair or school director (permission should be obtained prior to enrollment)
- Demonstration of ability to use English and, in the case of most Bachelor of Arts and Bachelor of Science degrees, another language:
  - For English, this ability will be shown by the completion of the General Education sequence for English Composition
  - For the other language, this ability will be shown by completion of the second year (202 at UA) of a foreign language at the University level. A student may place at any point in the language sequence so this is **not** a credit hour requirement but rather a course completion requirement for an Intermediate II course. Students who place above the 202 level must take one course to demonstrate proficiency. Demonstration of equivalent competence gained through non-academic "life experience" may be allowed through a test approved by the Department of Modern Languages contingent upon the availability of an appropriate test. The Department of Modern Languages does not offer credit by examination. Native speakers of a language other than English may be exempted from the foreign language requirement upon providing evidence of competence in the four basic language skills (speaking, reading, writing and listening comprehension) at a level equivalent to or higher than successful completion of the second year of instruction in the language at the University level. No credit is granted for exemption from the foreign language requirement. Sign Language is acceptable toward the foreign language requirement. You must complete the five courses listed below (totaling 14 credits) in the sign language sequence to satisfy the requirement:

Code	Title	Hours
7700:222	Survey of Deaf Culture in America	2
7700:201 & 7700:202	American Sign Language III and American Sign Language IV	6
7700:101 & 7700:102	American Sign Language I and American Sign Language II	6

- Students in the Schools of Art and Music may apply not more than two credits of physical education activities to their degree; students in the School of Communication and in Theatre programs may apply not more than two credits of physical education activities, eight credits of applied music or four credits of music organizations to their degree; students in Dance programs may apply not more than two credits of physical education activities and 12 credits of dance organizations to their degree

- Attaining a minimum grade-point average of 2.00 for all courses in the major Department/School at The University of Akron, unless otherwise required by the major Department/School
- Fulfilling the University requirements for a baccalaureate degree

Any student who wishes to receive a second baccalaureate degree must complete 30 credits of coursework in addition to the credits necessary for the first degree; 15 of the 30 credits must be in 300/400-level courses or other approved courses.

## Degrees Awarded

- *Fine Arts Division*: Bachelor of Arts, Bachelor of Fine Arts (Ceramics, Dance, Graphic Design, Jewelry & Metalsmithing, Photography, Painting/Drawing, Printmaking, Sculpture), Bachelor of Music
- *Humanities Division*: Bachelor of Arts
- *Natural Sciences Division*: Bachelor of Arts, Bachelor of Science, Bachelor of Science in Computer Science
- *Social Sciences Division*: Bachelor of Arts, Bachelor of Science, Associate of Applied Science in Criminal Justice Technology
- *Interdisciplinary Studies*: Bachelor of Arts, Bachelor of Science, Bachelor of Arts in Multidisciplinary Studies

## Interdisciplinary, Divisional and Partner Programs Bachelor of Arts in Multidisciplinary Studies

This degree meets the needs of students who have a multidisciplinary academic goal. It expands opportunities for non-traditional students to complete their degrees at The University of Akron by allowing them to combine courses in a structured manner from various colleges to design a program suited to their needs.

### Divisional Majors Biomedical Science

This divisional major provides for a broad background in science suited to students who intend to pursue careers or further education in a health science area. It is an appropriate major for those preparing for admission to professional programs in medicine, dentistry or veterinary science or for those desiring a Liberal Arts degree with a general emphasis in science. Additional coursework may be necessary for those planning graduate studies in a particular science discipline.

### Humanities

This divisional major is appropriate for those desiring a Liberal Arts degree with a general emphasis in the humanities. The humanities division consists of the Departments of English, Modern Languages and Philosophy. These disciplines and the disciplines of anthropology, classical studies, history and the creative and dramatic arts (art, music, theatre arts) are included in a prescribed manner in this divisional degree.

### Social Sciences

This divisional major is appropriate for those desiring a Liberal Arts degree with a general emphasis in the social sciences. The social sciences divisional degree tracks consist of coursework from the Departments of Economics, Political Science, Psychology, and Sociology. Students may select one of two specialized tracks:

- **Social Sciences – PPE Track**: The Social Sciences division PPE track consists of courses from the departments of Philosophy, Political Science and Economics.

- **Social Sciences – PSP Track:** The Social Sciences division PSP track (Understanding Ourselves and Others) consists of courses from the departments of Philosophy, Sociology, and Psychology.

### Early Assurance Pathway Program

The Early Assurance Pathway program is a partnership wherein current UA students apply for provisional admission to NEOMED in their sophomore year of college. Each year NEOMED will admit up to 35 UA students into the program.

Phase 1 is the undergraduate portion of the partnership. UA students may pursue any of UA's degree programs; however, it is recommended that students pursue the Bachelor of Science in Biomedical Science under the Biology department. This coursework meets the NEOMED admission requirements and focuses chiefly on studies in the humanities, social studies, and all basic premedical sciences to prepare students for the medical school curriculum. After students apply to NEOMED in their sophomore year and are provisionally admitted to the Early Assurance Pathway program, they complete their UA degree requirements, maintain the required grade point averages, achieve the required scores on the Medical College Admission Test (MCAT), and meet all other standards of readiness for medical education during their junior and senior years before being promoted directly to NEOMED for Phase 2 of the program.

Phase 2 consists of a four-year medical school course of study, at the NEOMED campus and at selected clinical campuses, leading to the M.D. degree.

### Early Acceptance Program (EAP)

The Early Acceptance Program (EAP) is a four-year undergraduate program of study at The University of Akron leading to Lake Erie College of Osteopathic Medicine (LECOM) with a reserved seat in their College of Osteopathic Medicine, School of Dental Medicine, or School of Pharmacy.

Each year LECOM can admit up to five UA students into their College of Osteopathic Medicine, School of Dental Medicine, or School of Pharmacy. Students can apply in their senior year of high school or before the start of their third year at The University of Akron. Phase 1 is the undergraduate curriculum at UA. UA students may pursue any of UA's degree programs, but it is recommended that students pursue the Bachelor of Science in Biomedical Science under the Biology department. Phase 2 is the is medical, dental, or pharmacy school at LECOM.

More information about the program can be found on the Pre-Health Partnerships information page (<https://www.uakron.edu/bcas/prehealth/partnerships/>).

- Anthropology and Classical Studies (p. 42)
- Art (p. 47)
- Biology (p. 77)
- Chemistry (p. 84)
- Communication (p. 92)
- Criminal Justice Studies (p. 106)
- Dance, Theatre, and Arts Administration (p. 114)
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## Anthropology and Classical Studies

### What is Anthropology?

Anthropology is

- the study of human societies and cultures and their development
- the study of human biological and physiological characteristics and their evolution
- the science that deals with the origins, physical and cultural development, biological characteristics, and social customs and beliefs of humankind
- the study of human beings' similarity to and divergence from other animals.
- the science of humans and their works
- Anthropology, BA (p. 44)
- Classical Studies, Minor (p. 46)
- Field Archaeology, Certificate (p. 46)
- Interdisciplinary Anthropology, Minor (p. 47)

### 3200: Classics

#### 3200:220 Introduction to the Ancient World (3 Credits)

Prerequisite: 3400:210 or 3400:221. Introduction to the civilizations of the Near East, Greece, and Rome, their cultural influences upon each other and their legacy to Europe.

#### 3200:230 Sports & Society in Ancient Greece and Rome (3 Credits)

A multimedia survey of ancient Greek and Roman sports, from the Olympics to gladiatorial games, and their connection to ancient and modern society.

**Gen Ed:** Tier 2 - Humanities

#### 3200:289 Mythology of Ancient Greece (3 Credits)

Myth, legend and folktale in ancient Greece, with attention to religion and the transmission of Greek myth to Rome and the West. No foreign language necessary.

**Gen Ed:** Tier 2 - Humanities

#### 3200:361 The Literature of Greece (3 Credits)

Prerequisite: 3400:210 or 3400:221. Major writers of ancient Greece and their influence on later European literature. No foreign language necessary. Required of majors.

#### 3200:362 The Literature of Rome (3 Credits)

Major writers of ancient Rome and their influence on later European literature. No foreign language necessary. Required of majors.

#### 3200:363 Women in Ancient Greece and Rome (3 Credits)

Examine women's lives in ancient Greece and Rome. Read their poetry, see them in ancient theatre, art, and philosophy, and in modern art and film.

**3200:480 Reading & Research in Classical Studies (1-3 Credits)**

Directed reading and research for individual and small group study in any recognized area of classical studies.

**3200:499 Honors Project in Classics (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: Senior standing in Honors Program and permission. Independent study leading to completion of a senior honors thesis under the supervision of a member of the Department of Classics.

**3230: Anthropology****3230:150 Human Cultures (3 Credits)**

This course examines what culture is, how human cultures vary and how they change. We then explore opportunities/conflicts presented by contemporary human cultural issues.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Global Diversity

**3230:151 Human Evolution (4 Credits)**

Study of biological evolution of Homo Sapiens, including primate comparisons and cultural development. One-hour laboratory using interactive computer programs, casts and Anthropology's cultural collection.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3230:251 Human Diversity (3 Credits)**

This course examines human diversity in global perspective by considering how and why human beings vary physically and ways categories of difference are culturally constructed.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Global Diversity

**3230:304 Primates: Behavior, Morphology and Evolution (3 Credits)**

Prerequisite: 3230:151. Extant primate diversity, behavior, morphology and primate paleontology.

**3230:309 Medicine & the Humanities (3 Credits)**

Medical history, literature, and ethics from the perspective of the Humanities, with readings from original sources and literary works on medical subjects.

**3230:310 Human Paleontology: The Australopithecines (3 Credits)**

Prerequisite: 3230:151. A study of the fossil record of the earliest hominids of the Miocene and Pliocene epochs.

**3230:311 Human Paleontology: Genus Homo (3 Credits)**

Prerequisite: 3230:151. The origins of the Genus Homo and the evolution of anatomically modern Homo sapiens.

**3230:340 Human Osteology (3 Credits)**

Prerequisites: 3230:151 and 3240:100 or permission. An intensive study of bone, bone growth, and the human skeleton; ageing and sexing techniques; application of demographic techniques to paleoanthropological populations.

**3230:357 Magic, Myth, & Religion (3 Credits)**

Analysis of the origins, roles, and functions of myth, magic and religion in a broad range of societies, with emphasis on the non-Western, pre-industrial societies.

**3230:358 Indians of North America (3 Credits)**

Ethnographic survey of native cultures of North America, with emphasis on variations in ecological adaptations, social organization and modern American Indians in anthropological perspective. Lecture.

**Gen Ed:** Tier 3 - Domestic Diversity

**3230:359 Anthropological Theory (3 Credits)**

Prerequisites: 3230:150 and 3230:151. Advanced seminar addressing the history of anthropological theory and current theoretical debates within the discipline.

**Gen Ed:** Tier 3 - Critical Thinking

**3230:370 Globalization and Culture (3 Credits)**

Prerequisite: [3230:150 or 3850:100]. A critical examination of socio-cultural processes of globalization that serve to complicate conventional notions of culture. Emphasizes how globalization affects a range of local places.

**Gen Ed:** Tier 3 - Complex Systems

**3230:397 Anthropological Research (1-3 Credits)**

(May be repeated) Individual study of problem areas of specific interest to an individual student under guidance of a faculty member.

**3230:398 Introduction to Anthropological Data (3 Credits)**

Prerequisite: 3230:150, 3230:151 and 3240:100. This course focuses on the characteristics of anthropological evidence through hands-on activities and examination of the uses of data in published works.

**3230:400 Seminar: Human Origins (3 Credits)**

Prerequisites: 3230:151 and [3230:304, 3230:310, 3230:311, 3230:401, 3230:410, or 3230:474]. Advanced seminar addressing current discoveries and theoretical issues in human paleontology. Content varies by semester.

**3230:401 History of Physical Anthropology (3 Credits)**

Prerequisites: 3230:151 and [3230:310 or 3230:311] or instructor's permission. History of evolutionary theory pertaining to the biological origins of humans covering pre-Darwinian thought to the most recent fossil discoveries.

**3230:410 Evolution and Human Behavior (3 Credits)**

Prerequisite: 3230:151. Critical examination of the theory of natural selection and its usefulness for understanding the origins and evolution of early hominid and modern human social behavior.

**3230:416 Anthropology of Sex and Gender (3 Credits)**

Prerequisites: 3230:150 or 3850:100. This course explores cross-cultural variation regarding sex, gender and sexuality. It examines the ways that cultures create, maintain and reproduce gender concepts and gender relations.

**Gen Ed:** Tier 3 - Global Diversity

**3230:420 The Anthropology of Food (3 Credits)**

Utilizing anthropological approaches and theories, this course explores the social relations and cultural beliefs associated with food cross-culturally.

**Gen Ed:** Tier 3 - Complex Systems

**3230:457 Medical Anthropology (3 Credits)**

Prerequisite: 3230:150 or permission of instructor. Analyzes various aspects of Western and non-Western medical systems from an anthropological perspective. Compares traditional medical systems around the world.

**Gen Ed:** Tier 3 - Complex Systems

**3230:460 Field Methods in Cultural Anthropology (4 Credits)**

Prerequisite: 3230:150 or permission of instructor. Community-based research and service-learning course in which students design and undertake a project. Addresses ethics, data collection, management and analysis in collaboration with community partners.

**Gen Ed:** Tier 3 - Complex Systems

**3230:472 Special Topics: Anthropology (3 Credits)**

(May be repeated) Prerequisite: 3230:150. Selected topics in anthropology. May include field schools, independent or faculty-led research, laboratory training or advanced course work not regularly offered by department.

**3230:474 Special Topics in Biological Anthropology (3 Credits)**

Prerequisite: 3230:151. Advanced topics in biological anthropology, human paleontology and primate behavioral ecology. May be repeated, but no more than six credits can be applied towards the major in Interdisciplinary Anthropology.

**3230:497 Senior Honors Project in Anthropology (3 Credits)**

The topic and scope of this individually chosen project is directed by an Anthropology faculty member in conjunction with Honors College preceptors under the guidelines of the Honors College.

## 3240: Archaeology

**3240:100 Introduction to Archaeology (3 Credits)**

Introduction to the study of ancient cultures based on material remains. Course covers basic archaeological concepts and tools, types of data and interpretation.

**Gen Ed:** Tier 2 - Social Science

**3240:150 Time Before History (3 Credits)**

Survey of world prehistory from the first appearance of anatomically modern humans to the rise of state-level societies from an archaeological perspective. Web Components.

**3240:300 Historical Archaeology (3 Credits)**

This course explores recent developments in historical archaeology and how material culture can be used to study race, class, gender, and ethnic identities.

**3240:313 Archaeology of Greece (3 Credits)**

The ruins and monuments of Greece; history reconstructed by examination of the material remains. No foreign language necessary.

**3240:314 Archaeology of Rome (3 Credits)**

The ruins and monuments of Rome; history reconstructed by examination of the material remains. No foreign language necessary.

**3240:345 Egyptology (3 Credits)**

Introduction to ancient Egyptian civilization, with emphasis on sites and artifacts representative of socio-political and ideological transformations from the Prehistoric through Ptolemaic Periods.

**3240:360 Ancient Near Eastern Archaeology (3 Credits)**

General survey of the archaeological material culture and written history of the ancient Near East. Covers principal human achievements from the Paleolithic to Alexander's conquest.

**3240:400 Archaeological Theory (3 Credits)**

Prerequisite: 3240:100. Advanced seminar covering history of scientific archaeological exploration, major theoretical paradigms and current trends in archaeology. Required for Certificate in Field Archaeology.

**Gen Ed:** Tier 3 - Critical Thinking

**3240:410 Archaeogeophysical Survey (3 Credits)**

Prerequisite: [3240:100 or 3370:101 or 3350:310]. Advanced instruction in principles of subsurface geophysical survey techniques in archaeology. Emphasizes magnetic gradiometry and electrical resistivity techniques. Includes both laboratory and fieldwork.

**3240:420 Archaeology of Ohio (3 Credits)**

Provides a detailed overview of Ohio's prehistoric cultures and the early historic period focusing on cultural evolution and environmental relationships.

**3240:440 Archaeological Laboratory Methods (3 Credits)**

Prerequisite: 3240:100. Laboratory processing and study of lithic, ceramic, paleofaunal, paleobotanical, metallic, archaeological materials. Emphasis varies with instructor expertise. Involves instrumental or statistical analysis.

**3240:450 Archaeological Field School (1-6 Credits)**

Prerequisite: 3240:100 or permission. A field-based course teaching based archaeological techniques, mapping, excavation of prehistoric and historic sites, survey and documentation. (May be repeated for a maximum of 6 credits.)

**3240:460 Seminar in Ancient Near East (3 Credits)**

Prerequisite: 3240:360 or 3400:307. Advanced undergraduate seminar on selected topics covering the archaeological remains and historical texts in translation of the ancient Near East.

**3240:472 Special Topics: Archaeology (3 Credits)**

Prerequisite: 3230:150 or permission. Selected topics in archaeology. May include field school, independent or faculty-led research, laboratory training or advanced course work not regularly offered by department.

**3240:499 Senior Honors Project in Archaeology (1-6 Credits)**

Prerequisite: Permission of instructor. Student-designed archaeology project directed by an Archaeology faculty member in conjunction with Honors College preceptors under the guidelines of the Honors College. (May be repeated for a maximum of six credits.)

## Anthropology, BA

### Bachelor of Arts in Anthropology (323000BAT)

- Archaeological Concentration
- Biological Concentration
- Cultural Concentration
- Classical Studies Concentration

This interdisciplinary program allows students the flexibility to construct a program of study tailored to their interests in cultural anthropology, biological anthropology or archaeology.

The following information has official approval of the **Department of Anthropology** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Students are encouraged to visit the Department of Anthropology their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

## Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14

Anthropology Core	16
Concentration Requirement	21
Additional Credits for Graduation*	35
<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

3200:289 Mythology of Ancient Greece

3200:230 Sports & Society in Ancient Greece and Rome

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

**Total Hours 34**

## College of Arts & Sciences Requirements

Code	Title	Hours
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**Degree requirements in Arts & Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.**

*Foreign Language*

101 Beginning I

102 Beginning II

201 Intermediate I

202 Intermediate II

7700:222 Survey of Deaf Culture in America (American Sign Language option only)

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Anthropology Requirements

A minimum of 30 departmental credits

### Anthropology Core

Code	Title	Hours
3230:150	Human Cultures	3
3230:151	Human Evolution	4
3230:359	Anthropological Theory	3
or 3240:400	Archaeological Theory	
3230:398	Introduction to Anthropological Data	3
3240:100	Introduction to Archaeology	3
<b>Total Hours</b>		<b>16</b>

### Concentration Requirement

Minimum of one course each from three of the following four fields for a total of 21 credits.

### Archaeological Set

Code	Title	Hours
2980:122	Elementary Surveying	3
3240:150	Time Before History	3
3240:300	Historical Archaeology	3
3240:313	Archaeology of Greece	3
3240:314	Archaeology of Rome	3
3240:345	Egyptology	3
3240:360	Ancient Near Eastern Archaeology	3
3240:400	Archaeological Theory	3
3240:410	Archaeogeophysical Survey	3
3240:420	Archaeology of Ohio	3
3240:440	Archaeological Laboratory Methods	3
3240:450	Archaeological Field School	1-6
3240:460	Seminar in Ancient Near East	3
3240:472	Special Topics: Archaeology	3
3240:499	Senior Honors Project in Archaeology	1-6
3350:405	Geographic Information Systems	3
3350:409	Archaeogeophysical Survey	3
3370:405	Archaeological Geology	3
3370:407	Archaeogeophysical Survey	3
3400:307	The Ancient Near East	3

### Biological Set

Code	Title	Hours
3100:217	General Ecology	3
3230:304	Primates: Behavior, Morphology and Evolution	3
3230:310	Human Paleontology: The Australopithecines	3
3230:311	Human Paleontology: Genus Homo	3
3230:340	Human Osteology	3

3230:400	Seminar: Human Origins	3
3230:401	History of Physical Anthropology	3
3230:410	Evolution and Human Behavior	3
3230:474	Special Topics in Biological Anthropology	3

**Cultural Set**

Code	Title	Hours
3230:251	Human Diversity	3
3230:357	Magic, Myth, & Religion	3
3230:358	Indians of North America	3
3230:359	Anthropological Theory	3
3230:370	Globalization and Culture	3
3230:397	Anthropological Research	1-3
3230:416	Anthropology of Sex and Gender	3
3230:420	The Anthropology of Food	3
3230:457	Medical Anthropology	3
3230:460	Field Methods in Cultural Anthropology	4
3230:472	Special Topics: Anthropology	3
3230:497	Senior Honors Project in Anthropology	3
3300:371	Introduction to Linguistics	3
3850:421	Race & Ethnic Relations	3

**Classical Studies Set**

Code	Title	Hours
3200:361	The Literature of Greece	3
3200:362	The Literature of Rome	3
3200:363	Women in Ancient Greece and Rome	3

**Classical Studies, Minor****Minor in Classical Studies (320003M)****Program Contact**

*Dr. Eugenia Gorogianni*

*Associate Professor of Instruction, Anthropology*

330-972-8069

eg20@uakron.edu

The following information has official approval of the **Department of Anthropology** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Classical Studies" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. At least 6 credits must be at the 300/400 level. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

**Summary**

Code	Title	Hours
Required Courses		6
Electives		12
Total Hours		18

**Required Courses**

Code	Title	Hours
<b>Select two of the following:</b>		
3200:220	Introduction to the Ancient World	6
3200:230	Sports & Society in Ancient Greece and Rome	
3200:289	Mythology of Ancient Greece	
Total Hours		6

**Electives**

Code	Title	Hours
<b>Select 12 credits from the following (a minimum of six credits must be at 300/400 level):</b>		
3200:361	The Literature of Greece	
3200:362	The Literature of Rome	
3200:363	Women in Ancient Greece and Rome	
3200:480	Reading & Research in Classical Studies	
3240:100	Introduction to Archaeology	
3240:313	Archaeology of Greece	
3240:314	Archaeology of Rome	
3240:360	Ancient Near Eastern Archaeology	
3240:400	Archaeological Theory	
3400:308	Greece	
3400:317	Roman Republic	
3400:318	Roman Empire	
3400:404	Studies in Roman History	
3510:201	Intermediate Latin I	
3510:202	Intermediate Latin II	
3510:303	Advanced Latin I	
3510:304	Advanced Latin II	
3510:497	Latin Reading & Research	
3510:498	Latin Reading & Research	
3600:211	History of Ancient Philosophy	
3600:411	Plato	
3600:432	Aristotle	
Total Hours		12

**Field Archaeology, Certificate**  
**Certificate in Field Archaeology (324001C)****Program Contact**

*Dr. Patricia S. Vinyard*

*Associate Professor of Instruction, Anthropology*

330-972-7138

vinyard@uakron.edu

The following information has official approval of the **Department of Anthropology** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Field Archaeology" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

## Required Courses

Code	Title	Hours
3240:400	Archaeological Theory	3
3240:440	Archaeological Laboratory Methods	3
3240:450	Archaeological Field School	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select 9 credits from the following Electives:</b>		<b>9</b>
2980:122	Elementary Surveying	
3240:300	Historical Archaeology	
3240:410	Archaeogeophysical Survey	
3240:420	Archaeology of Ohio	
3240:472	Special Topics: Archaeology	
3240:499	Senior Honors Project in Archaeology	
3350:405	Geographic Information Systems	
3370:405	Archaeological Geology	
Total Hours		9

## Interdisciplinary Anthropology, Minor Minor in Interdisciplinary Anthropology (323000M)

### Program Contact

*Dr. Patricia S. Vinyard*

*Associate Professor of Instruction, Anthropology*

330-972-7138

vinyard@uakron.edu

The following information has official approval of the **Department of Anthropology** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Interdisciplinary Anthropology" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minimum of 6 credits must be completed at the 300/400 level. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		10
Electives		9
Total Hours		19

## Required Courses

Code	Title	Hours
3230:150	Human Cultures	3
3230:151	Human Evolution	4
3240:100	Introduction to Archaeology	3
Total Hours		10

## Electives

Code	Title	Hours
<b>Select 9 credits:</b>		<b>9</b>
3230:251	Human Diversity	
3230:510	Evolution and Human Behavior	
3230:516	Anthropology of Sex and Gender	
3240:150	Time Before History	
3240:500	Archaeological Theory	
3240:510	Archaeogeophysical Survey	
3240:520	Archaeology of Ohio	
3240:540	Archaeological Laboratory Methods	
3240:550	Archaeological Field School	
3240:572	Special Topics: Archaeology	
3230:3xx	Anthropology	
3230:4xx	Anthropology	
3240:3xx	Archaeology	
3240:4xx	Archaeology	
Total Hours		9

## Art

### The Mary Schiller Myers School of Art

The mission of the Mary Schiller Myers School of Art at The University of Akron is to provide high-quality education in the fine arts, art history, design, and art education. We provide excellence in teaching, research, and community service, contributing to the visual culture of the region and beyond.

Undergraduate student success is our focus. We are committed to:

- maintaining an open enrollment policy that welcomes all students interested in a career in art and design and/or in enriching their lives through the visual arts.
- engaging our students in the world of art and design beyond the classroom;
- helping our graduates become successful professionals and leaders in the local and global cultural communities of the 21<sup>st</sup> century;
- sustaining a learning environment and an approach to teaching that can help every student realize his or her creative and intellectual potential in the visual arts;

- encouraging and rewarding continuing growth of faculty members as artists, scholars, and teachers;
- sharing our expertise and creative and intellectual resources to benefit of the broader campus and community.

## Admissions

We are an open enrollment school, welcoming all students. New students to The University of Akron do not need to submit any additional materials or portfolio to join Myers School of Art.

The Myers School of Art offers students the close-knit experience of a small art school while also providing the benefits of being part of a larger university campus and structure.

## Foundation Program

*"Foundation" is defined as the basis or fundamental principle on which something is founded.*

The courses of the Foundation Program at the Myers School of Art are the basis upon which a career as an artist or graphic designer will be built. The content covered in this series of classes will serve as a resource for students to draw on as they move into upper-level classes and then into their professional careers. This groundwork is established to enable students and faculty to focus intently on the interaction between media and content as applied to specific upper-level fine and applied arts disciplines.

The many concepts, media, and concerns covered are basic but should never be considered simple. They are in many ways the most complex topics with which art students struggle. The concepts that students investigate in these classes are the language and grammar that are the conventions of visual literacy. As the elements of our common language, these are concepts students must know fluently. As the convention of our discipline, their history must be understood and their application to contemporary art considered.

We recommend that all students pursuing a Bachelor of Fine Arts (BFA) or a Bachelor of Arts (BA) in Art Studio or Art Education are recommended to take the following 3 studio courses their first semester in the program:

7100:131 Foundation Drawing I  
7100:144 Foundation 2D Design  
7100:145 Foundation 3D Design

All majors (BFA and BA) are required to pass the co-requisites 7100:250 Foundation Forum: Lecture / 7100:252 Foundations Forum: Studio which includes evaluation and further investigation of the topics covered in the Foundation Curriculum. These two courses should be taken the semester following completion of 7100:131, 7100:144 and 7100:145. Students are given a total of 3 opportunities to successfully pass the Foundation Forum.

Additionally, BFA candidates are required to complete a Junior Review (reviews Sophomore/Junior-level work) and a Senior Exhibition (Senior-level work).

- Art Education, BA (p. 54)
- Art Studio with Minor, BA (p. 56)
- Ceramics, BFA (p. 58)
- Ceramics, Minor (p. 60)
- Drawing, Minor (p. 60)

- Emerging Technologies, Minor (p. 61)
- Graphic Design, BFA (p. 61)
- History Emphasis, Minor (p. 64)
- Illustration, Minor (p. 64)
- Jewelry & Metalsmithing, BFA (p. 65)
- Metalsmithing, Minor (p. 67)
- Painting & Drawing, BFA (p. 67)
- Painting, Minor (p. 69)
- Photography For Non-Art Majors, Minor (p. 69)
- Photography, BFA (p. 70)
- Photography, Minor (p. 71)
- Printmaking, BFA (p. 72)
- Printmaking, Minor (p. 74)
- Professional Photography, Minor (p. 74)
- Sculpture, BFA (p. 75)
- Sculpture, Minor (p. 77)

## 7100: Art - Myers School of

### 7100:100 Survey of History of Art I (3 Credits)

Prerequisite: 2020:121 or 3300:110 or 3300:111. Introductory survey of world art from prehistory to c.1250 C.E.

**Gen Ed:** Tier 2 - Arts; Tier 3 - Critical Thinking

### 7100:101 Survey of History of Art II (3 Credits)

Prerequisite: 7100:100. Introductory survey of world art from 1250 to 1850 C.E.

**Gen Ed:** Tier 2 - Arts; Tier 3 - Global Diversity

### 7100:102 Survey of History of Art, Part 3 (3 Credits)

Prerequisite: 7100:101 or permission of instructor. The third component in a 3-part series of introductory art history courses, this class covers the modern era, from Realism, Impressionism, and the Pre-Raphaelites through the present moment.

### 7100:103 Arts Orientation (0 Credits)

Corequisite: with first 7100 art course. Orientation to the information and strategies necessary to aid new art students in their understanding of the field of art.

### 7100:104 Visual Arts Application in the Elementary Classroom (3 Credits)

Exploration of methods, materials, processes and visual techniques relating two- and three-dimensional art experiences for the teacher of elementary children. No credit as an elective course for art majors.

### 7100:105 Introduction to Art Education (3 Credits)

An introduction to becoming Artist as Teacher in traditional school based and non-traditional community based settings. 10 hours field experience required.

### 7100:110 Introduction to New Media (3 Credits)

Students learn state of the art knowledge and activities of New Media. This course will be in addition or cross-listed with the 7000:100 course.

### 7100:111 Emerging Technologies (3 Credits)

This course provides a hands on introductory exploration of several technologies currently being used by the creative areas of Art and Design.

### 7100:131 Foundation Drawing I (3 Credits)

Corequisite: 7100:103. Introduction to drawing materials and techniques with an emphasis on observation, representation, and formal principles of composition and design.



**7100:132 Introduction to Design (3 Credits)**

An introductory graphic design course focusing on teaching the principles and elements of design through theory and practice.

**7100:144 Foundation 2D Design (3 Credits)**

Fundamental information about the theory and practice of visual design as applied to surfaces, including composition, color and pictorial illusions with lecture and studio experience.

**7100:145 Foundation 3D Design (3 Credits)**

Introduction to meaning of "design" and act of designing in real space. Study of naturally occurring form, structure and process.

**7100:184 Typography I (3 Credits)**

Prerequisite: 7100:132. Studio experience in concept development and processes, tools and materials of graphic designers. Elementary design problems in graphic design.

**7100:189 Production I (3 Credits)**

An introduction to graphic design industry standard software and hardware. Students learn proper development procedures for creating production-ready, professional digital files.

**7100:210 Visual Arts Awareness (3 Credits)**

Prerequisite: 2020:121 or 3300:110 or 3300:111. Lecture course providing appreciation and understanding of arts of various types/periods with emphasis on topics and influences on societies, rather than historical sequence.

**Gen Ed:** Tier 2 - Arts

**7100:213 Introduction to Printmaking (3 Credits)**

Prerequisite: 7100:131 or 7100:144. A fast-paced introduction to traditional and contemporary high-tech/low-tech printmaking processes including relief, intaglio, lithography, and screenprint as well as digital printmaking.

**7100:214 Relief/Screenprint (3 Credits)**

Prerequisite: 7100:213. An introduction to the history, process, and contemporary practice of relief printing and screenprinting.

**7100:216 Intaglio/Lithography (3 Credits)**

Prerequisite: 7100:213. An introduction to the history, process, and contemporary practice of intaglio and lithographic printing.

**7100:222 Introduction to Sculpture (3 Credits)**

Prerequisite: 7100:145. Exploration of aesthetic factors influencing sculptural statements. Development of proficiency in the use of tools, materials and techniques.

**7100:223 Sculpture: Stone (3 Credits)**

Prerequisite: 7100:222. Beginning level lecture and studio course using both traditional hand tools for the creation of stone sculpture. History of the use of stone, evolution of stone working technology and contemporary artists working with stone.

**7100:224 Installation Art (3 Credits)**

Prerequisite: 7100:222. Lecture and studio course introducing the student to the medium of installation art, a major emphasis in the contemporary art scene. The history and evolution of installation art and its use by contemporary artists.

**7100:231 Intermediate Drawing (3 Credits)**

Prerequisite: 7100:131. Continued investigation of basic drawing concepts. Introduction to drawing in color with further development of observation, design, technique and conceptual skills.

**7100:233 Introduction to Life Drawing (3 Credits)**

Prerequisite: 7100:131. Perceptual problems in drawing from the life model. Study of skeletal, muscular, mechanical nature of human figure and application of this knowledge to the resolution of aesthetic problems.

**7100:234 Anatomy for Artists (3 Credits)**

Prerequisite: 7100:233. Studio/lecture experience in drawing and sculpture with an emphasis on human skeletal, muscular, and surface structure.

**7100:243 Introduction to Painting (3 Credits)**

Prerequisites: 7100:131 and 7100:144. Study of aesthetic and technical problems involved in painting. Emphasis on painting from observation, and understanding of color in painting.

**7100:244 Color Concepts (3 Credits)**

Prerequisites: 7100:131 and 7100:144. Lecture and studio experience giving information concerning perception of color, additive color phenomena of light, subtractive color phenomena of pigments and dyes, color notation systems and psychological effects of color.

**7100:246 Introduction to Water-based Media (3 Credits)**

Prerequisites: 7100:131 and 7100:144. Experimentation with water-based media such as tempera, acrylic, and gouache.

**7100:250 Foundation Forum: Lecture (1 Credit)**

Prerequisites: 7100:131, 7100:144, and 7100:145. Corequisite: 7100:252. Credit/noncredit course. Lecture and review designed to broaden students' knowledge by including investigations into materials and technologies to synthesize an understanding in the visual arts.

**7100:251 Watercolor (3 Credits)**

Prerequisites: 7100:131 and 7100:144. Students will investigate traditional and contemporary watercolor techniques and mixed media while addressing issues of composition and conceptual concerns.

**7100:252 Foundations Forum: Studio (2 Credits)**

Prerequisites: 7100:131, 7100:144, and 7100:145. Corequisite: 7100:250. Studio course addresses theory and application of 2D and 3D skills to the production of artworks in preparation of the foundation forum: lecture and review.

**7100:253 Ceramics for Non-Art Majors (3 Credits)**

Hand-building, glazing and kiln loading. Link skills to personal experience, ceramic history and contemporary art and craft issues. No credit toward a major in art.

**7100:254 Introduction to Ceramics (3 Credits)**

Prerequisites: 7100:131 and 7100:144. Studio/lecture course exploring potentials of hand-building techniques in both sculptural and functional forms. Clay processing, glaze application and practical kiln firing.

**7100:266 Introduction to Metalsmithing (3 Credits)**

Prerequisite: 7100:144 and 7100:145. Studio experience in which student is introduced to properties of metals, processes of silversmithing and design and production of jewelry.

**7100:267 Intermediate Jewelry (3 Credits)**

Prerequisite: 7100:266. This class builds on acquired in Introduction to Metalsmithing. Emphasis will be placed on fine jewelry techniques including working with silver.

**7100:268 Color in Metals (3 Credits)**

Prerequisite: 7100:266. Introduction to a variety of techniques to achieve and/or combine color in metals. Techniques such as anodizing aluminum, enameling and the application of color resins and plastics will be explored.

**7100:273 Introduction to Digital Photography (3 Credits)**

Prerequisites: 7100:131 and 7100:144; or permission. An introductory digital photography course covering technical, aesthetic and conceptual issues. Digital camera with manual exposure controls required. No credit for photography majors.

**7100:274 Photography I for Non-Art Majors (3 Credits)**

Film-based black and white photography including camera control, film processing, and darkroom printing. 35mm camera with full manual control required. No credit toward art major.

**7100:275 Introduction to Photography (3 Credits)**

Prerequisites: 7100:131 and 7100:144. Film-based black and white photography including camera control, film processing and darkroom printing. 35mm film camera with full manual control required.

**7100:276 Introduction to Commercial Photography (3 Credits)**

Prerequisite: 7100:273, 7100:274, or 7100:275. Students are introduced to studio and location lighting techniques and related software applications while working through a series of photographic projects.

**7100:280 Digital Imaging (3 Credits)**

Prerequisites: 7100:189 or 7100:276. An exploration of contemporary digital image capture, manipulation, output and distribution, emphasizing digital image concepts, aesthetics and production.

**7100:281 Web and Devices I (3 Credits)**

Prerequisite: 7100:189. This course introduces the process of planning, designing and producing industry standard websites. Emphasis on front-end development and the creative aspect of web design. (May be repeated for a total of six credits.)

**7100:283 Drawing Techniques (3 Credits)**

Prerequisites: 7100:131 and 7100:189. Includes advanced drawing and presentation techniques commonly used in graphic design. Various presentation and design problems will be encountered stressing use of selected drawing methods and processes.

**7100:288 Typography II (3 Credits)**

Prerequisite: 7100:184. Introduction to typographic design to communicate. Study of letterforms, history, comping skills, layout design and digital technology.

**7100:300 Art Since 1945 (3 Credits)**

Prerequisite: [7100:101 and 7100:102] or permission of instructor. Consideration of significant developments in visual art forms since World War II in architecture, sculpture, printing, photography, metal, textile, ceramics, printmaking and graphic design.

**7100:301 Medieval Art (3 Credits)**

Prerequisite: 7100:101 or permission of instructor. Painting, mosaics, architecture, sculpture, and luxury arts of medieval Europe from 4th through 14th centuries.

**7100:302 Art in Europe During the 17th-18th Centuries (3 Credits)**

Prerequisite: 7100:101 or permission of instructor. Analysis of major European examples of architecture, landscape design, painting, prints and sculpture from beginning of the 17th century until approximately 1850.

**7100:303 Italian Renaissance Art (3 Credits)**

Prerequisite: 7100:101 or permission of instructor. Study of architecture, painting and sculpture of Italy during 13th through 16th centuries.

**7100:306 Renaissance Art in Northern Europe (3 Credits)**

Prerequisite: 7100:101 or permission of instructor. Painting, architecture, and sculpture of northern Europe from 14th through 16th centuries.

**7100:307 History of Graphic Design (3 Credits)**

Prerequisite: 7100:101 or permission of instructor. A lecture course analyzing the development of graphic design as an art form from Neolithic sources to the present.

**7100:309 Greek Art (3 Credits)**

The course presents art and architecture of ancient Greeks, and focuses on major monuments, myths, rituals, socio-political constructs, and methodological issues associated with Greek art.

**7100:310 Motion Design (3 Credits)**

Prerequisites: 7100:189 and 7100:288, or permission. Study of the history of moving images, principles of animation and motion graphics. Design in a non-linear environment, emphasis on narrative, video, type and image.

**7100:311 UI/UX Design (3 Credits)**

Prerequisites: 7100:189 and 7100:288, or permission. Introduction to user interface and user experience design. Emphasis is on the design principles, type and image for screen design and the user experience.

**7100:312 Roman Art & Architecture (3 Credits)**

Study of Roman art and architecture from the sixth century B.C.E. through the fourth century C.E.

**7100:313 Survey of Asian Art (3 Credits)**

This course introduces the student to the historical, cultural, political, and religious aspects of civilization that influenced the aesthetics of Asian art.

**7100:316 Biodesign (3 Credits)**

Prerequisite: Sophomore or higher standing or instructor permission. Biodesign combines an introduction into biomimicry/biomimetic design with a studio design exercise, using nature as a model for creating innovative solutions.

**7100:317 Print Matrix (3 Credits)**

Prerequisites: 7100:214 and 7100:216. Intermediate printmaking class requiring the application of printmaking to the production of imagery for specific printmaking applications - Book Arts, Hybrid Prints, Serial Imagery, etc.

**7100:318 Portrait Lighting (3 Credits)**

Prerequisite: 7100:276. Studio and location lighting techniques for commercial and fine art portraiture.

**7100:319 Printmaking Review (0 Credits)**

Prerequisite: 7100:317. A committee of full-time faculty review portfolio of studio work completed in all printmaking courses.

**7100:320 Product Photography (3 Credits)**

Prerequisite: 7100:276. Professional skills are further developed via studio and tabletop photography assignments based on current trends in illustration and advertising photography.

**7100:322 Sculpture II (3 Credits)**

Prerequisite: 7100:222 or permission from instructor. Continuation of 222. Addresses more advanced techniques. May include fabrication, casting, carving, or assemblage. (May be repeated for a total of nine credits)

**7100:323 Lost Wax Casting (3 Credits)**

Prerequisites: 7100:222 or 7100:266. Bronze and aluminum casting using the lost wax process. Students learn foundry techniques and apply them to individual artistic statements. (May be repeated for a total of six credits.)

**7100:330 New Media II (3 Credits)**

Prerequisite or Corequisite: 7100:110 or 7100:100. Students practice various New Media technologies. No prior art experience is required. This course will be in addition or cross-listed with the 7000:300 course.

**7100:335 Intermediate Life Drawing (3 Credits)**

Prerequisites: 7100:233. Continued development of the content established in Life Drawing with additional emphasis on draped models, drawing materials and aesthetics. (May be repeated for a total of nine credits.)

**7100:346 Intermediate Water-Based Media (3 Credits)**

Prerequisite: 7100:246. Development of personal concepts and imagery through investigation of historical and contemporary styles, techniques, and issues. (May be repeated for six credits.)

**7100:348 Intermediate Painting (3 Credits)**

Prerequisite: 7100:243. Development of personal concepts and imagery through investigation of historical and contemporary styles and issues. (May be repeated for a total of six credits, but limited to a maximum of three credits in a given medium)

**7100:350 Painting/Drawing Portfolio Review (0 Credits)**

Prerequisite: Two courses in 7100:348 Intermediate Painting. A committee of full-time faculty review portfolio of student work completed in prerequisite courses.

**7100:353 Throwing (3 Credits)**

Prerequisite: 7100:254. Emphasis on making pottery using the potter's wheel as well as organization and planning skills needed to make glazes and fire kilns.

**7100:356 History of Craft (3 Credits)**

This course is designed to illuminate selected aspects of the history of the making of things as these apply to current practice in the crafts.

**7100:366 Metalsmithing II (3 Credits)**

Prerequisite: 7100:266. Continuation of experiences presented in 266 with further development of skills and expansion of technical knowledge. (May be repeated for a total of six credits)

**7100:368 Color in Metals II (3 Credits)**

Prerequisite: 7100:268. Continuation of 268. Advanced projects designed to develop the student's aesthetic values in color in metals. Emphasis on individual approach and experimentation. (May be repeated for a total of 12 credits.)

**7100:369 Production for Jewelry (3 Credits)**

Prerequisite: 7100:266. This class will investigate ways of producing artwork and jewelry in multiples and limited production runs. Attention will also be given to packaging, display, and marketing the work.

**7100:370 History of Photography (3 Credits)**

Prerequisite: 7100:102. A lecture course studying the history of photography from its invention to contemporary issues.

**7100:374 Photography II for Non-Art Majors (3 Credits)**

Prerequisite: 7100:274. Projects designed to expand the student's awareness of technical conceptual and aesthetic issues in photographic images. 35mm film camera with full manual control required.

**7100:375 Photography II (3 Credits)**

Prerequisite: 7100:275. Projects designed to expand student's awareness of technical, conceptual and aesthetic issues in photographic images. 35mm film camera with full manual control required.

**7100:377 Medium and Large Format Photography (3 Credits)**

Prerequisite: 7100:374 or 7100:375. A technical course using medium and large format film cameras, which are furnished for the course's duration. Topics include camera movements, advanced exposure and development techniques.

**7100:378 Alternative Photographic Processes (3 Credits)**

Prerequisites: 7100:374 or 7100:375. Exploration in alternative photographic processes using hand-coated Cyanotype, Van Dyke Brown and Platinum emulsions, with digitally created large-format negatives.

**7100:380 Illustration (3 Credits)**

Prerequisite: 7100:283 or permission of instructor. Application of painting and drawing skills and aesthetic sensitivity to specific commercial illustration and editorial art assignments. (May be repeated for a total of nine credits.)

**7100:381 Digital Imaging II (3 Credits)**

Prerequisite: 7100:280. Advanced digital imaging development and manipulation with an emphasis on preparation and use of digital images in print, multimedia and web applications.

**7100:382 Graphic Design Junior Review (1 Credit)**

Prerequisites: 7100:250, 7100:252, and 7100:288. Corequisites: 7100:384 and 7100:387. Junior level review by graphic design faculty. Students present a portfolio of work from specified courses that exemplify creative and technical competencies.

**7100:384 Professional Design Practices (2 Credits)**

Prerequisite: 7100:288. Corequisites: 7100:382 and 7100:387. Comprehensive overview of standard business practices specific to the graphic design field. Prepares students to work as interns in professional creative environments.

**7100:385 3D Modeling, Printing and Prototyping (3 Credits)**

Prerequisite: 7100:189. Computer imaging course with an emphasis in three-dimensional modeling and preparation of files for output to various 3D devices for production or screen. (May be repeated for a total of nine credits)

**7100:387 Typography III (3 Credits)**

Prerequisite: 7100:288. Corequisites: 7100:382 and 7100:384. Incorporation of typography, photography, and concept development into advertising and design composition. Emphasis is given to integration of type and image, typography structure and refinement.

**7100:388 Production II (3 Credits)**

Prerequisites: 7100:276 and 7100:387. More complex projects with emphasis given to mechanical preparation of finished art for various printing processes.

**7100:401 Special Topics: History of Art (1-3 Credits)**

(May be repeated for credit when a different subject or level of investigation is indicated) Prerequisites: 7100:101 or permission of instructor. Lecture course in which subject is specified each time course is offered. Focuses upon an art movement, time period, the production of a single artist or a specific art medium.

**7100:402 Museology (3 Credits)**

Lecture course dealing with museum science, including museum history, staff structures, art handling, storage, and presentation and exhibit preparation.

**7100:403 Art and Critical Theory (3 Credits)**

Prerequisites: 7100:102 or permission of the instructor. This course, designed for both studio and art history majors, surveys the major theoretical currents in contemporary criticism and art history.

**7100:405 History of Art Symposium (1-3 Credits)**

Prerequisite: One Art History course beyond 7100:101 or permission of instructor. Lecture, individual research and evaluation, group discussion related to a specific time period or to an artistic problem. (May be repeated for credit when a different subject is indicated)

**7100:407 Methods of Art History (3 Credits)**

Prerequisite: 7100:101 or permission of the instructor. This course explores the history of the discipline and the permutations it has undergone since its establishment in the early years of the nineteenth century.

**7100:409 Time-Based Media (3 Credits)**

Prerequisite: 7100:285. Through the development of increasingly complex projects, students explore the conceptual and aesthetic considerations of creating motion media based presentations. (May be repeated for a total of six credits.)

**7100:410 Methods of Teaching Elementary Art (3 Credits)**

Prerequisite: 7100:105. Corequisite: 7100:428. A field based course presenting the necessary skills and knowledge to successfully implement, plan, instruct, and assess a diverse art-based curriculum for the elementary classroom.

**7100:411 Methods of Teaching Secondary Art (3 Credits)**

Prerequisite: 7100:105. Corequisite: 7100:429. A field based course presenting the necessary skills and knowledge to successfully implement, plan, instruct, and assess a diverse art-based curriculum for the secondary classroom.

**7100:412 Student Teaching Colloquium (1 Credit)**

Prerequisite: Senior status, successful completion of field experience, and permission of instructor. Corequisite: 5300:495. Lecture course providing the skills and knowledge necessary for art education licensure. Student will gain knowledge in resume building, licensure requirements, and practical pedagogical techniques.

**7100:418 Multiples and Multiplicity (3 Credits)**

Prerequisites: Student must have Junior standing and have completed at least one 7100:300 level course in their major. Advanced printmaking class recommended for studio majors working with multiples, variability, and production requiring students to define and complete their own projects.

**7100:419 Special Topics in Print (3 Credits)**

Prerequisite: 7100:131 or 7100:144 or 7100:145. Investigation in specialized printmaking media like Photogravure, Digital Printing, and Book Arts among others. May be offered in conjunction with university sponsored residency or travel.

**7100:420 Sculpture Portfolio Review (0 Credits)**

Prerequisite: 7100:422. Corequisite: 7100:422. A committee of full-time faculty reviews portfolio of studio work completed in prerequisite/corequisite courses.

**7100:422 Advanced Sculpture (3 Credits)**

Prerequisite: 7100:250 and 7100:322. Development of individual points of view and sculptural statements. (May be repeated for a total of 15 credits.)

**7100:423 Art Bomb Brigade: Methods for Creating Public Art (3 Credits)**

An experiential learning studio course in which students explore how artists work with community stakeholders to develop ideas for site specific mural projects.

**7100:424 Middle School Materials & Techniques (3 Credits)**

A studio course exploring current topics and media/materials and techniques in middle school art education.

**7100:425 Ceramics: Methods, Materials, & Concepts (3 Credits)**

Prerequisites: 7100:131 and 7100:145. (Lab) Ceramics for teachers. Introduces the potter's wheel, hand-building, firing kilns, history of ceramics and ceramic forms, safety in the studio and strategies for teaching ceramics.

**7100:426 Early Childhood Art Education (3 Credits)**

A lecture course for art educators exploring visual arts as a vehicle for whole child development and learning across the curriculum in PK-5 school settings.

**7100:427 Art in the Inclusive Classroom (3 Credits)**

Prerequisite: 5100:220. Art education course exploring the use of art with diverse populations through lecture, hands on art making and site visitations.

**7100:428 Elementary Field Exp: Art Licensure (1 Credit)**

Corequisite: 7100:410. Instructional experience in the PK-6 art classroom to apply theory and research into practice.

**7100:429 Secondary Field Exp: Art Licensure (1 Credit)**

Corequisite: 7100:411. Instructional experience in the 7-12 art classroom to apply theory and research into practice.

**7100:430 Professional Practices for Creative Careers (3 Credits)**

Studio course with experiential learning component introduces students to professional practices for securing creative careers after graduation.

**7100:435 Contemporary Art Issues (3 Credits)**

Prerequisite: 7100:102. Discussion course for advanced students in any visual arts discipline, dealing with concepts and critical theories related to current practice of the visual arts.

**7100:440 New Media III (3 Credits)**

Prerequisite or Corequisite: [7100:110 and 7100:330] or [7000:100 and 7000:330]. Students create their original New Media projects through proposals, productions, and a show. This course will be in addition or crosslisted with the 7000:400 course.

**7100:450 Advanced Life Drawing (3 Credits)**

Prerequisite: 7100:335. Drawing from the live model, with an experimentation leading to an individual style. (May be repeated for a total of 9 credits).

**7100:452 Service Learning in Art (3 Credits)**

Prerequisite: Senior standing. An interdisciplinary, lecture/studio course that integrates fine art and design to promote understanding of the importance of sustained community outreach and serving as arts advocates.

**7100:453 Advanced Throwing (3 Credits)**

Prerequisite: [7100:250 and 7100:353] or permission of instructor. Emphasis on making pottery using the potters wheel beyond the beginning level including organization and planning skills needed to make and exhibit or sell items. (May be repeated for a total of six credits.)

**7100:454 Advanced Ceramics (3 Credits)**

Prerequisite: 7100:250 and [7100:353 or 7100:354]. Emphasis on refinement of technique toward personal aesthetic statement in preparation for professional or private studio production. Student may choose a general survey of subject matter or a more concentrated area of study. (May be repeated for a total of 18 credits.)

**7100:455 Advanced Painting (3 Credits)**

Prerequisites: 7100:231 and 7100:348. Exploration of aesthetic and conceptual issues involved in developing an individual stylistic approach to image making, leading to senior portfolio and BFA exhibition. (May be repeated for a total of 15 credits)

**7100:456 Ceramic Portfolio Review (0 Credits)**

Prerequisite: 7100:454. A committee of full-time faculty reviews portfolio of studio work completed in prerequisite courses.

**7100:457 Professional Practices (3 Credits)**

Prerequisite: Junior or Senior status. This course covers business, marketing and professional development practices, while also introducing students to issues and strategies in contemporary art.

**7100:460 The Myers Forum: Studio (1-3 Credits)**

Prerequisites: 7100:102 and 7100:250, and successful completion of at least one 300 level course in the Myers School of Art, or permission of the instructor. Cross-disciplinary studio addressing current issues related to theory and practice of visual communication.

**7100:461 The Myers Forum: Seminar (1-3 Credits)**

Prerequisites: 7100:102 and 7100:250, and successful completion of at one 300 level course in the Myers School of Art, or permission of the instructor. Cross-disciplinary seminar addressing current issues related to the theory and practice of visual communication.

**7100:465 Painting/Drawing Senior Exhibition Preparation (0 Credits)**

Prerequisites: Senior standing, the second 7100:455 Advanced Painting/Drawing. Preparation of the portfolio to be exhibited in the Senior Exhibition.

**7100:466 Advanced Metalsmithing (3 Credits)**

Prerequisites: 7100:250 and 7100:366. Investigation in depth of aesthetic and technical problems of metalsmithing. Student works on individual projects under guidance from instructor. (May be repeated for a total of 18 credits.)

**7100:467 Metalsmithing Portfolio Review (0 Credits)**

Prerequisite: 7100:466. Corequisite: 7100:466. A committee of full-time faculty review portfolio of studio work completed in prerequisite courses.

**7100:471 Web and Devices II (3 Credits)**

Prerequisite: 7100:281. Students learn dynamic back-end understanding of website development while maintaining an emphasis on design and creative solutions. (May be repeated for a total of six credits.)

**7100:472 Photography III: Color for Non-Art Majors (3 Credits)**

Prerequisite: 7100:374. Advanced level lecture, studio and lab experience in color photography introducing students to technical, aesthetic and conceptual issues of the medium.

**7100:473 Photography III: Color (3 Credits)**

Prerequisite: 7100:375. Advanced level lecture, studio and lab experience in color photography introducing students to technical, aesthetic and conceptual issues of the medium.

**7100:474 Advanced Photography for Non-Art Majors (3 Credits)**

Prerequisite: 7100:374. Studio course with emphasis on advanced individual projects.

**7100:475 Advanced Photography (3 Credits)**

Prerequisites: 7100:250, 7100:375, and 7100:473. Photographic media, light and photographic equipment manipulated experimentally to produce creative graphic images. Student works under guidance of instructor on advanced individual projects. (May be repeated for a total of 21 credits.)

**7100:476 Photography Portfolio Review (0 Credits)**

Prerequisite: 7100:475. A committee of full-time faculty reviews portfolio of studio work completed in prerequisite/corequisite courses.

**7100:479 Professional Photographic Practices (3 Credits)**

Prerequisites: 7100:475 and senior standing. Introduction to business and marketing practices in the fine art and commercial photography industry. Financial, legal, organizational, promotional, interpersonal, and ethical practices will be covered.

**7100:480 Advanced Graphic Design (3 Credits)**

Prerequisite: 7100:382 or permission of instructor. Student works on advanced-level individual projects under supervision of instructor. (May be repeated for a total of nine credits.)

**7100:481 Design X Nine (3 Credits)**

Prerequisite: 7100:382. Course focusing on professional business practices. Students chosen by portfolio review in junior year. Practical experience gained through working with clients and outside sources. (May be repeated for a total of nine credits.)

**7100:482 Corporate Identity & Graphic Systems (3 Credits)**

Prerequisites: 7100:382 and 7100:384. Advanced projects in corporate identity and graphic systems analysis. Problem solving for these specific areas of graphic design within limitations of physical and digital reproduction.

**7100:483 Graphic Design Presentation (3 Credits)**

Prerequisite: 7100:482. Students prepare a professional portfolio and resume. The course includes project development, portfolio review and exhibition.

**7100:485 Advanced Illustration (3 Credits)**

Prerequisite: 7100:380 or permission of instructor. Development of a personal, unique visual voice. Exploration of traditional and/or digital approaches to illustration advancing technical proficiency, imaginative problem solving, and entrepreneurial thinking. (May be repeated for a total of nine credits)

**7100:487 Packaging Design (3 Credits)**

Prerequisite: 7100:382. Students solve packaging problems by synthesizing two and three-dimensional design concepts and researching materials and processes applicable to packaging of diverse products.

**7100:488 Typography IV (3 Credits)**

Prerequisite: 7100:387. Senior level investigation of complex sequential type systems; including publications, corporate communications and multi-application projects for comprehensive buildout while emphasizing preparation of files for various output.

**7100:489 Special Topics in Studio Art (3 Credits)**

Group Investigation of Topics not offered elsewhere in curriculum. (May be repeated for credit when a different subject or level of investigation is indicated)

**7100:490 Workshop in Art (1-4 Credits)**

Prerequisite: advanced standing in art or permission of instructor. Group investigation of a particular phase of art not offered by other courses in curriculum. (May be repeated for credit when a different subject or level of investigation is indicated - 7100:490 to maximum of eight credits; 7100:590 to maximum of 12 credits.)

**7100:491 Architectural Present I (3 Credits)**

Prerequisite: 7100:144. Studio practice in architectural design and presentation methods in residential and commercial interiors.

**7100:492 Architectural Present II (3 Credits)**

Prerequisite: 7100:491 or 7100:591. Continuation of concepts covered in Architectural Presentations I with additional work in color rendering techniques. Emphasis on a variety of rendering mediums.

**7100:493 Advanced Photography: Digital Printing (3 Credits)**

Prerequisites: 7100:280 and 7100:475. Digital technologies for fine-art photographers including scanning negatives; workflow; color management; image adjustment, correction and optimization; inkjet printing; and digital asset management.

**7100:494 Special Topics: Art Education (1-3 Credits)**

May be repeated for credit when a different subject or level of investigation of topics of interest to the art education student is not covered elsewhere in the curriculum.

**7100:495 Senior Exhibition (0 Credits)**

Prerequisite: Senior standing and permission. Exit review of work from B.F.A. candidate's major courses.

**7100:496 Art Internship/Professional Experience (1-6 Credits)**

Prerequisites: Junior standing in major program and permission of Internship Director. In-depth professional training affording the intern on-the-job experience in selected areas of specialization. (Repeatable for credit. No more than six credits of internship may apply toward the elective requirement for completion of any art department major.)

**7100:497 Independent Study: Art (1-7 Credits)**

Prerequisites for art majors: completion of at least one advanced course in the major with a grade of A or A- and permission of instructor. Investigation in depth of aesthetic and technical problems within a studio-selected area of specialization. Student must present in writing a proposed study plan and time schedule for instructor approval. Prerequisites for non-art majors: permission of instructor. (May be repeatable for seven credits).

**7100:498 Senior Thesis in the History of Art (1-3 Credits)**

Prerequisites: 14 credits in art history and permission of instructor. Individual research in art history centered around limited topic, such as specific time period, history of specific techniques, a single artist or movement in art history. No more than 10 credits will be counted toward major. (May be repeated for credit when a different subject or level of investigation is indicated)

**7100:499 Honors in Art (3 Credits)**

Prerequisites: senior standing in the Honors Program and approval of honors project by faculty advisor. To be used for research in the Honors Program established by student and his/her adviser(s). (May be repeated for a total of six credits)

## Art Education, BA

### Bachelor of Arts in Art Education (C10200BA)

More on the Art Education major (<https://www.uakron.edu/art/academics/art-education.dot>)

The Art Education program in the Mary Schiller Myers School of Art consists of a core curriculum of theory and practice that prepares students to work in a variety of organizational settings, from museums to recreational centers.

### Purpose

The purpose of this program is to enable students to develop the range of knowledge, skills, and competencies expected of those holding a liberal-arts baccalaureate degree in art and professional preparation in art education. P, K-12 licensed school art teachers who graduate from this program are expected to exhibit a high level of skills as artists, designers, and educators. Students benefit from excellent art, history, and theory instruction, and professionally equipped art and technology studios, while obtaining licensure from the College of Education through highly academic and interactive coursework.

### Goals

The following basic goals/competencies are essential to all prospective art teachers:

- To foster competencies with the basic expressive, technical, procedural and organizational skills, and conceptual insights developed through studio art and design experiences.
- To facilitate an understanding of the major styles and periods of art history, analytical methods, and theories of criticism.

- To help students connect an understanding of educational processes and structures with an understanding of relationships among the arts, sciences, and humanities, in order to apply art competencies in teaching situations and to integrate art/design instruction into the total process of education.
- To assist teachers in developing the knowledge and skills to customize and differentiate learning for learners with a range of individual differences. To aid pre-service teachers in developing curricular, instructional, and assessment strategies for building 21st Century cross-disciplinary skills for K-12 students (communication, collaboration, critical thinking, and the use of technology).
- To help students develop effective assessment strategies for collecting data and using it to improve instruction and support learner success.

## Distinctions

Students are presented with a broad range of facilities and opportunities while pursuing their BA in Art Education such as:

- Gain hands-on experience working with diverse student populations in clinical experiences.
- Obtain personalized job placement assistance (85% average full-time placement rate for graduating teachers)
- Exhibit in shows both within the university and beyond in regional venues.
- Network through student organizations like CAT (Coalition for Art Teachers) and at Ohio Art Education Association conferences.
- Participate in Arts LIFT (award-winning community-based art education program) Art Bomb Brigade (Knight funded mural arts program) and other University-sponsored outreach initiatives.

The following information has official approval of **The Mary Schiller Myers School of Art** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Students are encouraged to visit the The Mary Schiller Myers School of Art their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Art Core Requirements	42
	Advanced Art History	3
	Advanced Studio Core	6
	Education Courses	20
	Art Education Courses	21

Additional Major Electives *	2
<b>Total Hours</b>	<b>128</b>

\* This major requires a minimum of 128 completed credit hours.

Note: A 2.5 cumulative GPA in all 7100 courses is required for graduation.

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations **12**

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas **22**

*Arts/Humanities: 9 credit hours*

7100:100 Survey of History of Art I

7100:101 Survey of History of Art II

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

7100:100 Survey of History of Art I

Domestic Diversity

Global Diversity

7100:101 Survey of History of Art II

*Review the General Education Requirements page for detailed course listings.*

<b>Total Hours</b>	<b>34</b>
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## College of Arts & Sciences Requirement

Code	Title	Hours
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**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Art Core Requirements

Code	Title	Hours
7100:100	Survey of History of Art I	3
7100:101	Survey of History of Art II	3
7100:102	Survey of History of Art, Part 3	3
7100:103	Arts Orientation	0
7100:131	Foundation Drawing I	3
7100:144	Foundation 2D Design	3
7100:145	Foundation 3D Design	3
7100:189	Production I	3
7100:213	Introduction to Printmaking	3
7100:222	Introduction to Sculpture	3
7100:243	Introduction to Painting	3
or 7100:246	Introduction to Water-based Media	
7100:250	Foundation Forum: Lecture	1
7100:252	Foundations Forum: Studio	2
7100:254	Introduction to Ceramics	3
7100:266	Introduction to Metalsmithing	3
7100:273	Introduction to Digital Photography	3
or 7100:275	Introduction to Photography	
<b>Total Hours</b>		<b>42</b>

## Advanced Art History

Code	Title	Hours
<b>Complete one of the following:</b>		<b>3</b>
7100:300	Art Since 1945	
7100:301	Medieval Art	
7100:302	Art in Europe During the 17th-18th Centuries	
7100:303	Italian Renaissance Art	
7100:306	Renaissance Art in Northern Europe	
7100:307	History of Graphic Design	
7100:309	Greek Art	
7100:312	Roman Art & Architecture	
7100:313	Survey of Asian Art	
7100:356	History of Craft	
7100:370	History of Photography	
7100:401	Special Topics: History of Art	
7100:402	Museology	
<b>Total Hours</b>		<b>3</b>

## Advanced Studio Core

Code	Title	Hours
<b>Complete two of the following:</b>		<b>6</b>
7100:189	Production I	
7100:213	Introduction to Printmaking	
7100:214	Relief/Screenprint	
7100:216	Intaglio/Lithography	
7100:223	Sculpture: Stone	
7100:224	Installation Art	
7100:231	Intermediate Drawing	
7100:233	Introduction to Life Drawing	

7100:243	Introduction to Painting
7100:251	Watercolor
7100:267	Intermediate Jewelry
7100:268	Color in Metals
7100:276	Introduction to Commercial Photography
7100:280	Digital Media
7100:281	Web and Devices I
7100:283	Drawing Techniques
7100:288	Typography II
7100:310	Motion Design
7100:311	UI/UX Design
7100:317	Print Matrix
7100:318	Portrait Lighting
7100:320	Product Photography
7100:322	Sculpture II
7100:335	Intermediate Life Drawing
7100:348	Intermediate Painting
7100:353	Throwing
7100:366	Metalsmithing II
7100:368	Color in Metals II
7100:369	Production for Jewelry
7100:375	Photography II
7100:377	Medium and Large Format Photography
7100:378	Alternative Photographic Processes
7100:380	Illustration
7100:381	Digital Imaging II
7100:385	3D Modeling, Printing and Prototyping
7100:409	Emerging Technologies Studio
7100:418	Multiples and Multiplicity
7100:419	Special Topics in Print
7100:422	Advanced Sculpture
7100:425	Ceramics: Methods, Materials, & Concepts
7100:450	Advanced Life Drawing
7100:453	Advanced Throwing
7100:454	Advanced Ceramics
7100:455	Advanced Painting
7100:460	The Myers Forum: Studio
7100:466	Advanced Metalsmithing
7100:473	Photography III: Color
7100:475	Advanced Photography
7100:485	Advanced Illustration
7100:487	Packaging Design
7100:493	Advanced Photography: Digital Printing
Total Hours	6

## Education Courses

Code	Title	Hours
5100:220	Educational Psychology	3
5300:100	Orientation to the AYA/P-12 Multi-Age Programs	0
5300:495	Student Teaching: Secondary Education	11
5500:440	Literacy in the Content Areas	3

5610:225	Introduction to Exceptionalities	3
Total Hours		20

## Art Education Requirements

Code	Title	Hours
7100:105	Introduction to Art Education	3
7100:410	Methods of Teaching Elementary Art	3
7100:411	Methods of Teaching Secondary Art	3
7100:412	Student Teaching Colloquium	1
7100:428	Elementary Field Exp: Art Licensure	1
7100:429	Secondary Field Exp: Art Licensure	1
7100:430	Professional Practices for Creative Careers	3
7100:423	Art Bomb Brigade: Methods for Creating Public Art	3
7100:424	Middle School Materials & Techniques	3
7100:494	Special Topics: Art Education	3
Total Hours		24

## Art Studio with Minor, BA Bachelor of Art in Art, Studio Emphasis (C10001BA)

More on the Studio Emphasis major (<https://www.uakron.edu/art/academics/>)

The Bachelor of Arts Studio is an interdisciplinary, liberal arts degree, in which students are permitted to self-design the required suite of 42 studio electives around their interests in varying media within the School of Art. BA Studio Art Majors must complete a Minor Area Course of Study, two years of a foreign language, or five courses in American Sign Language.

The following information has official approval of **The Mary Schiller Myers School of Art** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Students are encouraged to visit the The Mary Schiller Myers School of Art their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

## Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Art History Requirements	9
	Advanced Art History	3
	Studio Art Core	12
	Studio Art Requirements	33



Internship Requirement	3
University Electives	8
Additional Credits for Graduation *	4
<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.5 cumulative GPA in all 7100 courses is required for graduation.

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

7100:100 Survey of History of Art I

7100:101 Survey of History of Art II

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

7100:100 Survey of History of Art I

Domestic Diversity

Global Diversity

7100:101 Survey of History of Art II

*Review the General Education Requirements page for detailed course listings.*

**Total Hours 34**

## College of Arts & Sciences Requirements

Code	Title	Hours
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**Degree requirements in Arts & Sciences include the completion of a minor or demonstration of ability to use another language by completion of the second year of a foreign language.** **14-18**

*Complete a minor, which is outside of the Myers School of Art, approved by a Myers School of Art faculty advisor* 18

-or-

*Foreign Language* 14

101 Beginning I

102 Beginning II

201 Intermediate I

202 Intermediate II

-or-

Five courses in American Sign Language

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Art History Requirements

Code	Title	Hours
7100:100	Survey of History of Art I	3
7100:101	Survey of History of Art II	3
7100:102	Survey of History of Art, Part 3	3
<b>Total Hours</b>		<b>9</b>

## Advanced Art History

Code	Title	Hours
<b>Complete one of the following:</b>		<b>3</b>
7100:300	Art Since 1945	
7100:301	Medieval Art	
7100:302	Art in Europe During the 17th-18th Centuries	
7100:303	Italian Renaissance Art	
7100:306	Renaissance Art in Northern Europe	
7100:307	History of Graphic Design	
7100:401	Special Topics: History of Art	
7100:402	Museology	
7100:403	Art and Critical Theory	
7100:405	History of Art Symposium	
7100:407	Methods of Art History	
7100:490	Workshop in Art	
7100:498	Senior Thesis in the History of Art	
<b>Total Hours</b>		<b>3</b>

## Studio Art Core

Code	Title	Hours
7100:103	Arts Orientation	0
7100:131	Foundation Drawing I	3
7100:144	Foundation 2D Design	3
7100:145	Foundation 3D Design	3
7100:250	Foundation Forum: Lecture	1
7100:252	Foundations Forum: Studio	2
<b>Total Hours</b>		<b>12</b>

## Studio Art Requirements

Code	Title	Hours
<b>Select 33 studio elective credits from at least six different studio disciplines.</b>		<b>33</b>

*Disciplines: Ceramics, Drawing, Graphic Design, Metalsmithing, Painting, Photography, Printmaking, Sculpture, Computer Imaging, Illustration, Commercial Photography*

Discipline 1	
7100:131	Foundation Drawing I
Discipline 2	
Discipline 3	
Discipline 4	
Discipline 5	
Discipline 6	
Total Hours	33

## Internship Requirement

Code	Title	Hours
7100:430	Professional Practices for Creative Careers	3
or 7100:452	Service Learning in Art	
or 7100:457	Professional Practices	
or 7100:479	Professional Photographic Practices	
or 7100:496	Art Internship/Professional Experience	
Total Hours		3

## University Electives

Code	Title	Hours
<b>Course substitution to reduce total number of electives might be necessary if student meets minimum 120 credits through required coursework</b>		<b>8</b>
Total Hours		8

# Ceramics, BFA

## Bachelor of Fine Arts in Ceramics (C10009BFA)

More on the Ceramics major (<https://www.uakron.edu/art/academics/ceramics.dot>)

The ceramics program at the Mary Schiller Myers School of Art is built on the belief that students can learn through doing: improving hand-skills through practice, thinking through sketching, and growing as artists by undertaking a rigorous and driven practice.

Education pioneer John Dewey wrote in *Art as Experience*, "we do not learn from experiences, we truly learn by reflecting on our experiences." In keeping with this thinking, the curriculum at the Myers School of Art explores the history of ceramics and uses that knowledge to consider the future of the medium. Clay and ceramics as a material have developed alongside humanity since the earliest periods of civilization. In that time knowledge has been passed on through demonstration, practical instruction and the exchange that comes with the discussion of novel ideas.

The program at the Myers School of Art explores art-making by considering the historical and cultural meaning of ceramic materials, as well as examining the importance of objects. Students are asked to draw on their personal experience with the world of things and then consider new possibilities and uses for such items. In support of the creation of individual work, we include lectures, demonstrations, hands-on experiences and experimentation which allow students to develop the

knowledge of processes and the skills necessary to the production of their ceramic works.

## Purpose

The ceramics program at the University of Akron's Myers School of Art offers a comprehensive forward-thinking undergraduate education, which will prepare students for work as visual artists and independent thinkers. The program is structured so students may consider careers in ceramics, or further graduate education in the visual arts at the countries leading Masters of Fine Arts Programs.

The program aims to offer students a wide range of ceramic techniques and firing methods. The ceramics program at the Myers School of Art provides the highest quality of instruction and support to facilitate students learning and the development of their personal artistic voice.

## Goals

Students majoring in Ceramics at the University of Akron will develop:

- Skills for a useful future in the field of fine art.
- A focused understanding of the contemporary continuum of clay.
- Knowledge of the historical uses, importance, and aesthetics of ceramics.
- A tactile understanding of clay materials and their potential.
- Develop a set of problem-solving skills, methods of critical thinking, ideation, and the ability to talk about artwork.
- Reflective ways to self-evaluate and consider developing their own artwork.
- Develop the ability to transfer tactile skills to other media while figuring out how to draw in skills from other areas.
- The ability to operate and control a wide range of ceramics' firing temperatures and atmospheres in various kilns including bisque, glaze, oxidation, reduction, salt firing, and raku firing.
- Skills of building ceramic forms by hand, on a potter's wheel, by slipcasting and employing digital technology.
- Knowledge about the formulation of clay bodies, glazes and ceramics coatings for the widest range of color choices.
- Synthesize periodic assignments, and individual ideas into a unique voice and style of producing individual ceramic artwork.

## Distinctions

Students at The University of Akron are presented with a broad range of skills and opportunities to develop their personal voice while pursuing a BFA in Ceramics, including:

- 24-hour studio access
- Large open studio spaces programmed to facilitate collaboration and a sense of community.
- More than 15 kilns able to fire in the widest range of oxidation, reduction, salt/soda atmosphere, as well as raku and smoke firing.
- A highly functional fully stocked glaze laboratory.
- Clay making facilities replete with a wide range of clay types.
- Access to cutting edge technology like 3D stereolithographic printing, decal printers, vinyl cutters, and a laser cutter.
- Access to a wide range of exhibition opportunities.
- Assistance finding and developing grant proposals.

- Opportunities to develop an understanding of the social aspects of the world's oldest three-dimensional material.

The following information has official approval of **The Mary Schiller Myers School of Art** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Students are encouraged to visit the The Mary Schiller Myers School of Art their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Art History Requirements	9
	Foundation Core	13
	Art History Electives	6
	Ceramics Requirements	12
	Advanced Ceramics Requirement	15
	Studio Electives	30
	Additional Credits for Graduation *	6
	<b>Total Hours</b>	<b>125</b>

\* This major requires a minimum of 125 completed credit hours.

Note: A 2.5 cumulative GPA in all 7100 courses is required for graduation.

## Recommended General Education Courses

Code	Title	Hours
	Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.	

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

<b>Tier I: Academic Foundations</b>	<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>	
<i>Speaking: 3 credit hours</i>	
<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>	<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>	
7100:100 Survey of History of Art I	

7100:101 Survey of History of Art II

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

7100:100 Survey of History of Art I

Domestic Diversity

Global Diversity

7100:101 Survey of History of Art II

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## College of Arts & Sciences Requirement

Code Title Hours

Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Art History Requirements

Code	Title	Hours
7100:100	Survey of History of Art I	3
7100:101	Survey of History of Art II	3
7100:102	Survey of History of Art, Part 3	3
	<b>Total Hours</b>	<b>9</b>

## Foundation Core

Code	Title	Hours
7100:103	Arts Orientation	0
7100:131	Foundation Drawing I	3
7100:144	Foundation 2D Design	3
7100:145	Foundation 3D Design	3
7100:233	Introduction to Life Drawing	3
7100:250	Foundation Forum: Lecture	1
	<b>Total Hours</b>	<b>13</b>

## Art History Electives

Code	Title	Hours
<b>Complete six credits:</b>		<b>6</b>
7100:300	Art Since 1945	
7100:301	Medieval Art	
7100:302	Art in Europe During the 17th-18th Centuries	
7100:303	Italian Renaissance Art	
7100:306	Renaissance Art in Northern Europe	
7100:307	History of Graphic Design	
7100:309	Greek Art	

7100:356	History of Craft	
7100:370	History of Photography	
7100:401	Special Topics: History of Art	
Total Hours		6

## Ceramics Requirements

Code	Title	Hours
7100:222	Introduction to Sculpture	3
7100:231	Intermediate Drawing	3
7100:254	Introduction to Ceramics	3
7100:353	Throwing	3
7100:456	Ceramic Portfolio Review	0
7100:495	Senior Exhibition	0
Total Hours		12

## Advanced Ceramics Requirement

Code	Title	Hours
<b>Complete 15 credits:</b>		<b>15</b>
7100:453	Advanced Throwing <sup>1</sup>	
7100:454	Advanced Ceramics <sup>2</sup>	

<sup>1</sup> May be repeated for a total of six credits

<sup>2</sup> May be repeated for a total of 15 credits

## Studio Electives

Code	Title	Hours
<b>Complete 30 credits</b>		<b>30</b>
7100:xxx		
Total Hours		30

## Ceramics, Minor

### Minor in Ceramics (C10009M)

#### Program Contact

Melissa Olson  
330-972-6030  
mso3@uakron.edu

The following information has official approval of the **Mary Schiller Myers School of Art** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Ceramics" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		18
Total Hours		18

## Required Courses

Code	Title	Hours
7100:254	Introduction to Ceramics	3
7100:353	Throwing	3
<b>Select one or both, repeating for a total of twelve credits:</b>		<b>12</b>
7100:453	Advanced Throwing <sup>1</sup>	
7100:454	Advanced Ceramics <sup>2</sup>	
Total Hours		18

<sup>1</sup> May be repeated for a total of 6 credits.

<sup>2</sup> May be repeated for a total of 18 credits.

Note: Foundations curriculum need not be completed.

## Drawing, Minor

### Minor in Drawing (C10100M)

The Drawing Minor prepares students to engage in an individual search for expression through the development of strong visual skills, critical reasoning abilities, exploration of materials and processes, and understanding of historical and contemporary art. The minor provides students with the opportunity to integrate creative and artistic practice with their other academic and research pursuits. Flexible thinking and analytical skills are sought by a wide range of professions and industries.

Professors encourage both the freedom and discipline essential to drawing by embracing a wide range of aesthetic strategies and offering individual attention. Classes offer a place where ideas are openly examined, exchanged, challenged, and refined. The Minor requirements consist of 18 credits which include introductory and intermediate drawing courses combined with a slate of choices exploring drawing media, subject matter, and applications. A minimum grade-point average of 2.0 is required.

#### Program Contact

Melissa Olson  
330-972-6030  
mso3@uakron.edu

The following information has official approval of the **Mary Schiller Myers School of Art** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Drawing" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

## Required Courses

Code	Title	Hours
7100:131	Foundation Drawing I	3
7100:231	Intermediate Drawing	3
7100:233	Introduction to Life Drawing <sup>1</sup>	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select three of the following:</b>		<b>9</b>
7100:283	Drawing Techniques	
7100:335	Intermediate Life Drawing <sup>2</sup>	
7100:450	Advanced Life Drawing <sup>2</sup>	
7100:489	Special Topics in Studio Art <sup>3</sup>	
Total Hours		9

<sup>1</sup> May be repeated for a total of 6 credits.

<sup>2</sup> May be repeated for a total of 9 credits.

<sup>3</sup> 7100:489 Special Topics in Studio Art must be in Drawing.

Note: Foundations curriculum need not be completed. Prerequisites must be honored.

## Emerging Technologies, Minor Minor in Emerging Technologies (C10107M)

Emerging Technologies is a minor at the Myers School of Art and explores the use of the latest technologies in art and design.

### Program Contact

Melissa Olson  
330-972-6030  
mso3@uakron.edu

The following information has official approval of the **Mary Schiller Myers School of Art** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Emerging Technologies" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		6
Electives		12
Total Hours		18

## Required Courses

Code	Title	Hours
7100:111	Emerging Technologies	3
7100:409	Emerging Technologies Studio	3
Total Hours		6

## Electives

Code	Title	Hours
<b>Select 12 credits of the following:</b>		<b>12</b>
7100:280	Digital Media	
7100:281	Web and Devices I	
7100:310	Motion Design	
7100:311	UI/UX Design	
7100:381	Digital Imaging II	
7100:471	Web and Devices II	
7100:385	3D Modeling, Printing and Prototyping	
7100:496	Art Internship/Professional Experience	
Total Hours		12

Note: Foundations curriculum need not be completed. Prerequisites must be honored.

## Graphic Design, BFA Bachelor of Fine Arts in Graphic Design (C10104BFA)

More on the Graphic Design major (<https://www.uakron.edu/art/academics/graphic-design.dot>)

Graphic Design is the largest program within the Myers School of Art. It is a professional program for students pursuing careers in the expanding multidisciplinary field of visual communication design. Critical thinking and logical problem solving in print, web and interactive media are emphasized.

## Purpose

The curriculum prioritizes creative thinking and problem solving through design theory but also emphasizes contemporary production processes using industry-standard technology. Students gain an understanding that design is an investment in innovative thinking, positioning, branding, and communication that creates value for businesses. We encourage our students to become engaged, socially responsible, and thoughtful designers.

## Goals

All students participate in several career preparation activities. These opportunities include portfolio reviews, travel, experiential learning in the workplace, exposure to area professionals, and workshops with visiting designers. These extracurricular activities help maintain an 86% job

placement rate, three months after graduation. Our alumni design the visual world around us from New York to Los Angeles, and Seattle to Austin.

## Distinctions

Students are presented with a broad range of facilities and opportunities while pursuing their BFA in Graphic Design such as:

- Gaining real-world skills through Design x Nine (<http://www.designxnine.com/>), the in-house student design studio serving on- and off-campus clients.
- Strengthening design and business skills through professional internships in a studio, agency, or corporate environment.
- Exploring current trends in graphic design through state-of-the-art courses and facilities such as our Makerspace and AR/VR lab.
- Engaging with local design professionals while participating in an American Advertising Federation of Akron event or awards show.
- Expanding their network by attending a portfolio review through The American Institute of Graphic Arts.
- Building a strong résumé, students in our program have won hundreds of design awards in competitions, have been published in major design journals, and even completed research opportunities for clients like NASA and Microsoft.
- Finding inspiration through travel, our students regularly visit design epicenters such as Miami, New York, and Chicago as well as unique travel experiences to other areas of the United States and Europe.

The following information has official approval of **The Mary Schiller Myers School of Art** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Students are encouraged to visit the The Mary Schiller Myers School of Art their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Art History Requirements	12
	Foundation Core	12
	Graphic Design Requirements	54
	Photography Requirement	3
	Electives	5
	<b>Total Hours</b>	<b>120</b>

Note: A 2.5 cumulative GPA in all 7100 courses is required for graduation.

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

7100:100 Survey of History of Art I

7100:101 Survey of History of Art II

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

7100:100 Survey of History of Art I

Domestic Diversity

Global Diversity

7100:101 Survey of History of Art II

*Review the General Education Requirements page for detailed course listings.*

**Total Hours 34**

## College of Arts & Sciences Requirement

Code	Title	Hours
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**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Art History Requirements

Code	Title	Hours
7100:100	Survey of History of Art I	3
7100:101	Survey of History of Art II	3
7100:102	Survey of History of Art, Part 3	3
7100:307	History of Graphic Design	3
	<b>Total Hours</b>	<b>12</b>

## Foundation Core

Code	Title	Hours
7100:131	Foundation Drawing I	3
7100:144	Foundation 2D Design	3
7100:145	Foundation 3D Design	3
7100:250	Foundation Forum: Lecture	1
7100:252	Foundations Forum: Studio	2
Total Hours		12

## Graphic Design Requirements

Code	Title	Hours
7100:132	Introduction to Design	3
7100:184	Typography 1	3
7100:189	Production I	3
7100:280	Digital Media	3
7100:281	Web and Devices I	3
7100:283	Drawing Techniques	3
7100:288	Typography II	3
7100:310	Motion Design	3
7100:311	UI/UX Design	3
7100:380	Illustration	3
7100:382	Graphic Design Junior Review	1
7100:384	Professional Design Practices	2
7100:387	Typography III	3
7100:471	Web and Devices II	3
7100:480	Advanced Graphic Design	3
or 7100:481	Design X Nine	
or 7100:485	Advanced Illustration	
7100:482	Corporate Identity & Graphic Systems	3
7100:483	Graphic Design Presentation	3
7100:487	Packaging Design	3
7100:488	Typography IV	3
7100:495	Senior Exhibition	0
Total Hours		54

## Photography Requirement

Code	Title	Hours
<b>Select three credits:</b>		<b>3</b>
7100:273	Introduction to Digital Photography	
7100:275	Introduction to Photography	
7100:276	Introduction to Commercial Photography	
7100:318	Portrait Lighting	
7100:320	Product Photography	
7100:375	Photography II	
7100:377	Medium and Large Format Photography	
7100:473	Photography III: Color	
7100:475	Advanced Photography	
Total Hours		3

## Electives

Code	Title	Hours
<b>Complete five credits:<sup>1</sup></b>		<b>5</b>
7100:213	Introduction to Printmaking	
7100:214	Relief/Screenprint	
7100:216	Intaglio/Lithography	
7100:222	Introduction to Sculpture	
7100:223	Sculpture: Stone	
7100:224	Installation Art	
7100:231	Intermediate Drawing	
7100:234	Anatomy for Artists	
7100:243	Introduction to Painting	
Total Hours		5

<sup>1</sup> A minimum of three credits must come from 7100 Studio Arts. The remaining two may be studio arts or open electives.

## Recommended Sequence

### 1st Year

Fall Semester	Hours
7100:103 Arts Orientation	0
7100:131 Foundation Drawing I	3
7100:144 Foundation 2D Design	3
7100:145 Foundation 3D Design	3
Writing Requirement <sup>1</sup>	3
Quantitative Reasoning Requirement	3
Hours	15

### Spring Semester

7100:100 Survey of History of Art I	3
7100:132 Introduction to Design	3
7100:189 Production I	3
7100:250 Foundation Forum: Lecture	1
7100:252 Foundations Forum: Studio	2
Writing Requirement	3
Hours	15

### 2nd Year

#### Fall Semester

7100:101 Survey of History of Art II	3
7100:184 Typography 1	3
7100:281 Web and Devices I	3
7100:280 Digital Media	3
7600:105 Introduction to Public Speaking	3
Hours	15

#### Spring Semester

7100:283 Drawing Techniques	3
7100:288 Typography II	3
7100:307 History of Graphic Design	3
Natural Science Requirement with Lab	4
Art Studio Elective	3
Hours	16

**3rd Year****Fall Semester**

7100:102	Survey of History of Art, Part 3	3
7100:310	Motion Design	3
7100:382	Graphic Design Junior Review	1
7100:384	Professional Design Practices	2
7100:387	Typography III	3
	Photography Requirement	3
	Hours	15

**Spring Semester**

7100:311	UI/UX Design	3
7100:380	Illustration	3
7100:488	Typography IV	3
	Social Science Requirement	3
	Humanities Requirement	3
	Hours	15

**4th Year****Fall Semester**

7100:482	Corporate Identity & Graphic Systems	3
7100:487	Packaging Design	3
	Art Studio or Open Elective	2
	General Education Tier III course	3
	General Education Tier III course	3
	Hours	14

**Spring Semester**

7100:471	Web and Devices II	3
7100:483	Graphic Design Presentation	3
7100:495	Senior Exhibition	0
	Global Diversity Requirement <sup>2</sup>	3
	Natural Science Requirement	3
	Social Science Requirement	3
	Hours	15
	Total Hours	120

<sup>1</sup> See adviser for placement<sup>2</sup> 7100:480 Advanced Graphic Design, 7100:481 Design X Nine, or 7100:485 Advanced Illustration

## History Emphasis, Minor

### Minor in Art – History Emphasis (C10002M)

**Program Contact**

Melissa Olson  
330-972-6030  
mso3@uakron.edu

The following information has official approval of the **Mary Schiller Myers School of Art** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a “Minor in History Emphasis” and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student’s record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

## Required Courses

Code	Title	Hours
7100:100	Survey of History of Art I	3
7100:101	Survey of History of Art II	3
7100:102	Survey of History of Art, Part 3	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select 9 credits of the following:</b>		<b>9</b>
7000:401	History of Performance and New Media	
7100:300	Art Since 1945	
7100:301	Medieval Art	
7100:302	Art in Europe During the 17th-18th Centuries	
7100:303	Italian Renaissance Art	
7100:306	Renaissance Art in Northern Europe	
7100:307	History of Graphic Design	
7100:309	Greek Art	
7100:313	Survey of Asian Art	
7100:370	History of Photography	
7100:401	Special Topics: History of Art	
7100:402	Museology	
7100:403	Art and Critical Theory	
7100:405	History of Art Symposium	
7100:407	Methods of Art History	
7100:435	Contemporary Art Issues	
7100:498	Senior Thesis in the History of Art	
Total Hours		9

Note: Foundations curriculum need not be completed. Prerequisites must be honored.

## Illustration, Minor

### Minor in Illustration (C10108M)

**Program Contact**

Melissa Olson  
330-972-6030  
mso3@uakron.edu

The following information has official approval of the **Mary Schiller Myers School of Art** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent



upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a “Minor in Illustration” and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student’s record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		18
Total Hours		18

## Required Courses

Code	Title	Hours
7100:283	Drawing Techniques	3
7100:335	Intermediate Life Drawing	3
7100:380	Illustration	3
7100:485	Advanced Illustration <sup>1</sup>	6
<b>Select one of the following:</b>		<b>3</b>
7100:185	Introduction to Computer Graphics	
7100:189	Production I	
Total Hours		18

<sup>1</sup> Complete twice for a total of six credits.

Note: Foundations curriculum need not be completed. Prerequisites must be honored.

# Jewelry & Metalsmithing, BFA

## Bachelor of Fine Arts in Jewelry and Metalsmithing (C10102BFA)

More on the Jewelry and Metalsmithing major

The jewelry and metalsmithing program introduces students to a variety of techniques and processes specific to the field, which allow students to explore a wide range of ideas, objects, images, and modes of making. The curriculum combines art theory, craft history, contemporary issues and personal influences with a wide approach to making and materials. Students refine their skills as they study and create utilitarian and nonfunctional objects, jewelry and metal sculpture.

## Purpose

The purpose of the Jewelry & Metalsmithing program is to offer a comprehensive, forward-thinking undergraduate education preparing students for graduate-level study in the field; professional life as a visual artist; and skills in the production/manufacturing field of the jewelry industry. The program aims to provide students with experience in a wide variety of jewelry and metalsmithing processes as well as alternative approaches to materials, processes, and tools to find their own artistic direction through research, experimentation, and practice.

## Goals

- To offer students a foundation in traditional and contemporary jewelry making and metalsmithing practices, while also emphasizing conceptual thinking, innovation in design, and refined craftsmanship.
- To encourage students to explore individual directions in contemporary jewelry making, ornamentation, and object making through mixed media exploration, production techniques, and fine jewelry skills.
- To encourage students to understand the implications of the objects and jewelry they make through the larger contexts of art theory, craft history, and contemporary issues in the studio art jewelry field.
- To give students experience in working with a variety of traditional techniques and processes including silversmithing, hollow form construction, casting, enameling, electroforming, stone setting, and die forming.
- To give students experience at working with a variety of alternative techniques and processes including 3D modeling and printing, laser cutting, powder coating, electroplating, vacuum forming, resin work, and experimentation with other materials that allow students to consider the meaning of materials in our contemporary culture.
- To help students develop creative problem-solving skills, self-motivated studio practice, and a strong work ethic.
- To familiarize students with the major issues and aesthetic approaches of contemporary art and craft disciplines.
- To foster the individual’s skills in thinking critically and analytically as a means of evaluating and understanding art made by themselves and other artists.
- To educate students on working safely in all areas of a jewelry and metalsmithing studio.
- To provide students with unique opportunities beyond the scope of traditional classroom learning to both expand upon the education that we offer as well as encourage an appreciation and love of lifelong learning.

## Distinctions

Students are presented with a broad range of facilities and opportunities while pursuing their BFA in Jewelry & Metalsmithing such as:

- The Myers School of Art jewelry & Metalsmithing studio is a shared, collaborative environment to which students have 24-hour access. In addition to communal space, studio space is offered to intermediate and advanced level students on a competitive basis.
- Exhibit in shows both within the university and beyond in local, regional, and national venues.
- Participate in the Annual Myers Holiday Shop, Annual Boston Mills ArtFest Akron, Art Museum Holiday Sale, and other local venues.
- Travel to the Biennial Society of North American Goldsmith Conferences.
- Participate in the Akron Jewelry & Metals Club Activities
- Engage with the Akron and Northeast Ohio communities at museums, schools, and community jewelry and metalsmithing events.
- Gain hands-on experience working with visiting artists and local and regional artists in our exciting internship program.
- Past students have interned with Zenia Lis, Stephen Yusko, Tap Studios, Seth Gould, and Cambridge Jewelers.

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intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Students are encouraged to visit the The Mary Schiller Myers School of Art their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Art History Requirements	9
	Foundation Core	12
	Art History Electives	6
	Jewelry and Metalsmithing Requirements	42
	Studio Electives	9
	Additional Major Electives *	13
	<b>Total Hours</b>	<b>125</b>

\* This major requires a minimum of 125 completed credit hours.

Note: A 2.5 cumulative GPA in all 7100 courses is required for graduation.

## Recommended General Education Courses

Code	Title	Hours
	Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.	

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

<b>Tier I: Academic Foundations</b>	<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>	
<i>Speaking: 3 credit hours</i>	
<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>	<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>	
7100:100 Survey of History of Art I	
7100:101 Survey of History of Art II	
<i>Natural Sciences: 7 credit hours</i>	
<i>Social Sciences: 6 credit hours</i>	
<b>Tier III: Tagged Courses</b>	
<i>Select one class from each of the following subcategories:</i>	

Complex Systems

Critical Thinking

7100:100 Survey of History of Art I

Domestic Diversity

Global Diversity

7100:101 Survey of History of Art II

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## College of Arts & Sciences Requirement

**Code Title Hours**

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Art History Requirements

Code	Title	Hours
7100:100	Survey of History of Art I	3
7100:101	Survey of History of Art II	3
7100:102	Survey of History of Art, Part 3	3
<b>Total Hours</b>		<b>9</b>

## Foundation Core

Code	Title	Hours
7100:103	Arts Orientation	0
7100:131	Foundation Drawing I	3
7100:144	Foundation 2D Design	3
7100:145	Foundation 3D Design	3
7100:250	Foundation Forum: Lecture	1
7100:252	Foundations Forum: Studio	2
<b>Total Hours</b>		<b>12</b>

## Art History Electives

Code	Title	Hours
<b>Complete six credits:</b>		<b>6</b>
7100:300	Art Since 1945	
7100:301	Medieval Art	
7100:302	Art in Europe During the 17th-18th Centuries	
7100:303	Italian Renaissance Art	
7100:306	Renaissance Art in Northern Europe	
7100:307	History of Graphic Design	
7100:309	Greek Art	
7100:312	Roman Art & Architecture	
7100:313	Survey of Asian Art	
7100:356	History of Craft	
<b>Total Hours</b>		<b>6</b>

## Jewelry and Metalsmithing Requirements

Code	Title	Hours
7100:189	Production I	3
7100:222	Introduction to Sculpture	3
7100:266	Introduction to Metalsmithing	3
7100:267	Intermediate Jewelry	3
7100:268	Color in Metals	3
7100:366	Metalsmithing II	3
7100:369	Production for Jewelry	3
7100:385	3D Modeling, Printing and Prototyping	3
7100:457	Professional Practices	3
7100:466	Advanced Metalsmithing <sup>1</sup>	12
7100:467	Metalsmithing Portfolio Review	0
7100:489	Special Topics in Studio Art <sup>2</sup>	3
Total Hours		42

<sup>1</sup> Repeat 7100:466 a minimum of four times.

<sup>2</sup> Special topic should be in the Jewelry & Metalsmithing area.

## Studio Electives

Code	Title	Hours
<b>Complete nine credits:</b>		<b>9</b>
7100:xxx		
Total Hours		9

## Metalsmithing, Minor Minor in Metalsmithing (C10102M)

### Program Contact

Melissa Olson  
330-972-6030  
mso3@uakron.edu

The following information has official approval of the **Mary Schiller Myers School of Art** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Metalsmithing" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		18
Total Hours		18

## Required Courses

Code	Title	Hours
7100:266	Introduction to Metalsmithing	3
7100:268	Color in Metals	3
7100:366	Metalsmithing II	3
7100:368	Color in Metals II	3
7100:466	Advanced Metalsmithing <sup>1</sup>	6
Total Hours		18

<sup>1</sup> Take two times for a total of six credits

Note: Foundations curriculum need not be completed. Prerequisites must be honored.

## Painting & Drawing, BFA Bachelor of Fine Art in Painting and Drawing (C10004BFA)

More on the Painting and Drawing major (<https://www.uakron.edu/art/academics/painting-drawing.dot>)

The Painting and Drawing program emphasizes that we are a community of people and ideas. Faculty and students are united in fostering curiosity and shared work ethic. Students explore studio work that demonstrates individual expression, critical thinking, and an awareness of art's historical and contemporary issues.

## Purpose

The painting department supports an inspired learning environment that encourages both experimentation and problem-solving. Working in individual studios, painting majors develop analytical thinking and a supportive community through critiques and discussions. An active visiting artist program and travel opportunities give students direct access to professionals in their field and new perspectives. Faculty and students share a respect for the tradition of painting while addressing how painting engages contemporary culture, technology and ideas.

## Goals

Students demonstrate strong technical, design, and conceptual thinking skills. Exposure to a wide range of creative processes and materials prepare students for personally driven projects in advanced work. Learning both traditional and modern approaches, majors enjoy the flexibility to investigate a wide range of approaches and related disciplines. Professional practices courses and visiting artists provide students with innovative learning and career development opportunities.

## Distinctions

Students are presented with a broad range of facilities and opportunities while pursuing their BFA in Painting/Drawing such as:

- 24-hour studio access
- Individual studio spaces at the advanced level
- Professional career development
- Exhibition opportunities
- Nationally recognized visiting artist program
- Preparation for graduate study
- Student-run painting club

- Access to world-class museums in the region
- National and international travel opportunities

The following information has official approval of **The Mary Schiller Myers School of Art** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Students are encouraged to visit the The Mary Schiller Myers School of Art their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Art History Requirements	12
	Foundation Core	15
	Art History Electives	3
	Painting and Drawing Requirements	39
	Studio Electives	9
	Additional Credits for Graduation *	8
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.5 cumulative GPA in all 7100 courses is required for graduation.

## Recommended General Education Courses

Code	Title	Hours
------	-------	-------

Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

<b>Tier I: Academic Foundations</b>	<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>	
<i>Speaking: 3 credit hours</i>	
<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>	<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>	
7100:100 Survey of History of Art I	

7100:101	Survey of History of Art II
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*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

7100:100	Survey of History of Art I
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Domestic Diversity

Global Diversity

7100:101	Survey of History of Art II
----------	-----------------------------

*Review the General Education Requirements page for detailed course listings.*

Total Hours	34
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## College of Arts & Sciences Requirement

Code	Title	Hours
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**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Art History Requirements

Code	Title	Hours
7100:100	Survey of History of Art I	3
7100:101	Survey of History of Art II	3
7100:102	Survey of History of Art, Part 3	3
7100:300	Art Since 1945	3
or 7100:403	Art and Critical Theory	
or 7100:435	Contemporary Art Issues	
<b>Total Hours</b>		<b>12</b>

## Foundation Core

Code	Title	Hours
7100:103	Arts Orientation	0
7100:131	Foundation Drawing I	3
7100:144	Foundation 2D Design	3
7100:145	Foundation 3D Design	3
7100:233	Introduction to Life Drawing	3
7100:250	Foundation Forum: Lecture	1
7100:252	Foundations Forum: Studio	2
<b>Total Hours</b>		<b>15</b>

## Art History Electives

Code	Title	Hours
<b>Complete three credits:</b>		<b>3</b>
7100:301	Medieval Art	
7100:302	Art in Europe During the 17th-18th Centuries	
7100:303	Italian Renaissance Art	

7100:306	Renaissance Art in Northern Europe
7100:307	History of Graphic Design
7100:309	Greek Art
7100:312	Roman Art & Architecture
7100:356	History of Craft
7100:370	History of Photography
7100:401	Special Topics: History of Art
7100:402	Museology
7100:405	History of Art Symposium
7100:407	Methods of Art History
Total Hours	3

## Painting and Drawing Requirements

Code	Title	Hours
7100:189	Production I	3
7100:213	Introduction to Printmaking	3
7100:231	Intermediate Drawing	3
7100:243	Introduction to Painting	3
7100:335	Intermediate Life Drawing	3
7100:348	Intermediate Painting <sup>1</sup>	6
7100:350	Painting/Drawing Portfolio Review	0
7100:450	Advanced Life Drawing <sup>1</sup>	6
7100:455	Advanced Painting <sup>2</sup>	9
7100:457	Professional Practices	3
7100:495	Senior Exhibition	0
Total Hours		39

<sup>1</sup> Repeat a minimum of two times.

<sup>2</sup> Repeat a minimum of three times.

## Studio Electives

Code	Title	Hours
<b>Complete nine credits:</b>		<b>9</b>
7100:xxx		
Total Hours		9

## Painting, Minor

### Minor in Painting (C10101M)

The Painting Minor prepares students to engage in an individual search for expression through the development of strong visual skills, critical reasoning abilities, exploration of materials and processes, and understanding of historical and contemporary art. The minor provides students with the opportunity to integrate creative and artistic practice with their other academic and research pursuits. Flexible thinking and analytical skills are sought by a wide range of professions and industries.

Professors encourage both the freedom and discipline essential to painting by embracing a wide range of aesthetic strategies and offering individual attention. Classes offer a place where ideas are openly examined, exchanged, challenged, and refined. The Minor requirements consist of 18 credits which include introductory and intermediate painting courses combined with a slate of choices exploring drawing and painting media. A minimum grade-point average of 2.0 is required.

### Program Contact

Melissa Olson  
330-972-6030  
mso3@uakron.edu

The following information has official approval of the **Mary Schiller Myers School of Art** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Painting" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

## Required Courses

Code	Title	Hours
7100:243	Introduction to Painting	3
7100:348	Intermediate Painting <sup>1</sup>	6
Total Hours		9

<sup>1</sup> Complete two times for six credits

## Electives

Code	Title	Hours
<b>Select one of the following:</b>		<b>3</b>
7100:231	Intermediate Drawing	
7100:246	Introduction to Water-based Media	
7100:335	Intermediate Life Drawing	
<b>Select two of the following:</b>		<b>6</b>
7100:450	Advanced Life Drawing	
7100:455	Advanced Painting	
7100:489	Special Topics in Studio Art	
Total Hours		9

## Photography For Non-Art Majors, Minor

### Minor in Photography for Non-Art Majors (C10110M)

#### Program Contact

Melissa Olson  
330-972-6030  
mso3@uakron.edu

The following information has official approval of the **Mary Schiller Myers School of Art** and the **Buchtel College of Arts & Sciences**, but

is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Photography for Non-Art Majors" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

## Required Courses

Code	Title	Hours
7100:274	Photography I for Non-Art Majors	3
7100:374	Photography II for Non-Art Majors	3
7100:474	Advanced Photography for Non-Art Majors	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select 9 credits of the following elective courses:</b>		<b>9</b>
7100:276	Introduction to Commercial Photography	
7100:370	History of Photography	
7100:473	Photography III: Color	
7100:474	Advanced Photography for Non-Art Majors <sup>1</sup>	
Total Hours		9

<sup>1</sup> May be repeated

Note: Foundations curriculum need not be completed. Prerequisites must be honored.

# Photography, BFA

## Bachelor of Fine Arts in Photography (C10103BFA)

More on the Photography major (<https://www.uakron.edu/art/academics/photography.dot>)

The Photography program provides in-depth experience in black and white and color fine art photography utilizing film and digital technologies as well as commercial photography and alternative approaches to the medium. Technical mastery and advanced conceptual thinking are emphasized, along with a solid grounding in historical and contemporary issues.

## Purpose

The photography area has a primary aim to provide a high quality professional undergraduate education in fine art photography. The program's curriculum centers on mastery in film and digital technologies

as well as strong conceptual development towards a final portfolio and exhibition. The photography area also serves many art and non-art students who take photography classes as electives.

## Goals

- Education of the student in the field of fine art photography.
- Understanding of historical and conceptual developments in the field.
- Understanding of the tools, materials, and processes used in the field today.
- Development of the students' career as a professional artist working in the gallery/museum world.
- Personal development for the student, to increase self-awareness and to provide a means for self-expression.

## Distinctions

Students are presented with a broad range of facilities and opportunities while pursuing their BFA in Photography such as:

- Competitive scholarships available for partial tuition, fees, tools, research, materials, and travel
- Travel to the Society for Photographic Education's Regional and National Conferences
- Afterhours access to darkrooms, lighting, and digital labs.
- Exhibit on campus, locally, and regionally.
- Gain hands-on experience with visiting artists in residence programs.
- Participate in activities led by the campus student organization, Folk Photography Association.

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Students are encouraged to visit the The Mary Schiller Myers School of Art their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Art History Requirements		15
Foundation Core		12
Photography Requirements		33
Printmaking Requirements		0-3
Studio Electives		18
Additional Credits for Graduation *		8-5
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.5 cumulative GPA in all 7100 courses is required for graduation.

## Recommended General Education Courses

Code	Title	Hours
------	-------	-------

Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

7100:100 Survey of History of Art I

7100:101 Survey of History of Art II

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

7100:100 Survey of History of Art I

Domestic Diversity

Global Diversity

7100:101 Survey of History of Art II

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## College of Arts & Sciences Requirement

Code	Title	Hours
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Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Art History Requirements

Code	Title	Hours
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7100:100 Survey of History of Art I 3

7100:101 Survey of History of Art II 3

7100:102 Survey of History of Art, Part 3 3

7100:370	History of Photography	3
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7100:xxx	Advanced Art History Elective	3
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Total Hours 15

## Foundation Core

Code	Title	Hours
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7100:103 Arts Orientation 0

7100:131 Foundation Drawing I 3

7100:144 Foundation 2D Design 3

7100:145 Foundation 3D Design 3

7100:250 Foundation Forum: Lecture 1

7100:252 Foundations Forum: Studio 2

Total Hours 12

## Photography Requirements

Code	Title	Hours
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7100:275 Introduction to Photography 3

7100:276 Introduction to Commercial Photography 3

7100:318 Portrait Lighting 3

7100:320 Product Photography 3

7100:375 Photography II 3

7100:377 Medium and Large Format Photography 3

7100:473 Photography III: Color 3

7100:475 Advanced Photography <sup>1</sup> 9

7100:476 Photography Portfolio Review 0

7100:479 Professional Photographic Practices 3

7100:495 Senior Exhibition 0

Total Hours 33

<sup>1</sup> Repeat a minimum of three times.

## Printmaking Requirements

Code	Title	Hours
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**Complete one course: 0-3**

7100:213 Introduction to Printmaking

7100:214 Relief/Screenprint

7100:216 Intaglio/Lithography

7100:317 Print Matrix

7100:319 Printmaking Review

7100:418 Multiples and Multiplicity

Total Hours 0-3

## Studio Electives

Code	Title	Hours
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**Complete 18 credits: 18**

7100:xxx

Total Hours 18

## Photography, Minor Minor in Photography (C10103M)

Program Contact

Melissa Olson  
330-972-6030  
mso3@uakron.edu

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The following courses constitute a “Minor in Photography” and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student’s record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		6
Electives		12
Total Hours		18

## Required Courses

Code	Title	Hours
7100:275	Introduction to Photography	3
7100:375	Photography II	3
Total Hours		6

## Electives

Code	Title	Hours
<b>Select 12 credits from the following:</b>		<b>12</b>
7100:276	Introduction to Commercial Photography	
7100:370	History of Photography	
7100:473	Photography III: Color	
7100:475	Advanced Photography <sup>1</sup>	
7100:479	Professional Photographic Practices	
Total Hours		12

<sup>1</sup> May be repeated

Note: Foundations curriculum need not be completed. Prerequisites must be honored.

## Printmaking, BFA

### Bachelor of Fine Arts in Printmaking (C10003BFA)

More on the Printmaking major (<https://www.uakron.edu/art/academics/printmaking.dot>)

The Printmaking program is centered upon a dynamic investigation into the meaning of printed matter and the production of multiples in our complex world. Students energetically examine the visual and expressive potential of fine art printmaking while developing theoretical grounding in the historic context and contemporary applications of printmaking.

The curriculum is structured to provide a firm technical and conceptual foundation in print media as students develop problem-solving and analytical skills. Through independent and communal efforts students refine their art-making abilities, discover their individual voices and aesthetic sensibilities, and learn the habits essential to the lives of active artists and engaged global citizens.

## Purpose

The purpose of the Printmaking program is to offer a comprehensive, forward-thinking undergraduate education in printmaking preparing students for professional work as visual artists and practitioners in the fields of printing/printmaking and for graduate-level study in printmaking and the visual arts. The program aims to offer students an education in a wide range of printmaking techniques—from historic to progressive—while continuing to provide high-quality printmaking courses to support and broaden the educations of students in other areas of study within The Myers School of Art.

## Goals

- To help students gain technical strength in the four primary printmaking media—relief, intaglio, lithography, and screenprinting—and progressive contemporary printmaking practice—digital printing, printstallation, relational aesthetics, etc.
- To foster student learning of the problem-solving skills, methods of critical thinking, and idea development of the printmaking discipline and greater art-making practice.
- To aid students in seeing the potential for the transference of basic printmaking skills, concepts, and thought processes into other fields of study and areas of personal investigation.
- To lead students in learning to work collaboratively in a communal space with a sense of social responsibility.
- To teach contextual knowledge of contemporary and historic printmaking.
- To foster the ability to critically analyze artworks created through printmaking processes.
- To provide students with unique opportunities beyond the scope of traditional classroom learning to both expand upon the education that we offer as well as encourage an appreciation and love of lifelong learning.

## Distinctions

Students are presented with a broad range of facilities and opportunities while pursuing their BFA in Printmaking such as:

- The Myers School of Art Printshop is a shared, collaborative environment to which students have 24-hour access. In addition to communal space, studio space is offered to intermediate and advanced level students on a competitive basis.
- Gain hands-on experience working with our extensive visiting artist program.
- Exhibit in shows both within the university and beyond in regional venues.
- Travel to the annual Southern Graphics Council International and biennial Mid America Print Council conferences.
- Participate in APE (Akron Printmaking Enthusiasts), our printmaking club, activities.
- Engage with the Akron and Northeast Ohio communities at museums, schools, and community printmaking demonstrations and events.



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Students are encouraged to visit the The Mary Schiller Myers School of Art their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Art History Requirements	12
	Foundation Core	12
	Art History Elective	3
	Printmaking Requirements	36
	3D Elective	3
	Studio Electives	15
	Additional Credits for Graduation *	5
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.5 cumulative GPA in all 7100 courses is required for graduation.

## Recommended General Education Courses

Code	Title	Hours
	Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.	

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

<b>Tier I: Academic Foundations</b>	<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>	
<i>Speaking: 3 credit hours</i>	
<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>	<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>	
7100:100 Survey of History of Art I	
7100:101 Survey of History of Art II	
<i>Natural Sciences: 7 credit hours</i>	

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

Select one class from each of the following subcategories:

Complex Systems

Critical Thinking

7100:100 Survey of History of Art I

Domestic Diversity

Global Diversity

7100:101 Survey of History of Art II

Review the General Education Requirements page for detailed course listings.

Total Hours 34

## College of Arts & Sciences Requirement

Code Title Hours

Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Art History Requirements

Code	Title	Hours
7100:100	Survey of History of Art I	3
7100:101	Survey of History of Art II	3
7100:102	Survey of History of Art, Part 3	3
7100:300	Art Since 1945	3
or 7100:435	Contemporary Art Issues	
<b>Total Hours</b>		<b>12</b>

## Foundation Core

Code	Title	Hours
7100:103	Arts Orientation	0
7100:131	Foundation Drawing I	3
7100:144	Foundation 2D Design	3
7100:145	Foundation 3D Design	3
7100:250	Foundation Forum: Lecture	1
7100:252	Foundations Forum: Studio	2
<b>Total Hours</b>		<b>12</b>

## Art History Elective

Code	Title	Hours
<b>Complete three credits:</b>		
7100:301	Medieval Art	
7100:302	Art in Europe During the 17th-18th Centuries	
7100:303	Italian Renaissance Art	
7100:306	Renaissance Art in Northern Europe	
7100:307	History of Graphic Design	
7100:309	Greek Art	
7100:312	Roman Art & Architecture	

7100:313	Survey of Asian Art	
7100:356	History of Craft	
7100:370	History of Photography	
7100:402	Museology	
7100:403	Art and Critical Theory	
Total Hours		3

## Printmaking Requirements

Code	Title	Hours
7100:189	Production I	3
7100:213	Introduction to Printmaking	3
7100:214	Relief/Screenprint	3
7100:216	Intaglio/Lithography	3
7100:231	Intermediate Drawing	3
or 7100:233	Introduction to Life Drawing	
7100:243	Introduction to Painting	3
7100:273	Introduction to Digital Photography	3
7100:317	Print Matrix <sup>1,2</sup>	6
7100:319	Printmaking Review	0
7100:418	Multiples and Multiplicity <sup>1</sup>	6
7100:457	Professional Practices	3
7100:495	Senior Exhibition	0
Total Hours		36

<sup>1</sup> Repeat a minimum of two times.

<sup>2</sup> 7100:419 Special Topics in Print may be substituted for 7100:317 Print Matrix for a total of three credits.

## 3D Elective

Code	Title	Hours
<b>Select one of the following:</b>		<b>3</b>
7100:222	Introduction to Sculpture	
7100:224	Installation Art	
7100:254	Introduction to Ceramics	
7100:266	Introduction to Metalsmithing	
Total Hours		3

## Studio Electives

Code	Title	Hours
<b>Complete 15 credits:</b>		<b>15</b>
7100:xxx		
Total Hours		15

## Printmaking, Minor Minor in Printmaking (C10003M)

### Program Contact

Melissa Olson  
330-972-6030  
mso3@uakron.edu

The following information has official approval of the **Mary Schiller Myers School of Art** and the **Buchtel College of Arts & Sciences**, but

is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Printmaking" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		18
Electives		6
Total Hours		24

## Required Courses

Code	Title	Hours
7100:131	Foundation Drawing I	3
7100:144	Foundation 2D Design	3
7100:213	Introduction to Printmaking	3
7100:214	Relief/Screenprint	3
7100:216	Intaglio/Lithography	3
7100:317	Print Matrix <sup>1</sup>	3
Total Hours		18

## Electives

Code	Title	Hours
<b>Select 2 of the following:</b>		<b>6</b>
7100:317	Print Matrix <sup>1</sup>	
7100:418	Multiples and Multiplicity <sup>1</sup>	
7100:419	Special Topics in Print <sup>1</sup>	
Total Hours		6

<sup>1</sup> 7100:317 Print Matrix, 7100:418 Multiples and Multiplicity and 7100:419 Special Topics in Print may be repeated.

Note: Foundations curriculum need not be repeated. Prerequisites must be honored.

## Professional Photography, Minor Minor in Professional Photography (C10109M)

### Program Contact

Melissa Olson  
330-972-6030  
mso3@uakron.edu

The following information has official approval of the **Mary Schiller Myers School of Art** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a “Minor in Professional Photography” and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student’s record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		3
Electives		15
Total Hours		18

## Required Courses

Code	Title	Hours
7100:189	Production I	3
Total Hours		3

## Electives

Code	Title	Hours
<b>Complete 15 credits from the following:</b>		<b>15</b>
7100:275	Introduction to Photography	
7100:276	Introduction to Commercial Photography	
7100:280	Digital Media	
7100:318	Portrait Lighting	
7100:320	Product Photography	
7100:479	Professional Photographic Practices	

Note: Foundations curriculum need not be completed. Prerequisites must be honored.

## Sculpture, BFA

### Bachelor of Fine Arts in Sculpture (C10005BFA)

More on the Sculpture major (<https://www.uakron.edu/art/academics/sculpture.dot>)

The Sculpture program provides a solid grounding in a wide variety of conceptual, technical and formal approaches for the creation of sculpture to enable students to explore and communicate their individual artistic concerns. The curriculum is designed to introduce students to the almost limitless possibilities of contemporary sculpture.

## Purpose

The purpose of the Sculpture program is to provide an undergraduate education in sculpture that prepares students for graduate-level study in sculpture and for professional life as a visual artist. The program aims to provide students with experience in a wide variety of sculptural processes and media and the tools to find their own artistic direction through research, experimentation and practice.

## Goals

- To encourage students to explore individual directions in contemporary sculpture through object making, mixed media installations, interdisciplinary projects and public art exhibitions.

- To give students experience at working with a variety of media and processes including steel, wood, plaster, found objects, mixed media and lost wax casting.
- To help students develop creative problem-solving skills, a self motivated studio practice and strong work ethic.
- To familiarize students with the major issues and aesthetic approaches of contemporary sculpture.
- To encourage students to apply skills learned in sculpture to their other areas of study.
- To foster the individual's skills in thinking critically and analytically as a means to evaluating and understanding art made by themselves and other artists.
- To educate students in working safely in three dimensions.

## Distinctions

Students are presented with a broad range of facilities and opportunities while pursuing their BFA in Sculpture such as:

- The sculpture facility comprises a well-equipped and organized wood-working shop, metal shop, foundry and plaster area, available outside of class times through supervised lab hours.
- The woodshop has a state of the art “Saw-stop” table saw, compound miter saw, band-saws, sanding machines, drill press and most common woodworking tools and equipment.
- A metal shop, with oxy-acetylene and MIG welding capabilities, hydraulic shear, sheet metal rollers, metal band-saw, bench grinder and more.
- Gain valuable professional work experience as the Sculpture area's Student Assistant.
- Work with internationally-renowned visiting artists.
- Exhibit work on campus and in regional venues – sculpture students have exhibited their work at The Box Gallery, Summit ArtSpace, The Icehouse and Spaces, Cleveland.

The following information has official approval of **The Mary Schiller Myers School of Art** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Students are encouraged to visit the The Mary Schiller Myers School of Art their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Foundation Core		12
Art History Requirements		15
Sculpture Requirements		39

Studio Electives	12
Electives	8
Total Hours	120

Note: A 2.5 cumulative GPA in all 7100 courses is required for graduation.

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

7100:100 Survey of History of Art I

7100:101 Survey of History of Art II

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

Select one class from each of the following subcategories:

Complex Systems

Critical Thinking

7100:100 Survey of History of Art I

Domestic Diversity

Global Diversity

7100:101 Survey of History of Art II

Review the General Education Requirements page for detailed course listings.

Total Hours	34
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## College of Arts & Sciences Requirement

Code	Title	Hours
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Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Foundation Core

Code	Title	Hours
7100:103	Arts Orientation	0
7100:131	Foundation Drawing I	3
7100:144	Foundation 2D Design	3
7100:145	Foundation 3D Design	3
7100:250	Foundation Forum: Lecture	1
7100:252	Foundations Forum: Studio	2
Total Hours		12

## Art History Requirements

Code	Title	Hours
7100:100	Survey of History of Art I	3
7100:101	Survey of History of Art II	3
7100:102	Survey of History of Art, Part 3	3
7100:300	Art Since 1945	3
or 7100:403	Art and Critical Theory	
or 7100:435	Contemporary Art Issues	
7100:xxx	Advanced Level Art History	3
Total Hours		15

## Sculpture Requirements

Code	Title	Hours
7100:189	Production I	3
7100:222	Introduction to Sculpture	3
7100:224	Installation Art	3
7100:231	Intermediate Drawing	3
7100:233	Introduction to Life Drawing	3
7100:254	Introduction to Ceramics	3
7100:266	Introduction to Metalsmithing	3
7100:322	Sculpture II	3
7100:420	Sculpture Portfolio Review	0
7100:422	Advanced Sculpture <sup>1</sup>	12
7100:457	Professional Practices	3
7100:495	Senior Exhibition	0
Total Hours		39

<sup>1</sup> Repeat a minimum of four times.

## Studio Electives

Code	Title	Hours
<b>Select 12 credits:</b>		<b>12</b>
7100:xxx		
Total Hours		12

## Electives

Code	Title	Hours
<b>Select 8 credits</b>		<b>8</b>
Total Hours		8

## Sculpture, Minor

### Minor in Sculpture (C10005M)

#### Program Contact

Melissa Olson  
330-972-6030  
mso3@uakron.edu

The following information has official approval of the **Mary Schiller Myers School of Art** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Sculpture" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

### Summary

Code	Title	Hours
Required Courses		3
Electives		18
Total Hours		21

### Required Courses

Code	Title	Hours
7100:222	Introduction to Sculpture	3
Total Hours		3

### Electives

Code	Title	Hours
<b>Complete 18 credits:</b>		<b>18</b>
7100:223	Sculpture: Stone	
7100:224	Installation Art	
7100:254	Introduction to Ceramics	
7100:266	Introduction to Metalsmithing	
7100:322	Sculpture II	
7100:323	Lost Wax Casting	
7100:422	Advanced Sculpture	
Total Hours		18

Note: Foundations curriculum need not be completed. Prerequisites must be honored.

## Biology

Biology is the fastest-growing field of science today and its impact is carried to many fronts: medicine and health care; the environment and climate change; and global food sources. A degree in Biology can prepare a student for professional schools, such as medical, dental, veterinary and pharmacy. Alternatively, in collaboration with the College of Education, the degree can prepare a student to teach high school biology. Graduates with Biology degrees from UA become physicians, dentists, pharmacists, veterinarians, and university professors, as

well as conducting a variety of biological research in firms such as Envirosience, Battelle Memorial Institute, Ohio EPA, Ohio Nature Conservancy, and Ohio DNR. UA students gain experience in these areas through research opportunities in academic laboratories, internships with local businesses, and with co-ops.

- Biology, BS (p. 81)
- Biology, Minor (p. 82)
- Biomedical Science, BS (p. 82)

## Biology (3100)

### 3100:100 Introduction to Botany (4 Credits)

Identification and biology of common plants of this region. Recommended for teachers of nature study. Not available for credit toward a degree in biology. Laboratory.

### 3100:101 Introduction to Zoology (4 Credits)

Identification and biology of common animals of this region. Recommended for teachers of nature study. Not available for credit toward a degree in biology. Laboratory.

### 3100:103 Natural Science: Biology (4 Credits)

Designed for non-science majors. Laboratory and class instruction illustrate concepts of living organisms with emphasis on mankind's position in, and influence on, the environment.

**Gen Ed:** Tier 2 - Natural Science w/LAB

### 3100:106 Exploring Biology (3 Credits)

Exploration of how science works and the cellular organization, genetic inheritance and diversity of living things. Not available for credit toward a degree in biology.

**Gen Ed:** Tier 2 - Natural Science

### 3100:108 Introduction to Biological Aging (3 Credits)

Prerequisite: 3100:103. Survey of normal anatomical and physical changes in aging and associate diseases. (For students in gerontological programs at Wayne College. Not for B.S. biology credit.)

**Gen Ed:** Tier 2 - Natural Science

### 3100:111 Principles of Biology I (4 Credits)

Prerequisite or Corequisite: 3150:151 Molecular, cellular basis of life; energy transformations, metabolism; cell reproduction, genetics, development, immunology, evolution, and origin and diversity of life (through plants). Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

### 3100:112 Principles of Biology II (4 Credits)

Prerequisite: 3100:111 with a grade of C- or better. Animal diversity; nutrients, gas exchange, transport, homeostasis, control in plants and animals; behavior; ecology. (3100:111 and 3100:112 are an integrated course for biology majors.) Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

### 3100:113 Professional Development for Biology Majors (1 Credit)

Prerequisite/Corequisite: 3100:111. This course is for Biology majors in their first year of study to provide useful tools as they pursue a Biology career. Recommended, not required.

### 3100:130 Principles of Microbiology (3 Credits)

Basic principles and terminology of microbiology; cultivation and control of microorganisms; relationships of microorganisms; medical microbiology. Laboratory. Not available for credit toward a degree in biology.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3100:131 The Biology of Monsters (1 Credit)**

Many movie monsters use exaggerations or extrapolations of real biological concepts. This course uses monsters to teach key biological concepts in a fun and accessible way. A short lecture is followed by a screening of the movie.

**3100:180 BS/MD Orientation (1 Credit)**

Orientation to the BS/MD Program. Restricted to students in the BS/MD Program. Graded credit/no credit. Not available for credit toward a biology degree.

**3100:190 Health-Care Delivery Systems (1 Credit)**

Health-care principles and practices. Restricted to the student in NEOUCOM, six-year BS/MD program. Graded credit/noncredit. Not available toward credit as major in biological sciences.

**3100:191 Health-Care Delivery Systems (1 Credit)**

Health-care principles and practices. Restricted to the student in NEOUCOM, six-year BS/MD program. Graded credit/noncredit. Not available toward credit as major in biological sciences.

**3100:200 Human Anatomy & Physiology I (3 Credits)**

Study of structure and function of the human body. Molecular, cellular function, histology, integumentary system, skeletal system, muscular system, nervous system, and the sense organs. Not available for credit toward a degree in biology.

**Gen Ed:** Tier 2 - Natural Science

**3100:201 Human Anatomy & Physiology Laboratory I (1 Credit)**

Laboratory devised to allow hands on experience using models, dissections of various animals, virtual dissection, and physiological exercises. Not available for credit toward a degree in biology.

**3100:202 Human Anatomy & Physiology II (3 Credits)**

Prerequisite: 3100:200. Study of structure and function of the human body. Endocrine system, cardiovascular system, lymphatics, respiratory system, urinary system, digestive system, and reproductive systems. Not available for credit toward a degree in biology.

**Gen Ed:** Tier 2 - Natural Science

**3100:203 Human Anatomy & Physiology Laboratory II (1 Credit)**

Laboratory devised to allow hands on experience using models, dissections of various animals, virtual dissection, and physiological exercises. Not available for credit toward a degree in biology.

**3100:211 General Genetics (3 Credits)**

Prerequisite: Completion of 3100:112 with a grade of "C-" or better. Principles of heredity, principles of genetics.

**3100:212 Genetics Laboratory (1 Credit)**

Prerequisite: 3100:112 with a grade C- or better, and prerequisite or corequisite: 3100:211. Laboratory experiments in genetics with emphasis on scientific method; techniques in molecular biology.

**3100:217 General Ecology (3 Credits)**

Prerequisite: Completion of 3100:112 with a grade of "C-" or better. Study of interrelationships between organisms and environment.

**3100:225 Biology of AIDS (1 Credit)**

Prerequisite: Permission. Course examines the Human Immunodeficiency Virus and the disease of AIDS. Virus structure, replication, therapy, transmission, epidemiology, disease process and social consequences are studied. Not available for credit toward a degree in biology.

**3100:238 Biomimicry Foundations (3 Credits)**

An introduction to biomimicry through the analysis of case studies, including those from Northeast Ohio, and a consideration of the major tools and methods.

**3100:265 Introductory Human Physiology (4 Credits)**

Study of physiological processes in human body, particularly at organ-systems level. Not open to preprofessional majors. Laboratory. Not available for credit toward a degree in biology.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3100:290 Health-Care Delivery Systems (1 Credit)**

Health-care principles and practices. A continuation of 190/191 for a second year student in NEOUCOM six-year BS/MD program. Graded credit/noncredit. Not available toward credit as major in biological sciences.

**3100:291 Health-Care Delivery Systems (1 Credit)**

Health-care principles and practices. A continuation of 190/191 for a second year student in NEOUCOM six-year BS/MD program. Graded credit/noncredit. Not available toward credit as major in biological sciences.

**3100:295 Special Topics in Biology (1-3 Credits)**

Prerequisite: Permission. Special courses offered occasionally in areas where no formal course exists. Not available for credit toward a degree in biology.

**3100:311 Cell & Molecular Biology (4 Credits)**

Prerequisites: 3150:151, 3150:152, 3150:153, 3150:154, and 3100:211. Study of structure and function of cells, with emphasis on both classical and modern approaches to understanding organelles, energy balance, protein synthesis, and replication.

**3100:312 Neuroscience in Health and Disease (3 Credits)**

Prerequisite: 3100:112 with a C or better or 3100:202 with a C or better or 3750:320 with a C or better. Discover how neurons communicate and explore how the brain functions under conditions of normal health, as well as conditions of disease.

**3100:315 Evolutionary Biology Discussion (1 Credit)**

Prerequisite: 3100:211 with a grade of C- or better. Informal discussions of various aspects of organic evolution of general or special interest.

**3100:316 Evolutionary Biology (3 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Description of core evolutionary concepts and the history of evolutionary thought including natural selection, sexual selection, genetic drift, higher level selection and speciation.

**3100:318 Biomimicry Design Challenge (3 Credits)**

A studio design course using nature as a model for creating innovative solutions targeting a specific design problem. It combines a brief introduction into biomimetics and is open to students from different disciplines in the arts, sciences, and engineering.

**3100:331 Microbiology (4 Credits)**

Prerequisites: 3100:112, 3100:211, and 3150:263 (or corequisite). Survey of monera with emphasis on the bacteria: their morphology, cultivation and chemical characteristics. Relationships of microorganisms to humans and their environment. Laboratory.

**3100:342 Flora & Taxonomy (3 Credits)**

Prerequisite: 3100:112 with a C- or better. Origins of Ohio flora, ecological and evolutionary relationships. Survey of local flowering plant families, collection and identification of flora. Laboratory and field trips.

**3100:343 Diversity of Plants (3 Credits)**

Prerequisites: 3100:112 with a grade of C- or better, and 3100:217. A broad survey of the traditional plant "branches" of the tree of life. Diversity, structure, and function of fungi, algae, and land plants.

**3100:344 Diversity of Plant Laboratory (2 Credits)**

Prerequisites: 3100:112 with a grade of C- or better, and 3100:217.  
Corequisite: 3100:343. A broad laboratory survey of the traditional plant "branches" of the tree of life. Students will have hands-on experience with fungi, algae, and land plants.

**3100:345 Biology of Vascular Plants (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. A lecture and laboratory course which presents an overview of the anatomy, morphology, development and evolution of vascular plants.

**3100:363 Foundations of Physiology I (3 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Fundamentals of physiology including integrating systems (neurophysiology, sensory processes, and endocrinology), movement, and muscle. For all pre-professional students and Biology majors.

**3100:364 Foundations of Physiology Laboratory I (2 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Corequisite: 3100:363. Laboratory experiments in animal physiology. (Transport processes, neurophysiology, endocrinology, muscle physiology.) Presentation of results in written scientific format.

**3100:365 Histology (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Cellular structure of organs in relation to their functional activity, life history, comparative development. Laboratory.

**3100:367 Genomics (3 Credits)**

Prerequisites: 3100:111 and 3100:112. Study of genomes from all branches of life to develop a deeper understanding of functional genomics, genomic architecture, and impacts (ethical and social) of advances in genomics.

**3100:401 Human Anatomy for Biology Majors (4 Credits)**

Prerequisite: 3100:112 with a C- or better. Organizing principles and patterns found in human organs and systems. Laboratory integrates creative, analytical and virtual approaches to translate concept into practical application of anatomy.

**3100:404 Digital Skills for Biologists (3 Credits)**

This course teaches students with no prior experience the fundamentals of programming, electronics, 3D printing, actuation and robotics for application to biological experiments.

**3100:406 Principles of Systematics (3 Credits)**

Prerequisites: 3100:112 with a grade of C- or better, and 3100:211, and 3100:316. The science of identifying, naming, and classifying the diversity of life. Topics include: nomenclature, types, techniques of data collection, and methods of phylogenetic reconstruction.

**3100:418 Field Ecology (4 Credits)**

Prerequisite: 3100:217 (statistics strongly recommended). Introduction to sampling methods, design of experiments and observations, and computer analysis; some local natural history. Laboratory.

**3100:421 Tropical Field Biology (4 Credits)**

Prerequisites: Completion of courses 3100:111 and 3100:112 with a grade of C- or better, or equivalent. Ecology of coral reefs, tide pools, mangroves, intertidal zones, terrestrial flora and fauna, island biogeography. Taught at a field station in the tropics. Field trips involved; transportation costs.

**3100:422 Conservation Biology (3 Credits)**

Prerequisite: 3100:217. Explores the factors affecting survival of biodiversity, and how to develop practical approaches to resolve complicated conservation issues.

**3100:423 Population Biology (3 Credits)**

Prerequisites: 3100:211 and 3100:217. Discussions of animal and plant ecology and evolutionary biology from a species and population level perspective. Includes topics in population ecology and population genetics.

**Gen Ed:** Tier 3 - Critical Thinking

**3100:426 Wetland Ecology (4 Credits)**

Prerequisite: 3100:217. Wetland ecology; principles and conservation. Field studies will be conducted at Bath Nature Preserve. Laboratory.

**3100:427 Freshwater Ecology (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better, or by permission. The course explores the diversity of aquatic life and key characteristics of freshwater ecosystems with emphasis on the Laurentian Great Lakes. Includes field trips, laboratory.

**3100:428 Biology of Behavior (3 Credits)**

Prerequisites: 3100:211, 3100:217, and 3100:316. Biological basis of behavior, ethology, and behavioral ecology. An evolutionary perspective is emphasized.

**3100:429 Biology of Behavior Laboratory (1 Credit)**

Prerequisite or corequisite: 3100:428 and permission of instructor. Individualized, directed study to provide the student with first-hand experience in observing, describing and interpreting animal behavior.

**3100:430 Community/Ecosystem Ecology (3 Credits)**

Prerequisite: 3100:217. An examination of the components, processes, and dynamics in communities and ecosystems. Includes reading and discussion of primary literature.

**3100:433 Medical Microbiology (4 Credits)**

Prerequisite: 3100:331. Pathogenic microorganisms, including bacteria, viruses, fungi, helminthes, and how they cause disease; host-pathogen interactions and the function of the immune response in controlling disease. Laboratory.

**3100:437 Immunology (4 Credits)**

Prerequisite: 3100:211 and 3100:311. Nature of antigens, antibody response, and antigen-antibody reactions. Site and mechanism of antibody formations, hypersensitivity, immunologic tolerance and immune diseases considered. Laboratory.

**3100:439 Advanced Immunology (3 Credits)**

Prerequisite: 3100:437. Immunology is studied from a historical and current perspective. Topics include T cells, B cells, antigen presentation, HIV, and transplantation.

**3100:440 Mycology (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Structure, life history, classification of representative fungi with emphasis on the importance of fungi to humans. Laboratory.

**3100:443 Phycology (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Examination of the major groups of algae with emphasis on life histories and their relationship to algal form and structure. Laboratory.

**3100:444 Field Marine Phycology (3 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Collection and identification of tropical marine algae on San Salvador Island, The Bahamas. Discussion of characteristics and ecology of major groups of Caribbean algae. Laboratory.

**3100:451 General Entomology (4 Credits)**

Prerequisites: 3100:112 with a grade of C- or better, and 3100:217. Structure, physiology, life cycles, economic importance and characteristics of orders and major families of insects. Laboratories parallel lectures.

**3100:453 Invertebrate Zoology (4 Credits)**

Prerequisites: 3100:112 with a grade of C- or better, and 3100:217. Invertebrate groups, their classification, functional morphology, adaptive radiation and life history. A phylogenetic approach is used. Laboratories parallel lectures.

**3100:454 Parasitology (4 Credits)**

Prerequisites: 3100:112 with a grade of C- or better. Principles of parasitism; host parasite interactions; important human and veterinary parasitic diseases; and control measures. Laboratories parallel lectures.

**3100:455 Ichthyology (4 Credits)**

Prerequisites: 3100:217. Study of fishes; incorporates aspects of evolution, anatomy, physiology, natural history, and commercial exploitation of fishes. Laboratory incorporates field-based exercises and fish taxonomy.

**3100:456 Ornithology (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Introduction to biology of birds: classification, anatomy, physiology, behavior, ecology, evolution, natural history and field identification. Laboratory and field trips.

**3100:457 Herpetology (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Survey of the diversity, ecology and evolution of amphibians and reptiles. Special emphasis is given to Ohio species. Laboratory.

**3100:458 Vertebrate Zoology (4 Credits)**

Prerequisite: 3100:316 or permission. Biology of vertebrates, except birds evolution, ecology, behavior, systematics and anatomy. Laboratory with field trips.

**3100:460 Medical Histology (4 Credits)**

Prerequisite: 3100:311. 100% online course. Structure of human cells and tissues and their identification. Functional organization of the human cell and tissues.

**3100:463 Exercise Physiology (3 Credits)**

Prerequisite: 3100:363 or instructor permission. Through lecture, reading and critical analysis of current literature, physiologic mechanisms of exercise in animals will be explored.

**3100:465 Advanced Cardiovascular Physiology (3 Credits)**

Prerequisite: 3100:202, or 3100:363, or 3100:473. Study of biological mechanisms involved in heart attack, strokes, fluid balance, hypertension and heart disease. Controversial issues in each area will be examined and current research presented.

**3100:466 Vertebrate Embryology (3 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Lectures focus on development of model vertebrate organisms, and cellular and molecular mechanisms underlying animal development.

**3100:467 Comparative Vertebrate Morphology (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. An introduction to the comparative morphology of major vertebrates. The laboratories consist of dissections of representative vertebrates.

**3100:468 The Physiology of Reproduction (3 Credits)**

Prerequisites: 3100:112 with a grade of C- or better, or 3100:202. Study of the physiological mechanisms of reproduction throughout the animal kingdom with emphasis upon mammalian endocrinological control. Controversial issues and current research will be examined.

**3100:469 Respiratory Physiology (3 Credits)**

Prerequisite: 3100:202, or 3100:363, or 3100:473. Study of mechanisms determining gas exchange including mechanics, ventilation, blood flow, diffusion, and control systems. Emphasis is given to normal human lung function. (Clinical aspects are not considered in detail.)

**3100:470 Lab Animal Regulations (1 Credit)**

Required of anyone working with animals, and covers government regulations, care of animals and a lab to teach basic animal handling and measurement techniques.

**3100:471 Physiological Genetics (4 Credits)**

Prerequisite: 3100:211 or equivalent and [3100:202, or 3100:363, or 3100:473]. The integrative study of how genetics and physiology influence complex systems from molecular to behavioral in plants and animals. Laboratory.

**3100:472 Biological Mechanisms of Stress (3 Credits)**

Prerequisite: 3100:202, or 3100:363, or 3100:473. Study of mechanisms from molecular to behavioral of how stress influences body systems and signals. The latest research and experimental issues are discussed.

**3100:473 Foundations of Physiology II (3 Credits)**

Prerequisite: 3100:363. Continuing fundamentals of physiology including metabolism and temperature, respiration and circulation, and osmoregulation. Adaption to extreme environments is emphasized.

**3100:474 Foundations of Physiology Laboratory II (1 Credit)**

Prerequisite: 3100:364; corequisite 3100:473. Laboratory experiments in animal physiology (respiration, circulation, metabolism, osmoregulation). Presentation of results in scientific format and as oral reports.

**3100:475 Comparative Biomechanics (3 Credits)**

Investigation of how physical constraints on biological materials, structural mechanics and locomotion relate to the survival and evolution of living organisms.

**3100:478 Renal Physiology (3 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. The study of how the kidneys affect other body systems and how, in turn, they are affected by these systems.

**3100:480 Molecular Biology (3 Credits)**

Prerequisite: 3100:211 and 3100:311. Fundamentals of molecular biology, including recombinant DNA technology, applications in biotechnology, medicine, and genetic engineering. Mechanisms of gene regulation.

**3100:481 Advanced Genetics (3 Credits)**

Prerequisite: 3100:211. Nature of the gene; genetic codes; hereditary determinants; mutagenesis and genes in population. Lecture and seminar.

**3100:482 Neurobiology (3 Credits)**

Prerequisites: Completion of 3100:111 and 3100:112 with a grade of "C-" or better. History of Neuroscience; organization, function and development of the central nervous system; electrophysiological properties of nerve cells; learning and memory; molecular basis for mental diseases.

**3100:483 Research Techniques in Neuroscience (3 Credits)**

Prerequisite: [3100:112, or 3100:202, or 3750:320] with a C or better. Discover how the most cutting edge neuroscience research techniques are designed and implemented to further our understanding of the brain and visual system.



**3100:485 Cell Physiology (3 Credits)**

Prerequisite: 3100:112 with a grade of C- or better and 3150:401. Explores molecular and biochemical aspects of energy metabolism, inter and intracellular signaling, growth and death of cells. Emphasizes up-to-date scientific literature.

**3100:486 Cell Physiology Laboratory (2 Credits)**

Prerequisite: 3100:112 with a grade of C- or better and 3150:401. Corequisite: 3100:485. Practice of modern cell physiology laboratory techniques. Emphasis on student directed original research.  
**Gen Ed:** Tier 3 - Critical Thinking

**3100:494 Workshop in Biology (1-3 Credits)**

(May be repeated) Prerequisite: Permission of instructor. Group studies of special topics in biology. May not be used to meet undergraduate or graduate major requirements in biology. May be used for elective credit only.

**3100:495 Special Topics in Biology (1-3 Credits)**

Prerequisite: Permission. Special courses offered occasionally in areas where no formal course exists.

**3100:496 Internship in Biology (1-3 Credits)**

(May be repeated for maximum of 6 credits) Prerequisites: Permission of department and a minimum 3.0 GPA in Biology courses (20 credits minimum). Work experience to focus on career applications in Biology. Maximum 3 credits will count towards Biology electives.

**3100:497 Biological Problems (1-3 Credits)**

(May be repeated for a total of 6 credits) Prerequisites: Permission of department, 2.0 GPA or better in Biology coursework, and currently in the College of Arts & Sciences. Advanced level work, usually consisting of laboratory investigations. A maximum of 4 credits may apply toward the major degree requirements.

**3100:499 Senior Honors Program in Biology (1-3 Credits)**

(May be repeated for a total of five credits) Prerequisites: senior standing in Honors College and approval of honors preceptor. Open only to biology and natural sciences divisional majors in Honors College. Independent study leading to completion of approved senior honors.

## Biology, BS

### Bachelor of Science in Biology (310000BS)

More on the Biology major (<https://www.uakron.edu/biology/academics/undergraduate-major-information/>)

The following information has official approval of **The Department of Biology** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Biology Core Requirement	47-50
	Biology Electives	19
	Additional Credits for Graduation *	6-3
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	
	<i>Social Sciences: 6 credit hours</i>	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
	Complex Systems	
	Critical Thinking	
	Domestic Diversity	
	Global Diversity	
	<i>Review the General Education Requirements page for detailed course listings.</i>	
	<b>Total Hours</b>	<b>34</b>

## College of Arts & Sciences Requirements

Code	Title	Hours
<b>Degree requirements in Arts &amp; Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.</b>		
<b>Foreign Language</b>		<b>14</b>
	101 Beginning I	
	102 Beginning II	
	201 Intermediate I	
	202 Intermediate II	
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Biology Core Requirements

Code	Title	Hours
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4
3100:211	General Genetics	3
3100:217	General Ecology	3
3100:311	Cell & Molecular Biology	4
3100:316	Evolutionary Biology	3
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:266	Organic Chemistry Laboratory II	2
3450:149	Precalculus Mathematics	3-4
or 2030:154	Technical Mathematics IV	
or 3450:215	Concepts of Calculus	
or 3450:221	Analytic Geometry-Calculus I	
3470:250	Statistics for Everyday Life	2-4
or 3470:260	Basic Statistics	
or 3470:261	Introductory Statistics I	
3470:262	Introductory Statistics II	2
Total Hours		47-50

## Biology Electives

Code	Title	Hours
<b>Complete 19 credits:</b> <sup>1</sup>		<b>19</b>
3100:3xx/4xx		
Total Hours		19

<sup>1</sup> Credits must be at the 300/400 level and must not be used in the core.

## Biology, Minor Minor in Biology (310000M)

### Program Contact

Dr. Stephen Weeks

Professor and Chair, Department of Biology

330-972-6954

scweeks@uakron.edu

The following information has official approval of the **Department of Biology** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors,

including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Biology" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		21
Electives		2-3
Total Hours		23-24

## Required Courses

Code	Title	Hours
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4
3100:211	General Genetics	3
3100:217	General Ecology	3
3100:316	Evolutionary Biology	3
3100:311	Cell & Molecular Biology	4
or 3100:331	Microbiology	
Total Hours		21

## Electives

Code	Title	Hours
<b>Select any 300/400 level course for 2-3 credits</b>		<b>2-3</b>
3100:3xx	300-level Biology Elective	
3100:4xx	400-level Biology Elective	
Total Hours		2-3

## Biomedical Science, BS

### Bachelor of Science in Biomedical Science (390002BS)

More on the Biomedical Science major (<https://www.uakron.edu/biology/academics/undergraduate-major-information/biology-undergraduate-degree.dot>)

The following information has official approval of **The Department of Biology** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Biology Requirements	34
	Chemistry Requirements	25
	Math and Physics Requirements	16
	Program Requirements	12
Total Hours		121

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

3450:221 Analytic Geometry-Calculus I

*Speaking: 3 credit hours*

7600:105 Introduction to Public Speaking

or 7600:106 Effective Oral Communication

*Writing: 6 credit hours*

3300:111 English Composition I

3300:112 English Composition II

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

3750:100 Introduction to Psychology

3850:100 Introduction to Sociology

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

3600:361 Biomedical Ethics

Critical Thinking

Domestic Diversity

3850:100 Introduction to Sociology

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## College of Arts & Sciences Requirements

Code	Title	Hours
------	-------	-------

Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Biology Requirements

Code	Title	Hours
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4
3100:211	General Genetics	3
3100:212	Genetics Laboratory	1
3100:316	Evolutionary Biology	3
3100:363	Foundations of Physiology I	3
3100:364	Foundations of Physiology Laboratory I	2
3100:485	Cell Physiology	3
3100:486	Cell Physiology Laboratory	2
3100:3xx/4xx	Biology Electives	9
Total Hours		34

## Chemistry Requirements

Code	Title	Hours
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3150:263	Organic Chemistry Lecture I	3
3150:265	Organic Chemistry Laboratory I	2
3150:264	Organic Chemistry Lecture II	3
3150:266	Organic Chemistry Laboratory II	2
3150:401	Biochemistry Lecture I	3
3150:402	Biochemistry Lecture II	3
Total Hours		25

## Math and Physics Requirements

Code	Title	Hours
3450:221	Analytic Geometry-Calculus I	4
3470:261	Introductory Statistics I	2
3470:262	Introductory Statistics II	2
3650:261	Physics for Life Sciences I	4
3650:262	Physics for Life Sciences II	4
Total Hours		16

## Program Requirements

Code	Title	Hours
3230:309	Medicine & the Humanities	3
3600:361	Biomedical Ethics	3
3750:100	Introduction to Psychology	3

3850:100	Introduction to Sociology	3
Total Hours		12

## Chemistry

Chemistry is an experimental science that seeks to understand the structure and function of molecules. Chemists synthesize new materials, and study their properties and how they interact with other compounds. The B.S. degrees offered by the department prepare students for independent laboratory work and research. The B.A. degree is less strongly focused on research and prepares students for professional degrees like medicine, dentistry and pharmacy.

### Admission, Retention and Graduation

- The student must maintain a minimum 2.00 grade point average
- The student must obtain a grade of C- or better in all required chemistry courses

#### Introduction

In Northeast Ohio, there is a growing demand for professionals trained in polymer chemistry. The polymer industry is one of the major industrial sectors of the economy of Ohio. The BS/MS Polymer Chemistry degree was instituted to prepare students for jobs in this area. The program provides a quality undergraduate science degree coupled with a graduate degree from one of the premier polymer programs in the country.

Students who are admitted to this program can complete the undergraduate phase of the course of study in three years and then immediately begin graduate studies in polymer science. Under rare circumstances, a student can complete the undergraduate phase in four years after approval of the advisers. A student not proceeding to the graduate program in Polymer Science may complete the degree requirements for the BS Natural Sciences - Polymer Chemistry Concentration.

Students earn a Bachelors degree in Natural Science from the Buchtel College of Arts and Sciences (<https://www.uakron.edu/bcas/>) that is heavily weighted toward chemistry. They will be assigned an adviser in the Department of Chemistry (<https://www.uakron.edu/chemistry/>) and a co-adviser in the Department of Polymer Science (<https://www.uakron.edu/cpspe/>) who will advise them throughout their undergraduate program. Once the undergraduate degree is completed students begin studies to earn a Masters of Science from the College of Polymer Science and Polymer Engineering (<https://www.uakron.edu/cpspe/>) that will require two years of courses and research.

### Admission, Retention, and Graduation

- Honors Students who express interest will be admitted into the 3+2 program after an interview
- Students must have a 3.70 grade point average in all undergraduate science and math classes at the end of the first semester in the third year
- Students who earn a grade less than a C- in any required science or math class will have to repeat the course and earn a grade of C- or better

## Cooperative Education Program in Chemistry

### Qualifications

Arrangements for entry into the program are on an individual basis and are initiated by the student during the second year of undergraduate study. Full-time B.S. chemistry majors at The University of Akron must meet the following requirements:

- Satisfactory completion of 60 credits with a quality point average of at least 2.3 in chemistry courses and on schedule in their curriculum.
- Acceptance by a cooperative education coordinator or director following a series of interviews
- Part-time students must have completed 60 credits with a 2.3 average and be on schedule in their curriculum
- Transfer students must have preparation equivalent to the minimum requirements for The University of Akron students and must have completed at least one semester of full-time study at The University of Akron

Placement in an industrial or other position is not guaranteed, and foreign students should recognize that many companies require U.S. citizenship or possession of a permanent visa. In any case, final acceptance of a student for any position is the decision of the employer.

### Schedule

The work-study schedule for students in the co-op program is as follows:

Fall	Spring	Summer
School	School	Vacation/School
School	School	Vacation/School/Work
School	Work	School
Work	School	Work
School	School	

### Admission to Program

Interested students should attend a Cooperative Education orientation session. Students will be expected to remain with their employer for all co-op work periods in order to provide a progression of experience and responsibility. Employment must have approval of the department and the Cooperative Education director, but the University does not guarantee employment.

### Registration

Students register for Cooperative Work Periods in the same manner that a student registers for any other University courses. The course is: 3000:301 Cooperative Education.

A registration fee for each work period is charged to offset the expenses of administering the Co-op Program. Upon completion of a work period, a statement will appear on the student's official transcript listing the course number and title. In place of a grade, "credit" or "no credit" will be given, depending upon the student's satisfactory or unsatisfactory completion of the following:

- Work performance as evaluated by the employer
- Submission of a written Work Report and its approval by the Cooperative Education staff
- Submission of a Cooperative Work Period Summary Form

- Biochemistry, BS (p. 86)
- Chemistry, BA (p. 88)
- Chemistry, BS (p. 89)
- Chemistry, Minor (p. 90)
- Chemistry, Polymer Option, BS (p. 91)

## Chemistry (3150)

### 3150:100 Chemistry & Society (3 Credits)

Qualitative introduction to chemistry using current world problems and commercial products, such as the ozone layer, nuclear fission, polymers and drugs, to introduce chemical principles.

### 3150:101 Chemistry for Everyone (4 Credits)

Integrated, hands-on, laboratory instruction in the fundamental concepts of chemistry for general education and middle-level licensure for pre-service and in-service teachers.

**Gen Ed:** Tier 2 - Natural Science w/LAB

### 3150:110 Introduction to General, Organic & Biochemistry I (Lecture) (3 Credits)

Sequential. Introduction to principles of chemistry, fundamentals of inorganic, organic and biochemistry. Structure and chemistry of carbohydrates, lipids, proteins; biochemistry of enzymes, metabolism, radiation.

**Gen Ed:** Tier 2 - Natural Science

### 3150:111 Introduction to General, Organic & Biochemistry I (Laboratory) (1 Credit)

Prerequisite/Corequisite: 3150:110. Sequential. Laboratory course applying principles of chemistry and fundamentals of inorganic, organic and biochemistry.

**Gen Ed:** Tier 2 - Natural Science w/LAB

### 3150:112 Introduction to General, Organic & Biochemistry II (Lecture) (3 Credits)

Prerequisite: 3150:110. Sequential. Introduction to principles of chemistry, fundamentals of inorganic, organic and biochemistry. Structure and chemistry of carbohydrates, lipids, proteins; biochemistry of enzymes, metabolism, radiation.

**Gen Ed:** Tier 2 - Natural Science

### 3150:113 Introduction to General, Organic & Biochemistry II (Laboratory) (1 Credit)

Prerequisite/Corequisite: 3150:112. Sequential. Laboratory course applying principles of chemistry and fundamentals of inorganic, organic and biochemistry.

**Gen Ed:** Tier 2 - Natural Science w/LAB

### 3150:151 Principles of Chemistry I (3 Credits)

Prerequisite: placement in 3450:149 or higher or permission. Introduction to basic facts and principles of chemistry including atomic and molecular structure, states of matter and thermodynamics. For chemistry majors, pre-medical students and most other science majors. Discussion (day sections).

**Gen Ed:** Tier 2 - Natural Science

### 3150:152 Principles of Chemistry I Laboratory (1 Credit)

Pre/Corequisite: 3150:151. Laboratory course applying principles of thermodynamics, chemical analysis and laboratory practice.

**Gen Ed:** Tier 2 - Natural Science w/LAB

### 3150:153 Principles of Chemistry II (3 Credits)

Pre/Corequisite: 3150:151. Continuation of 151, 152, including aqueous solution theory, chemical kinetics, equilibrium, electrochemistry and nuclear chemistry. For chemistry majors, premedical students and most other science majors. Discussion (day sections).

**Gen Ed:** Tier 2 - Natural Science

### 3150:154 Qualitative Analysis (2 Credits)

Prerequisite: 3150:152; pre/corequisite: 3150:153. Laboratory course applying principles of chemical equilibrium to inorganic qualitative analysis.

### 3150:199 Introductory Seminar in Chemistry (1 Credit)

Basic concepts in chemistry practice including written and oral communication skills, computer skills, professional ethics, environmental issues, chemical literature, degree options, and career considerations.

### 3150:263 Organic Chemistry Lecture I (3 Credits)

Sequential. Prerequisite: 3150:153 or permission. Structure and reactions of organic compounds, mechanism of reactions.

### 3150:264 Organic Chemistry Lecture II (3 Credits)

Sequential. Prerequisite: 3150:263 or permission. Structure and reactions of organic compounds, mechanism of reactions.

### 3150:265 Organic Chemistry Laboratory I (2 Credits)

Sequential. Prerequisite: 3150:154; pre/corequisite: 3150:263. Laboratory experiments to develop techniques in organic chemistry and illustrate principles. Discussion.

### 3150:266 Organic Chemistry Laboratory II (2 Credits)

Sequential. Prerequisite: 3150:265. Laboratory experiments to develop techniques in organic chemistry and illustrate principles. Discussion.

### 3150:305 Physical Chemistry for the Biological Sciences (4 Credits)

Prerequisites: 3150:264, 3450:222, and [3650:262 or 3650:292]. Chemical thermodynamics, kinetics, molecular structure and spectra. Accepted for the BS degree in Biochemistry.

### 3150:313 Physical Chemistry Lecture I (3 Credits)

Prerequisites: 3150:264, 3450:223, and 3650:291. Gases, thermodynamics, thermochemistry, solutions, dilute solutions, chemical equilibrium, phase rule, chemical kinetics, electrochemistry, electrolytic equilibria.

### 3150:314 Physical Chemistry Lecture II (3 Credits)

Prerequisites: 3150:264, and 3450:335, and 3650:292. Atomic and molecular structure and spectroscopy.

### 3150:370 Biochemistry Laboratory (2 Credits)

Prerequisite: 3150:266. An integrated laboratory experience covering the isolation, characterization and analysis of enzymes and DNA, protein synthesis and purification, enzyme kinetics, biochemical databases and statistical treatment of data.

### 3150:380 Advanced Chemistry Laboratory I (2 Credits)

Prerequisite: 3150:266. A laboratory experience that focuses on the synthetic and spectroscopic techniques of modern inorganic chemistry, including bio-inorganic and organometallic compounds.

### 3150:381 Advanced Chemistry Laboratory II (2 Credits)

Prerequisite 3150:266; corequisite: 3150:314 or 3150:305 or permission. Integrated laboratory experience covering the areas of quantitative analysis, physical chemistry, and instrumental techniques.

### 3150:399 Internship in Chemistry (1-3 Credits)

Prerequisites: minimum GPA of 2.5; permission of the Department. Work experience focused on career applications of the discipline of Chemistry. (May repeat for a maximum of six credits.)

**3150:401 Biochemistry Lecture I (3 Credits)**

Prerequisite: 3150:264. Biochemistry of amino acids, carbohydrates, lipids, and nucleic acids: structure/function relations. Enzymes as catalysts: kinetics and regulation. Cofactors.

**3150:402 Biochemistry Lecture II (3 Credits)**

Prerequisite: 3150:401. Overview of metabolism; thermodynamics; carbohydrate, fatty acid, amino acid, and nucleoside anabolism and catabolism; hormonal control of metabolism. Photosynthesis.

**3150:406 Biochemistry of Gene Expression (3 Credits)**

Prerequisites: 3100:311 and 3150:401. DNA, RNA, and protein synthesis, translation and transcription. Gene function and expression, cell cycle and cancer, genetic engineering, gene silencing, gain of function studies.

**3150:410 Special Readings in Analytical Chemistry (1-3 Credits)**

Prerequisite: Junior standing or higher. Selected topics in advanced analytical chemistry for which no course exists. (May be repeated)

**3150:411 Special Readings in Inorganic Chemistry (1-3 Credits)**

Prerequisite: Junior standing or higher. Selected topics in advanced inorganic chemistry for which no course exists. (May be repeated)

**3150:412 Special Readings in Organic Chemistry (1-3 Credits)**

Prerequisite: Junior standing or higher. Selected topics in advanced organic chemistry for which no course exists. (May be repeated)

**3150:413 Special Readings in Physical Chemistry (1-3 Credits)**

Prerequisite: Junior standing or higher. Selected topics in advanced physical chemistry for which no course exists. (May be repeated)

**3150:415 Special Readings in Biochemistry (1-3 Credits)**

Prerequisite: Junior standing or higher. Selected topics in advanced biochemistry for which no course exists. (May be repeated)

**3150:423 Analytical Chemistry I (3 Credits)**

Prerequisite: 3150:154 and 3150:263. Theoretical principles of quantitative and instrumental analysis.

**3150:424 Analytical Chemistry II (3 Credits)**

Prerequisite: 3150:154 and 3150:263. Instrumental analysis with emphasis on newer analytical tools and methods.

**3150:463 Advanced Organic Chemistry (3 Credits)**

Prerequisite: 3150:264. Introduction to study of mechanisms of organic reactions.

**3150:472 Advanced Inorganic Chemistry (3 Credits)**

Prerequisites: 3150:314 or 3150:305. Concepts of atomic structure integrated in systematic classification of elements. Periodic table. Chemistry of the representative elements. Transition elements including coordination compounds, organometallics and metal carbonyls.

**3150:480 Advanced Chemistry Laboratory III (2 Credits)**

Prerequisite: 3150:381; or Corequisite: 3150:305; or permission. Integrated laboratory experience covering the areas of quantitative analysis, physical chemistry, instrumental techniques, and inorganic chemistry.

**3150:490 Workshop in Chemistry (1-3 Credits)**

(May be repeated) Group studies of special topics in chemistry. May not be used to meet undergraduate or graduate major requirements in chemistry.

**3150:497 Honors Project in Chemistry (2 Credits)**

(May be repeated for a total of eight credits) Prerequisites: Junior or senior standing in Honors College and permission of department honors preceptor. Independent research leading to completion of honors thesis under guidance of honors project adviser.

**3150:498 Special Topics in Chemistry (1-3 Credits)**

Special Topics in Chemistry.

**3150:499 Research Problems in Chemistry (1-2 Credits)**

(May be repeated for a total of eight credits) Prerequisite: Permission. Assignment of special problems to student, designed as an introduction to research problems.

## Biochemistry, BS

### Bachelor of Science in Biochemistry (315002BS)

More on the Biochemistry major (<https://www.uakron.edu/chemistry/undergraduate.dot>)

The following information has official approval of **The Department of Chemistry** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Chemistry Requirements	33-35
	Biology Requirements	24
	Physics Requirements	8
	Mathematics Requirements	8
	Biochemistry Electives	8
Total Hours		129-131

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	
	<i>Social Sciences: 6 credit hours</i>	

**Tier III: Tagged Courses**

Select one class from each of the following subcategories:

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

Review the General Education Requirements page for detailed course listings.

Total Hours 34

**College of Arts & Sciences Requirements**

**Code Title Hours**

**Degree requirements in Arts & Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.**

*Foreign Language* 14

101 Beginning I

102 Beginning II

201 Intermediate I

202 Intermediate II

7700:222 Survey of Deaf Culture in America (American Sign Language option only)

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

**Chemistry Requirements <sup>1</sup>**

**Code Title Hours**

3150:151 Principles of Chemistry I 3

3150:152 Principles of Chemistry I Laboratory 1

3150:153 Principles of Chemistry II 3

3150:154 Qualitative Analysis 2

3150:263 Organic Chemistry Lecture I 3

3150:264 Organic Chemistry Lecture II 3

3150:265 Organic Chemistry Laboratory I 2

3150:266 Organic Chemistry Laboratory II 2

3150:370 Biochemistry Laboratory 2

3150:401 Biochemistry Lecture I 3

3150:402 Biochemistry Lecture II 3

3150:480 Advanced Chemistry Laboratory III <sup>2</sup> 2

**Select one of the following: 4-6**

3150:305 Physical Chemistry for the Biological Sciences

-or-

3150:313 Physical Chemistry Lecture I  
& 3150:314 and Physical Chemistry Lecture II

Total Hours 33-35

<sup>1</sup> Complete with a grade of C- or better

<sup>2</sup> Biochemistry majors meet the prerequisite requirements for this course

**Biology Requirements**

**Code Title Hours**

3100:111 Principles of Biology I 4

3100:112 Principles of Biology II 4

3100:211 General Genetics 3

3100:212 Genetics Laboratory 1

3100:311 Cell & Molecular Biology 4

3100:480 Molecular Biology 3

3100:485 Cell Physiology 3

3100:486 Cell Physiology Laboratory 2

Total Hours 24

**Physics Requirement**

**Code Title Hours**

**Select one of the following: 8**

3650:261 Physics for Life Sciences I  
& 3650:262 and Physics for Life Sciences II

-or-

3650:291 Elementary Classical Physics I  
& 3650:292 and Elementary Classical Physics II

Total Hours 8

**Mathematics Requirement**

**Code Title Hours**

3450:221 Analytic Geometry-Calculus I 4

3450:222 Analytic Geometry-Calculus II 4

Total Hours 8

**Biochemistry Electives**

**Code Title Hours**

**Select at least eight credits of the following: 8**

3100:331 Microbiology

3100:437 Immunology

3100:481 Advanced Genetics

3100:497 Biological Problems

3150:199 Introductory Seminar in Chemistry

3150:380 Advanced Chemistry Laboratory I <sup>1</sup>

3150:381 Advanced Chemistry Laboratory II <sup>1</sup>

3150:399 Internship in Chemistry

3150:423 Analytical Chemistry I

3150:424 Analytical Chemistry II

3150:463 Advanced Organic Chemistry

3150:472 Advanced Inorganic Chemistry

3150:497 Honors Project in Chemistry <sup>2</sup>

3150:499 Research Problems in Chemistry <sup>2</sup>

3470:401 Probability and Statistics for Engineers

9871:407 Polymer Science

9871:497 Honors Project in Polymer Science

9871:499	Research Problems in Polymer Science	8
Total Hours		8

<sup>1</sup> Biochemistry majors meet the prerequisite requirements for this course.

<sup>2</sup> Course may be repeated for up to eight credits.

## Chemistry, BA

### Bachelor of Arts in Chemistry (315000BA)

More on the Chemistry major (<https://www.uakron.edu/chemistry/undergraduate.dot>)

### Program Description

Chemistry is an experimental science that seeks to understand the structure and function of molecules. Chemists synthesize new materials, and study their properties and how they interact with other compounds. The BS degrees offered by the department prepare students for independent laboratory work and research. The BA degree is less strongly focused on research and prepares students for professional degrees like medicine, dentistry and pharmacy.

### Admission, Retention and Graduation

The student must maintain a minimum 2.00 grade point average. The student must obtain a grade of C- or better in all required chemistry courses.

The following information has official approval of **The Department of Chemistry** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

### Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Chemistry Requirements	31-33
	Physics Requirements	8
	Mathematics Requirements	8
	Advanced Chemistry Electives	5
	Additional Credits for Graduation *	20-18
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirements

Code	Title	Hours
<b>Degree requirements in Arts &amp; Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.</b>		
<i>Foreign Language</i>		<b>14</b>
101 Beginning I		
102 Beginning II		
201 Intermediate I		
202 Intermediate II		
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Chemistry Requirements <sup>1</sup>

Code	Title	Hours
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3150:263	Organic Chemistry Lecture I	3



3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:266	Organic Chemistry Laboratory II	2
3150:380	Advanced Chemistry Laboratory I	2
3150:423	Analytical Chemistry I	3
3150:424	Analytical Chemistry II	3
<b>Select one of the following:</b>		<b>4-6</b>
3150:305	Physical Chemistry for the Biological Sciences	
-or-		
3150:313 & 3150:314	Physical Chemistry Lecture I and Physical Chemistry Lecture II	
Total Hours		31-33

<sup>1</sup> If a grade of less than C- is earned in a required chemistry course, the student must successfully repeat that course within a year.

## Physics Requirements

Code	Title	Hours
<b>Select one of the following:</b>		<b>8</b>
3650:261 & 3650:262	Physics for Life Sciences I and Physics for Life Sciences II	
-or-		
3650:291 & 3650:292	Elementary Classical Physics I and Elementary Classical Physics II	
Total Hours		8

## Mathematics Requirements

Code	Title	Hours
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
Total Hours		8

## Advanced Chemistry Electives

Code	Title	Hours
<b>Select at least five credits of the following:</b>		<b>5</b>
3150:199	Introductory Seminar in Chemistry	
3150:381	Advanced Chemistry Laboratory II	
3150:399	Internship in Chemistry <sup>1</sup>	
3150:401	Biochemistry Lecture I	
3150:402	Biochemistry Lecture II	
3150:463	Advanced Organic Chemistry	
3150:472	Advanced Inorganic Chemistry	
3150:480	Advanced Chemistry Laboratory III	
3150:497	Honors Project in Chemistry <sup>2</sup>	
3150:498	Special Topics in Chemistry <sup>2</sup>	
3150:499	Research Problems in Chemistry <sup>2</sup>	
9871:403	Polymer Chemistry	
9871:404	Polymer Physics	
9871:405	Polymer Science Laboratory	
Total Hours		5

<sup>1</sup> May be repeated for a total of six credits.

<sup>2</sup> May be repeated for a total of eight credits.

## Chemistry, BS

### Bachelor of Science in Chemistry (315000BS)

More on the Chemistry major (<https://www.uakron.edu/chemistry/undergraduate.dot>)

## Program Description

Chemistry is an experimental science that seeks to understand the structure and function of molecules. Chemists synthesize new materials, and study their properties and how they interact with other compounds. The BS degrees offered by the department prepare students for independent laboratory work and research. The BA degree is less strongly focused on research and prepares students for professional degrees like medicine, dentistry and pharmacy.

## Admission, Retention and Graduation

The student must maintain a minimum 2.00 grade point average. The student must obtain a grade of C- or better in all required chemistry courses.

The following information has official approval of **The Department of Chemistry** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
College of Arts & Sciences Requirements		14
Chemistry Requirements		35
Physics Requirements		8
Mathematics Requirements		15
Advanced Chemistry Electives		5
Additional Credits for Graduation *		9
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirements

Code	Title	Hours
<b>Degree requirements in Arts &amp; Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.</b>		
<i>Foreign Language</i>		<b>14</b>
101 Beginning I		
102 Beginning II		
201 Intermediate I		
202 Intermediate II		
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Chemistry Requirements <sup>1</sup>

Code	Title	Hours
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3150:263	Organic Chemistry Lecture I	3

3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:266	Organic Chemistry Laboratory II	2
3150:313	Physical Chemistry Lecture I	3
3150:314	Physical Chemistry Lecture II	3
3150:380	Advanced Chemistry Laboratory I	2
3150:381	Advanced Chemistry Laboratory II	2
3150:423	Analytical Chemistry I	3
3150:424	Analytical Chemistry II	3
Total Hours		35

<sup>1</sup> If a grade of less than C- is earned in a required chemistry course, the student must successfully repeat that course within a year.

## Physics Requirements

Code	Title	Hours
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
Total Hours		8

## Mathematics Requirements

Code	Title	Hours
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:335	Introduction to Ordinary Differential Equations	3
Total Hours		15

## Advanced Chemistry Electives

Code	Title	Hours
<b>Select at least seven credits of the following:</b>		
3150:399	Internship in Chemistry <sup>1</sup>	7
3150:401	Biochemistry Lecture I	
3150:402	Biochemistry Lecture II	
3150:463	Advanced Organic Chemistry	
3150:497	Honors Project in Chemistry <sup>2</sup>	
3150:498	Special Topics in Chemistry <sup>2</sup>	
3150:499	Research Problems in Chemistry <sup>2</sup>	
9871:403	Polymer Chemistry	
9871:404	Polymer Physics	
9871:405	Polymer Science Lab	
Total Hours		7

<sup>1</sup> May be repeated for a total of six credits.

<sup>2</sup> May be repeated for a total of eight credits.

## Chemistry, Minor

### Minor in Chemistry (315000M)

#### Program Contact

*Dr. Chris Ziegler*  
Professor, Chemistry  
330-972-7365

ziegler@uakron.edu

The following information has official approval of the **Department of Chemistry and College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Chemistry" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		13
Electives		6
Total Hours		19

## Required Courses

Code	Title	Hours
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
Total Hours		13

## Electives

Code	Title	Hours
<b>Select 6 credits of 300/400 level Chemistry courses</b>		<b>6</b>
3150:3XX	300-level Chemistry Elective <sup>1</sup>	
3150:4XX	400-level Chemistry Elective <sup>1</sup>	
Total Hours		6

<sup>1</sup> For additional 300/400 level chemistry courses, a premed, medical technology or biology student might take 3150:401 Biochemistry Lecture I, 3150:402 Biochemistry Lecture II (three credits each). An engineering or physics major might select 3150:313 Physical Chemistry Lecture I, 3150:314 Physical Chemistry Lecture II (three credits each). Analytical or instrumental courses might be attractive to students in other fields. Students who intend to minor in chemistry should seek advice from the Chemistry Department about the 300/400 level courses that would be most relevant to their interests.

Note: Chemical engineering majors automatically fulfill the requirements for a minor in chemistry.

## Chemistry, Polymer Option, BS Bachelor of Science in Chemistry, Polymer Option (315001BS)

More on the Chemistry, Polymer Option major (<https://www.uakron.edu/chemistry/undergraduate.dot>)

The following information has official approval of **The Department of Chemistry and The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
College of Arts & Sciences Requirements		14
Chemistry Requirements		38
Polymer Requirements		9
Physics Requirements		8
Mathematics Requirements		15
Additional Credits for Graduation *		2
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirements

**Code**                      **Title**    **Hours**

**Degree requirements in Arts & Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.**

<i>Foreign Language</i>		14
101	Beginning I	
102	Beginning II	
201	Intermediate I	
202	Intermediate II	
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Chemistry Requirements <sup>1</sup>

<b>Code</b>	<b>Title</b>	<b>Hours</b>
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:266	Organic Chemistry Laboratory II	2
3150:313	Physical Chemistry Lecture I	3
3150:314	Physical Chemistry Lecture II	3
3150:380	Advanced Chemistry Laboratory I	2
3150:381	Advanced Chemistry Laboratory II	2
3150:423	Analytical Chemistry I	3
3150:424	Analytical Chemistry II	3
3150:472	Advanced Inorganic Chemistry	3
<b>Total Hours</b>		<b>38</b>

<sup>1</sup> If a grade of less than C- is earned in a required chemistry course, the student must successfully repeat that course within a year.

## Polymer Requirements

<b>Code</b>	<b>Title</b>	<b>Hours</b>
9871:403	Polymer Chemistry	3
9871:404	Polymer Physics	3
or 9871:405	Polymer Science Lab	
3150:499	Research Problems in Chemistry	3
or 9871:499	Research Problems in Polymer Science	
<b>Total Hours</b>		<b>9</b>

## Physics Requirements

<b>Code</b>	<b>Title</b>	<b>Hours</b>
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
<b>Total Hours</b>		<b>8</b>

## Mathematics Requirements

<b>Code</b>	<b>Title</b>	<b>Hours</b>
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:335	Introduction to Ordinary Differential Equations	3
<b>Total Hours</b>		<b>15</b>

## Communication

The School of Communication offers students a liberal arts education combined with professional and practical experience to meet the social, professional and personal challenges of the 21st century marketplace. Steeped in the tradition of free, accountable, and effective expression of thoughts and ideas, the broad-based curriculum equips students to think critically, write and speak eloquently, work in groups effectively, develop creatively, act ethically and interface proactively with converged media platforms.

Students choose from three academic concentrations: Strategic and Organizational Communication, Public Relations and Media Studies. Additionally, students are encouraged to participate in internships that lead to careers in media, business, sales and marketing, public relations, journalism and conference planning.

Additional information about the school, its faculty and its programs is available at <http://www.uakron.edu/schlcomm> (<http://www.uakron.edu/schlcomm/>)

Requirements for transferring into the School of Communication:

- Admission to the Buchtel College of Arts and Sciences and a 2.5 GPA or above

## Exit Requirement

To graduate with a degree from the School of Communication, a student must attain a minimum 2.0 GPA overall, a minimum 2.30 GPA for all courses taken in the School of Communication and have completed one of the following courses with a grade of C or better.

<b>Code</b>	<b>Title</b>	<b>Hours</b>
7600:105 & 7600:106	Introduction to Public Speaking and Effective Oral Communication	6
3300:111	English Composition I	3
3300:112	English Composition II	3
3300:113	African American Language and Culture I: College Composition	3
or 3300:114	African American Language and Culture II: College Composition	

- Converged Media, Minor (p. 95)
- Interpersonal Group Communication, Minor (p. 96)

- Media Production, Minor (p. 96)
- Media Studies, BA (p. 97)
- News, Minor (p. 98)
- Organizational Communication, Minor (p. 99)
- Organizational Supervision, BS (p. 99)
- Professional Communication, Certificate (p. 100)
- Professional Social Media, Certificate (p. 101)
- Public Communication, Minor (p. 101)
- Public Relations, BA (p. 102)
- Public Relations, Minor (p. 103)
- Strategic & Organizational Communication, BA (p. 104)
- Supervision and Management, Certificate (p. 105)

## School of Communication (7600)

### 7600:101 Introduction to Communication (3 Credits)

Survey of the field of communication. Topics will focus on the history, as well as the theories, constructs, and career opportunities of all sub disciplines.

### 7600:105 Introduction to Public Speaking (3 Credits)

Introduction to principles and practice of speaking by reading examples of speeches, studying techniques and methods employed and applying them in a variety of speaking situations.

**Gen Ed:** Tier 1 - Speaking

### 7600:106 Effective Oral Communication (3 Credits)

Principles of communication in speaker-audience, group and informal settings, and application of the principles in speeches, group discussions and other oral and written assignments.

**Gen Ed:** Tier 1 - Speaking

### 7600:209 Principles of Social Media (3 Credits)

This course provides students with a thorough understanding of social media as it relates to the tools, history, theories, ethics and practice of communication.

### 7600:210 Multiplatform Production (3 Credits)

A basic introduction to theory and practice of single camera, photography, graphic and web production.

### 7600:219 Introduction to Public Relations (3 Credits)

Introduction to public relations is a survey course that provides students with foundational information related to the study and practice of public relations.

### 7600:226 Interviewing (3 Credits)

Study and practical application of selected interviewing concepts associated with job interviewing, journalistic interviewing, and life review interviewing.

### 7600:227 Non-Verbal Communication (3 Credits)

Focused study of the principal aspects of nonverbal communication in public, group and interpersonal settings.

### 7600:228 ZTV (1 Credit)

Participation in the operations of the University television station. \*Total repeats not to exceed eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)

### 7600:230 WZIP-FM (1 Credit)

Participation in the operations of the University radio station. \*Total repeats not to exceed eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)

### 7600:231 Forensics (1 Credit)

Participation in the operations of the University forensics team. \*Total repeats not to exceed eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)

### 7600:232 Buchtelite (1 Credit)

Participation in the operations of the University newspaper. \*Total repeats not to exceed eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)

### 7600:233 Tel-Buch (1 Credit)

Participation in the operations of the University year book. \*Total repeats not to exceed eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)

### 7600:235 Interpersonal Communication (3 Credits)

Theory and practice in interpersonal communication concepts and principles. Special topics in communication apprehension, assertive communication, communication dyads and triads, and transactional communication.

### 7600:245 Argumentation (3 Credits)

Study of process of developing, presenting and defending inferences and arguments in oral communication setting. Includes study and practice of evidence, reasoning, case construction, refutation and rebuttal.

**Gen Ed:** Tier 3 - Critical Thinking

### 7600:252 Persuasion (3 Credits)

Emphasis on understanding persuasion theory and practice. Includes information analysis of motivational appeals and introduction to propaganda analysis.

### 7600:274 Introduction to the Media Industries (3 Credits)

An introduction to the media industries concentrating on industry structure and business models with a particular emphasis on media convergence and distribution.

### 7600:284 Legal Issues in Media (3 Credits)

Concentration on government regulations and legal requirements in production of broadcasting, film, and print media. Particular emphasis on copyright.

### 7600:300 Newswriting Across the Media (3 Credits)

Prerequisite: completion of General Education English Composition Requirement with a grade of C or better or permission. Concentration on what constitutes news, legal and ethical aspects of what to print/broadcast and writing news stories for print and broadcast media.

### 7600:301 Advanced Newswriting (3 Credits)

Prerequisite: Admitted to a four year degree granting college and 7600:300. Advanced course in writing and editing news, features and analysis for print media. Behavioral approach to communication of information and ideas.

### 7600:303 Public Relations Writing (3 Credits)

Prerequisite or Corequisite: 7600:219. Introduction of writing skills required by public relations practitioners emphasizing different approaches for specific publics and specific media.

### 7600:304 Information Gathering & Editing (3 Credits)

Prerequisite: Ability to type. Editing stories and photographs and writing headlines for print and online. Gathering information from primary and secondary sources.

### 7600:305 Communication Theory (3 Credits)

Prerequisite: 7600:101. Examination of the theoretical foundations of the communication discipline. Historical roots, major theory building perspectives and a review of contemporary theories and applications in communication contexts.

**7600:309 Public Relations Publications (3 Credits)**

Preparation of publications used as communication tools in public relations, advertising and organizations. Emphasis upon design, layout and technology.

**7600:317 Topics in Media Production (3 Credits)**

Variable topics in media production including audio, video, digital. Repeatable with a change in topic, maximum 9 credits.

**7600:325 Intercultural Communication (3 Credits)**

Study of human communication processes between individuals in culturally diverse contexts, both domestically and internationally, with an emphasis on analysis and application.

**Gen Ed:** Tier 3 - Domestic Diversity

**7600:344 Small Group Communication (3 Credits)**

Prerequisite: Junior or higher academic standing. This course explores the dynamics of small group communication. Students will learn how to become effective members of groups by practicing course concepts and theories in assignments.

**7600:345 Advanced Presentational Communication (3 Credits)**

Prerequisite: [7600:105 or 7600:106] and 7600:245. Continued development of audience analysis, research, style, and delivery to improve oral communication skills for a variety of civic and organizational purposes.

**7600:355 Freedom of Speech (3 Credits)**

Discussion and analysis of the Constitution's free speech guarantee; contemporary issues in freedom of speech; role of the media in free speech issues.

**7600:356 Rhetorical Criticism (3 Credits)**

Prerequisite: 7600:260. Identifies principal textual and contextual elements of public discourse and presents various theories and models to be applied in studying rhetorical acts.

**7600:360 Theories of Rhetoric (3 Credits)**

Prerequisite: 7600:101. Theories of Rhetoric exposes students to 2,000 years of thought on rhetoric and meaning. Students explore the relationship between knowledge, truth and rhetoric.

**Gen Ed:** Tier 3 - Critical Thinking

**7600:368 Basic Audio & Video Editing (3 Credits)**

Prerequisite: Admitted to a four year degree granting college. A basic practical introduction to audio and video editing and the Avid Editing system in the MediaNet environment.

**7600:372 Video Production (3 Credits)**

Prerequisite or corequisite: 7600:368. Theory and practice of digital video; development of professional skills in lighting, use of lenses, visual composition and sound recording for Single Camera applications.

**7600:378 Topics in Media History (3 Credits)**

Prerequisite: Admitted to a four year degree granting college. In-depth study of topics in media history and genre. Repeatable with a change in topic (9 credits maximum).

**7600:384 Communication Research (3 Credits)**

Prerequisites: 7600:101 with a grade of C or better. Fundamental concepts of communication research methods, and the analysis, application, and interpretation of data in communication and media operations.

**7600:398 Honors Project Preparatory (1 Credit)**

Prerequisite: junior standing, honors students only. This course prepares honors students to begin work on their senior honors project. Students will learn how to do background research, literature reviews, work with human subjects, and School of Communication requirements. At the end of the semester, students will have their proposal ready for submission to the Honors College.

**7600:404 Public Relations Cases (3 Credits)**

Prerequisite or corequisite: 7600:219. Application of principles of public relations profession in an actual organizational setting.

**7600:405 Media Copywriting (3 Credits)**

Prerequisite: 7600:309. Selected communication theories and research techniques used to plan, write and analyze commercial messages. Emphasis will be placed on selection of audience, medium, appeal, writing style and evaluation of efforts.

**7600:406 Advanced Public Relations Theory (3 Credits)**

Prerequisite: 7600:219. Study and practical application of communication concepts, theories and skills relevant to public relations programs in businesses and nonprofit organizations.

**7600:408 Women, Minorities & News (3 Credits)**

Prerequisites: 7600:300 and admission to a four year degree granting college. From a professional journalism perspective, this course provides historical analysis of diversity in the newsroom and the news. Students produce new content that addresses diversity.

**7600:409 Public Relations Strategic Campaigns (3 Credits)**

Prerequisite: 7600:219. This course allows students to apply knowledge of public relations practice, history, theories, ethics and strategic planning to create real-world public relations campaigns.

**7600:429 Advanced Strategic Social Media (3 Credits)**

Prerequisite: 7600:209 or 7600:219. Students will learn and apply knowledge of professional social media including theories, ethics, policy, and best practices to solve real-world social media problems.

**7600:435 Organizational Communication (3 Credits)**

Prerequisite: 7600:101. Overview of theories and approaches for understanding communication flow and practices in organizations, including interdepartmental, networks, superior-subordinate, formal and informal communication.

**7600:436 Analyzing Organizational Communication (3 Credits)**

Prerequisites: 7600:384 and 7600:435, or permission. Methodology for in-depth analysis and application of communication in organizations; team building; conflict management, communication flow. Individual and group projects; simulations.

**7600:437 Training Methods in Communication (3 Credits)**

Prerequisites: 7600:345 or permission. Principles and concepts in the design and delivery of communication training programs; integration of theory and methodology; presentation skills; matching methods and learner needs.

**7600:438 Health Communication (3 Credits)**

Prerequisite: Admitted to a four year degree granting college. The course presents an overview of health communication theory and research issues in interpersonal, small group, organizational, public relations, and mass media contexts.

**7600:439 Independent Study: Communication (1-12 Credits)**

(May be repeated for a total of 12 credits) Prerequisites: Admitted to a four year degree granting college except CAST, permission of faculty. Directed independent readings, research, projects and productions. Written proposal must be submitted before permission is granted. Appropriate documentation of work required.

**7600:444 Communication & Conflict (3 Credits)**

Prerequisite: 7600:101. Explores roles of communication & conflict in personal and work relationships. Emphasis placed on application of theories and strategies for conflict resolution from a communication perspective.

**7600:450 Special Topics in Communication (3 Credits)**

(May be repeated for a total of nine credits) Special interest topics in mass communication, journalism, or communication, supplementing courses listed in University Bulletin. See department for current listing of offerings.

**7600:457 Rhetoric in Contemporary Culture (3 Credits)**

Prerequisite: 7600:260 & 7600:356. Rhetoric in Contemporary Culture serves as an advanced course in rhetorical criticism. Students apply critical methods to contemporary issues surrounding political, popular, and vernacular discourses.

**7600:459 Leadership and Communication (3 Credits)**

Prerequisite: Admitted to a four year degree granting college except CAST. Theories of leadership and communication across public, organizational, small group, interpersonal, and political contexts. Assessments tools provided. Guest speakers.

**7600:468 Advanced Audio and Video Editing (3 Credits)**

Prerequisite: 7600:368. A study of film and video editing. It provides practical experience and exposure to the various creative approaches and techniques of film / video editing.

**7600:474 Media Theory (3 Credits)**

Prerequisites: 7600:101. A review of mass communication theories and their applications in addressing major issues relevant to media content, media audience and media effects.

**7600:475 Political Communication (3 Credits)**

Students explore the relationship between politicians, citizens, and media. Topics include media coverage, campaign technologies, advertising, debates, engagement, rhetoric, and attitudes.

**7600:480 Communication Internship (3-6 Credits)**

Prerequisites: 24 credits in Communication, 3.0 GPA in Communication and permission. Supervised experience and on-the-job training. Written permission prior to the semester enrolled is necessary. Repeatable up to a maximum 6 credits.

**7600:481 Film as Art: An Introduction to the Film Form (3 Credits)**

A study of the role and function of Cinematography, Editing, Sound, and Mise-en-scene as they shape the meaning of the film, within the context of the traditional / non-traditional narratives and the documentary structure.

**7600:485 Honors Project in Communication (3 Credits)**

Prerequisites: 7600:398, approval of honors preceptor. Independent study project leading to completion of honors research, creative or service project.

**7600:486 Media Management & Leadership (3 Credits)**

Prerequisite: 7600:384 An intensive overview of media management and leadership principles and applications of these principles in addressing issues related to entrepreneurship, ethics, globalization and media convergence.

**7600:487 Advanced Topics in Media Writing (3 Credits)**

Prerequisite: 7600:300. Advanced study in media writing. Topics include: script writing, broadcast news writing, new media writing, etc. Repeatable with a change in topic, maximum 12 credit hours.

**7600:490 Communication Workshop (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Admitted to a four year degree granting college. Group study or group projects investigating a particular phase of media not covered by other courses in curriculum.

**7600:499 Capstone in Communication (3 Credits)**

Prerequisites: 7600:101, 7600:384, and Senior Standing. Capstone in communication integrates theories, concepts, and skills: provides interdisciplinary work, and applied focus; and culminates in a project, paper, or production. Topics vary.

## Converged Media, Minor Minor in Converged Media (C60110M)

Students will gain hands-on experience with emerging technology tools to become responsible media content developers and information brokers. Specifically, the Converged Media Minor (CM) will provide students with the knowledge and the skills to: (1) develop digital media literacy; (2) gather information and create content; (3) write for accuracy, thoroughness, authenticity, and efficiency; (4) design and distribute content for print, audio, video, and the web; and (5) apply media ethics.

**Program Contact**

Heather L. Walter

Director & Associate Professor, School of Communication  
330-972-6486

hlwalter@uakron.edu (jec37@uakron.edu)

The following information has official approval of the **School of Communication** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		18
Total Hours		18

## Required Courses

Code	Title	Hours
7600:209	Principles of Social Media	3
7600:210	Multiplatform Production	3
7600:300	News Writing Across the Media	3
7600:304	Information Gathering & Editing	3
7600:317	Topics in Media Production <sup>1</sup>	3
7600:317	Topics in Media Production <sup>1</sup>	3
Total Hours		18

<sup>1</sup> 7600:317 Topics in Media Production should be taken once for Studio and once for Audio (for a total of six credits).

## Interpersonal Group Communication, Minor

### Minor in Interpersonal/Group Communication (C60107M)

Students in the Interpersonal and Group Communication minor study how messages are created and delivered for maximum effectiveness both interpersonally and within a group setting. Like other Communication minors, 18 hours are required.

#### Program Contact

Dr. Mary Triece  
mtriece@uakron.edu  
330-972-6222

The following information has official approval of the **School of Communication** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Communication - Interpersonal/Group Communication" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minor in Communication - Interpersonal/Group Communication may only be awarded at the time a student receives a Baccalaureate degree. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

### Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

### Required Courses

Code	Title	Hours
7600:101	Introduction to Communication	3
7600:235	Interpersonal Communication	3
7600:344	Small Group Communication	3
Total Hours		9

### Electives

Code	Title	Hours
<b>Select 9 credits of the following (at least 3 credits must be 300/400 level):</b>		
7600:226	Interviewing	
7600:227	Non-Verbal Communication	
7600:245	Argumentation	
7600:252	Persuasion	
7600:305	Communication Theory	

7600:325	Intercultural Communication	
7600:444	Communication & Conflict	
7600:450	Special Topics in Communication <sup>1</sup>	
Total Hours		9

<sup>1</sup> Prior to enrolling in 7600:450 Special Topics in Communication, approval must be given by School Director.

## Media Production, Minor

### Minor in Media Production (C60105M)

#### Program Contact

Juan Contreras  
jec37@uakron.edu (pipps@uakron.edu)  
330-972-5870

The following information has official approval of the **School of Communication** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Communication - Media Production" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minor in Communication - Media Productions may only be awarded at the time a student receives a Baccalaureate degree. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

### Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

### Required Courses

Code	Title	Hours
7600:368	Basic Audio & Video Editing	3
7600:372	Video Production	3
7600:481	Film as Art: An Introduction to the Film Form	3
Total Hours		9

### Electives

Code	Title	Hours
<b>Select 9 credits of the following:</b>		
7600:228	ZTV	
7600:230	WZIP-FM	
7600:274	Introduction to the Media Industries	
7600:284	Legal Issues in Media	
7600:317	Topics in Media Production	
7600:468	Advanced Audio and Video Editing	
Total Hours		9



# Media Studies, BA

## Bachelor of Arts in Media Studies (C60104BA)

More on the Media Studies major (<https://www.uakron.edu/schlcomm/ugrad-programs/media-studies/>)

The University of Akron's media studies program prepares students with real experience for a career in video production, radio/television and journalism.

There is always more than meets the eye in the media industry, and our media studies program is no different. Student's will study every aspect of the media industry – from business, law and theory to writing for different media platforms and producing audio and video content.

### Program Contact

Juan Contreras

jec37@uakron.edu (pipps@uakron.edu)

330-972-5870

The following information has official approval of **The School of Communication** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Communication Core	15
	Media Studies Core	12
	Media Studies Electives	9
	School of Communication Elective	3
	Minor Requirement	18
	Additional Credits for Graduation *	15
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
<b>Total Hours</b>		<b>34</b>

## College of Arts & Sciences Requirements

Code	Title	Hours
<b>Degree requirements in Arts &amp; Sciences include the demonstration of 14 ability to use another language by completion of the second year of a foreign language.</b>		
<i>Foreign Language</i>		
101 Beginning I		
102 Beginning II		
201 Intermediate I		
202 Intermediate II		
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Communication Core <sup>1</sup>

Code	Title	Hours
7600:101	Introduction to Communication	3
7600:210	Multiplatform Production	3
7600:245	Argumentation	3
7600:384	Communication Research	3
<i>Select one of the following:</i>		<b>3</b>

7600:398 Honors Project Preparatory or 7600:480 Communication Internship or 7600:485 Honors Project in Communication or 7600:499 Capstone in Communication	
Total Hours	15

<sup>1</sup> Grade of C or better is required in Communication Core courses.

## Media Studies Core

Code	Title	Hours
7600:274	Introduction to the Media Industries	3
7600:284	Legal Issues in Media	3
7600:300	Newswriting Across the Media	3
7600:474	Media Theory	3
Total Hours		12

## Media Studies Electives

Code	Title	Hours
<b>Select nine credits of the following:</b>		<b>9</b>
7600:209	Principles of Social Media	
7600:303	Public Relations Writing	
7600:304	Information Gathering & Editing	
7600:309	Public Relations Publications	
7600:317	Topics in Media Production <sup>1</sup>	
7600:345	Advanced Presentational Communication	
7600:355	Freedom of Speech	
7600:368	Basic Audio & Video Editing	
7600:372	Video Production	
7600:378	Topics in Media History <sup>1</sup>	
7600:405	Media Copywriting	
7600:408	Women, Minorities & News	
7600:437	Training Methods in Communication	
7600:468	Advanced Audio and Video Editing	
7600:475	Political Communication	
7600:481	Film as Art: An Introduction to the Film Form	
7600:486	Media Management & Leadership	
7600:487	Advanced Topics in Media Writing	
Total Hours		9

<sup>1</sup> May be repeated with a change in topic for a maximum 9 credit hours

## School of Communication Elective

Code	Title	Hours
<b>Select three credits from any 7600 course:</b>		
7600:xxx <sup>1</sup>		3
7600:325	Intercultural Communication (Recommended, not required)	
<i>The following courses DO NOT satisfy this requirement:</i>		
7600:105	Introduction to Public Speaking	
7600:106	Effective Oral Communication	
Total Hours		3

<sup>1</sup> Co-curricular activities (Forensics, WZIP, ZTV, Buchtelite) are limited to a total of three credits to be applied to the School of Communication elective.

## Minor Requirement

Code	Title	Hours
<b>Completion of a Minor or Second Major (not in Communication) or earned Associate Degree</b>		<b>18</b>
Total Hours		18

## News, Minor

### Minor in News (C60007M)

#### Program Contact

Dr. Heather Walter  
Director, School of Communication  
330-972-6486  
hlwalter@uakron.edu

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The following courses constitute a "Minor in Communication - News" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minor in Communication - News may only be awarded at the time a student receives a Baccalaureate degree. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		12
Electives		6
Total Hours		18

## Required Courses

Code	Title	Hours
7600:274	Introduction to the Media Industries	3
7600:284	Legal Issues in Media	3
7600:300	Newswriting Across the Media	3
7600:304	Information Gathering & Editing	3
Total Hours		12

## Electives

Code	Title	Hours
<b>Select 6 credits of the following:</b>		<b>6</b>
7600:317	Topics in Media Production <sup>1</sup>	
7600:487	Advanced Topics in Media Writing <sup>1</sup>	
Total Hours		6

<sup>1</sup> 7600:317 Topics in Media Production and 7600:487 Advanced Topics in Media Writing may be repeated with a change of topic.

## Organizational Communication, Minor

### Minor in Organizational Communication (C60101M)

Students who minor in Organizational Communication learn about for-profit corporations and non-profit service groups by examining the communication that occurs both within and between these types of organizations. Like other Communication minors, 18 credits are required.

#### Program Contact

Dr. Mary Triece  
mtriece@uakron.edu  
330-972-6222

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The following courses constitute a "Minor in Communication - Organizational Communication" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minor in Communication - Organizational Communication may only be awarded at the time a student receives a Baccalaureate degree. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

### Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

### Required Courses

Code	Title	Hours
7600:101	Introduction to Communication	3
7600:435	Organizational Communication	3
7600:436	Analyzing Organizational Communication	3
Total Hours		9

### Electives

Code	Title	Hours
Select 9 credits of the following (at least 6 must be 300/400 level):		
7600:235	Interpersonal Communication	
7600:305	Communication Theory	
7600:325	Intercultural Communication	
7600:344	Small Group Communication	
7600:345	Advanced Presentational Communication	
7600:437	Training Methods in Communication	

7600:444	Communication & Conflict	
7600:450	Special Topics in Communication <sup>1</sup>	
Total Hours		9

<sup>1</sup> Prior to enrolling in 7600:450 Special Topics in Communication, approval must be given by School Director.

## Organizational Supervision, BS Bachelor of Science in Organizational Supervision (242010BS)

More on the Organizational Supervision major (<https://www.uakron.edu/bit/bos.dot>)

### Program Contact

Dr. Heather Walter  
Director, School of Communication  
330-972-6486  
hlwalter@uakron.edu

### Program Information

The baccalaureate program in organizational supervision is an articulated degree (or degree completer) that is designed specifically for students with an earned associate degree from an accredited institution or junior standing (60+ credits) at The University of Akron. The program prepares students to gain supervisory and leadership skills necessary for professional and career advancement. The program provides broad skills and competencies to be applied in industrial areas such as information technology, healthcare, communication, and manufacturing.

This program is offered on the UA main campus as well as at UA-Wayne Campus, and the Medina County University Center. Interested students should contact an adviser in the College of Applied Science and Technology (330-972-7220) to review their transcript and to develop a program of study. Check with the Department of Business and Information Technology for information regarding schedules and enrolling.

### Career Information

The program prepares students for positions at the supervisory level of large organizations, as small business owners/managers, or as team leaders for organizations. Graduates of the BOS degree might be able to get jobs as management analysts, human resources managers, sales managers, community service managers, and consultants in various areas of the business world, including human resources, training and sales, or to find work in the nonprofit sector or in government.

For additional information, please visit the Career Center at the Student Union, room 211 or visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) (<http://www.bls.gov>).

## Department of Business and Information Technology Policy Notes

- Students must attain a "C" or better in each course in their major area (2440).
- The Department of Business and Information Technology requires a cumulative GPA of 2.0 GPA and a minimum of 15 earned credit hours

for Inter- and Intra- College Transfer into all Associate and Bachelor's degree programs.

- Prior to enrolling in classes for the B.S. degree you must contact an advisor in Polsky 301

## Transfer to the College of Applied Science and Technology

To be admitted to the College of Applied Science and Technology, a student must have a GPA of 2.0. A student can complete the transfer process through an appointment with an Academic Advisor in the college in which they reside.

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### 3rd Year

Fall Semester		Hours
3470:250 or 3470:260	Statistics for Everyday Life or Basic Statistics	4
2040:240	Human Relations <sup>1,2</sup>	3
2420:300	Supervision	3
2420:301	Information Design	3
2420:310	Leadership Principles & Practices	3
Hours		16

### Spring Semester

2040:247	Survey of Basic Economics <sup>1,2</sup>	3
2420:302	Ethics and Law in Business	3
2420:401	Leading Project Teams	3
2420:402	Operational Assessments and Improvements	3
3750:380	Industrial/Organizational Psychology <sup>2</sup>	4
Hours		16

### 4th Year

Fall Semester		Hours
2420:311	Corporate Social Responsibility and Leadership	3
2420:420	Human Resources Development	3
2420:421	Senior Seminar in Organizational Supervision	3
7600:325 or 7600:344	Intercultural Communication <sup>1</sup> or Small Group Communication	3
Global Diversity Requirement <sup>1</sup>		3
Hours		15

### Spring Semester

Complex Systems Tag Requirement <sup>1</sup>	3
General Education Requirement (if necessary) <sup>1</sup>	3
General Education Requirement (if necessary) <sup>1</sup>	3
General Education Requirement (if necessary) <sup>1</sup>	3
General Education Requirement (if necessary) <sup>1</sup>	3
Hours	15
Total Hours	62

- <sup>1</sup> All students pursuing a bachelor's degree at the University of Akron must complete the General Education requirements. Students transferring to the Bachelors of Organizational Supervision who have not completed these requirements prior to acceptance into the program should meet with an academic advisor to review remaining courses.
- <sup>2</sup> All students will be required to take Economics (preferably 2040:247 Survey of Basic Economics) and Psychology (preferably 2040:240 Human Relations) for their General Education - Social Science requirements. BOS students may use 2040:240 Human Relations to replace 3750:100 Introduction to Psychology as the prerequisite for 3750:380 Industrial/Organizational Psychology.

### Program Notes:

- All students will be required to complete a minimum of 34 credit hours of 300/400 level courses.
- Students will be required to complete all necessary prerequisites and to meet the general education requirements for all baccalaureate students at The University of Akron. There are no exceptions to prerequisites for the BOS courses.
- If a student has not completed Statistics as part of an Associate degree or General Education requirements, student must take this course even if they have met the math requirement for the General Education requirements.
- Students in Junior standing (at least 60 credits) who have not earned an Applied Associate degree (AAB or AAS) will be required to complete an undergraduate certificate or minor towards completion in their BOS degree.

## Professional Communication, Certificate

### Certificate in Professional Communication (H70008C)

#### Program Contact

Dr. Amanda Booher  
Assistant Professor  
Department of English  
330-972-6465  
abooh@uakron.edu

The following information has official approval of the **School of Communication** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent

upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Professional Communication" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. This certificate must be earned concurrently with an undergraduate (associate or bachelor's) degree. A student who already possesses an undergraduate degree may directly pursue this certificate.

## Summary

Code	Title	Hours
Core Requirements		12
Total Hours		12

## Core Requirements

Code	Title	Hours
3300:390	Professional Writing I	3
3300:391	Professional Writing II	3
7600:309	Public Relations Publications	3
7600:345	Advanced Presentational Communication	3
Total Hours		12

## Professional Social Media, Certificate Certificate in Professional Social Media (C60108C)

The Professional Social Media Certificate is open to students of any major, as well as professionals. It serves as formal training and evidence of your preparation in the subject.

You will learn to generate content, use analytics to measure success, and create a complete social media campaign for a real client as your final project for the course, Advanced Strategic Social Media, giving you a hands-on experiential learning opportunity.

"The number of jobs that request or require skills and knowledge in social media is continuously growing, yet there are still very few educational credentials available to help students demonstrate a mastery of this expertise that organizations need. This certificate is a concrete way for current students and professionals already in the field to obtain formal training in social media, as well as gain evidence of their preparation."

Julie Cajigas, Associate Professor of Practice in the School of Communication

### Program Contact

Julie A Cajigas  
Associate Professor of Practice,  
School of Communication  
330-972-6914  
julieca@uakron.edu

The following information has official approval of the **School of Communication** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total

number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Professional Social Media" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		12
Total Hours		12

## Required Courses

Code	Title	Hours
7600:209	Principles of Social Media	3
7600:210	Multiplatform Production	3
7600:429	Advanced Strategic Social Media	3
7600:487	Advanced Topics in Media Writing <sup>1</sup>	3
Total Hours		12

<sup>1</sup> In order to complete the certificate, 7600:487 Advanced Topics in Media Writing must be taken with the "New Media" course topic designation. The prerequisite will be waived for certificate students.

## Public Communication, Minor Minor in Public Communication (C60102M)

Building on the written and presentational skills offered in this minor, students who specialize in Public Communication often go on to graduate and/or law school. Like all the other Communication minors, 18 credits are required.

### Program Contact

Dr. Mary Triece  
mtriece@uakron.edu  
330-972-6222

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The following courses constitute a "Minor in Communication - Public Communication" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minor in Communication - Public Communication may only be awarded at the time a student receives a Baccalaureate degree. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

## Required Courses

Code	Title	Hours
7600:101	Introduction to Communication	3
7600:305	Communication Theory	3
7600:360	Theories of Rhetoric	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select 9 credits of the following (at least 6 credits must be 300/400 level):</b>		
7600:231	Forensics <sup>1</sup>	3
7600:245	Argumentation	3
7600:252	Persuasion	3
7600:345	Advanced Presentational Communication	3
7600:355	Freedom of Speech	3
7600:356	Rhetorical Criticism	3
7600:360	Theories of Rhetoric	3
7600:444	Communication & Conflict	3
7600:450	Special Topics in Communication <sup>2</sup>	3
7600:457	Rhetoric in Contemporary Culture	3
7600:475	Political Communication	3
Total Hours		9

<sup>1</sup> No more than 3 credits of 7600:231 Forensics will count toward this minor.

<sup>2</sup> Prior to enrolling in 7600:450 Special Topics in Communication, approval must be given by School Director.

## Public Relations, BA

### Bachelor of Arts in Public Relations (C60100BA)

More on the Public Relations major (<https://www.uakron.edu/schlcomm/ugrad-programs/public-relations/>)

Public Relations is all about building and maintaining beneficial relationships between organizations and their stakeholders and customers. The organization's message is the foundation of building those relationships. As a PR representative, students will create and shape those messages between an organization and its public.

Our PR degree path provides students with real-world experiences through service-learning; exposure to people, organizations and scenarios that foster creativity; and helps develop the critical thinking skills students will use throughout their career in the industry

#### Program Contact

Julia Spiker

Professor, School of Communication  
330-972-7198  
jspiker@uakron.edu (jec37@uakron.edu)

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## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		
		34
College of Arts & Sciences Requirements		
		14
Communication Core		
		15
Public Relations Core		
		12
Public Relations Electives		
		12
Minor Requirement		
		18
Additional Credits for Graduation *		
		15
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		

Review the General Education Requirements page for detailed course listings.

Total Hours 34

## College of Arts & Sciences Requirements

**Code Title Hours**

**Degree requirements in Arts & Sciences include the demonstration of 14 ability to use another language by completion of the second year of a foreign language.**

### Foreign Language

101	Beginning I	
102	Beginning II	
201	Intermediate I	
202	Intermediate II	
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Communication Core <sup>1</sup>

Code	Title	Hours
7600:101	Introduction to Communication	3
7600:210	Multiplatform Production	3
7600:245	Argumentation	3
7600:384	Communication Research	3
<i>Select one of the following:</i>		3
7600:480	Communication Internship <sup>2</sup>	
-or-		
7600:485	Honors Project in Communication	
-or-		
7600:499	Capstone in Communication	
Total Hours		15

<sup>1</sup> Grade of C or better is required in Communication Core courses.

<sup>2</sup> Students must have 90 credits to qualify.

## Public Relation Core

Code	Title	Hours
7600:219	Introduction to Public Relations	3
7600:303	Public Relations Writing	3
7600:404	Public Relations Cases	3
7600:409	Public Relations Strategic Campaigns	3
Total Hours		12

## Public Relations Electives

**Code Title Hours**  
**12 credits from the list below or any 7600 courses not included above: 12**

7600:209	Principles of Social Media	
7600:309	Public Relations Publications	
7600:406	Advanced Public Relations Theory	
7600:429	Advanced Strategic Social Media	
7600:xxx <sup>1</sup>		
<i>The following courses DO NOT satisfy this requirement:</i>		
7600:105	Introduction to Public Speaking	
7600:106	Effective Oral Communication	
Total Hours		12

<sup>1</sup> Co-curricular activities (Forensics, WZIP, ZTV, Buchtelite) are limited to a total of three credits to be applied to the Public Relations Electives.

## Minor Requirement

Code	Title	Hours
<b>Completion of a Minor or Second Major (not in Communication) or earned Associate Degree</b>		<b>18</b>
Total Hours		18

## Public Relations, Minor Minor in Public Relations (C60100M)

### Program Contact

Dr. Julia Spiker  
 jspiker@uakron.edu  
 330-972-7198

The following information has official approval of the **School of Communication** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Communication - Public Relations" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minor in Communication - Public Relations may only be awarded at the time a student receives a Baccalaureate degree. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		6
Electives		12
Total Hours		18

## Required Courses

Code	Title	Hours
7600:219	Introduction to Public Relations	3
7600:406	Advanced Public Relations Theory	3
Total Hours		6

## Electives

Code	Title	Hours
<b>Select 12 credits of the following:</b>		
7600:209	Principles of Social Media	12
7600:303	Public Relations Writing	
7600:309	Public Relations Publications	
7600:404	Public Relations Cases	
7600:409	Public Relations Strategic Campaigns	
7600:450	Special Topics in Communication <sup>1</sup>	
Total Hours		12

<sup>1</sup> 7600:450 Special Topics in Communication needs to be in Public Relations.

## Strategic & Organizational Communication, BA

### Bachelor of Arts in Strategic & Organizational Communication (C60101BA)

More on the Strategic & Organizational Communication major (<https://www.uakron.edu/schlcomm/ugrad-programs/strategic-organization/>)

UA's strategic and organizational communication program prepares students with the knowledge and skill needed to develop, evaluate and effectively communicate messages in contexts ranging from interpersonal relationships, business applications, public campaigns, advocacy and the law.

Our goal is for students to understand how the broad field of communication impacts organizational success and to learn how to apply technology effectively in communicating with organizations.

#### Program Contact

Heather L. Walter  
 Director & Associate Professor, School of Communication  
 330-972-6486  
[hlwalter@uakron.edu](mailto:hlwalter@uakron.edu) ([jec37@uakron.edu](mailto:jec37@uakron.edu))

The following information has official approval of **The School of Communication** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements

### Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14

Communication Core	15
Strategic & Organizational Communication Core	12
Strategic & Organizational Communication Electives	12
Minor Requirement	18
Additional Credits for Graduation *	15
Total Hours	120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirements

Code	Title	Hours
<b>Degree requirements in Arts &amp; Sciences include the demonstration of 14 ability to use another language by completion of the second year of a foreign language.</b>		
<i>Foreign Language</i>		
101	Beginning I	
102	Beginning II	
201	Intermediate I	
202	Intermediate II	
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;



or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Communication Core <sup>1</sup>

Code	Title	Hours
7600:101	Introduction to Communication	3
7600:210	Multiplatform Production	3
7600:245	Argumentation	3
7600:384	Communication Research	3
<i>Select one of the following:</i>		3
7600:480	Communication Internship <sup>2</sup>	
-or-		
7600:485	Honors Project in Communication	
-or-		
7600:499	Capstone in Communication	
Total Hours		15

<sup>1</sup> Grade of C or better is required in Communication Core courses.

<sup>2</sup> Students must have 90 credits to qualify.

## Strategic & Organizational Communication Core

Code	Title	Hours
7600:235	Interpersonal Communication	3
7600:305	Communication Theory	3
7600:360	Theories of Rhetoric	3
7600:435	Organizational Communication	3
Total Hours		12

## Strategic & Organizational Communication Electives

Code	Title	Hours
<b>12 credits from the list below or any 7600 courses not included above:</b>		<b>12</b>
7600:226	Interviewing	
7600:227	Non-Verbal Communication	
7600:252	Persuasion	
7600:325	Intercultural Communication	
7600:344	Small Group Communication	
7600:345	Advanced Presentational Communication	
7600:355	Freedom of Speech	
7600:356	Rhetorical Criticism	
7600:436	Analyzing Organizational Communication	
7600:437	Training Methods in Communication	
7600:438	Health Communication	
7600:444	Communication & Conflict	
7600:475	Political Communication	
7600:xxx <sup>1</sup>		
<i>The following courses DO NOT satisfy this requirement:</i>		
7600:105	Introduction to Public Speaking	

Code	Title	Hours
7600:106	Effective Oral Communication	
Total Hours		12

<sup>1</sup> Co-curricular activities (Forensics, WZIP, ZTV, Buchtelite) are limited to a total of three credits to be applied to the Strategic & Organizational Communication Electives.

## Minor Requirement

Code	Title	Hours
<b>Completion of a Minor or Second Major (not in Communication) or earned Associate Degree</b>		<b>18</b>
Total Hours		18

## Supervision and Management, Certificate

### Certificate in Supervision & Management (242303C)

The Supervision and Management certificate is aimed at providing knowledge and skills to the new and existing supervisor as well as to the individual who aspires to a supervisory position.

To apply, go to: The College of Applied Science & Technology Advising Services, Polsky 301.

#### Program Contact

*Dr. Irina Chernikova*  
 Professor, Department of Applied General & Technical Studies  
 330-972-6529  
 irina@uakron.edu

The following information has official approval of the **Department of Applied General and Technical Studies** and the **College of Applied Science and Technology**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Supervision and Management" and must be completed with a minimum grade point average of 2.5 overall for the certificate to be noted on the student's record. This certificate may be earned independent of earning a degree.

## Summary

Code	Title	Hours
Business Management Skills		9
Electives		5
Total Hours		14

## Business Management Skills

Code	Title	Hours
<b>Select 9 credits minimum of the following:</b>		<b>9</b>
2420:103	Essentials of Management Technology	
2420:104	Introduction to Business	
2420:202	Elements of Human Resource Management	

2280:233	Restaurant Operations & Management
2280:240	Supervision in the Hospitality Industry
2420:300	Supervision
2870:332	Management of Technology Based Operations
2880:100	Basic Principles of Manufacturing Management
2880:232	Labor Management Relations
<hr/>	
Total Hours	9

## Electives

Code	Title	Hours
<b>Select 5 credits of the following:</b>		<b>5</b>
2020:224	Writing for Advertising	
2020:325	Signs of Professional Writing	
2030:345	Technical Data Analysis	
2040:241	Technology & Human Values	
2040:240		
2040:243	Contemporary Global Issues	
2040:247	Survey of Basic Economics	
2420:270	Business Software Applications	
2420:211	Essentials of Financial Accounting	
2920:310	Economics of Technology	
2880:241	Introduction to Quality Assurance	
xxxx:xxx	Other Supervision/Management related courses approved by faculty of Department of Applied Science & Technical Studies	
<hr/>		
Total Hours		5

## Criminal Justice Studies

The Criminal Justice program develops critical thinking, problem solving techniques, effective communications and the ability to use technology while examining crime and the methods used to prevent it, as well as investigate and punish those who violate the law. It provides a professional perspective of the Criminal Justice field, including policing, corrections and security administration.

- Corrections, Certificate (p. 107)
- Corrections, Minor (p. 108)
- Criminal Intelligence Analysis, BS (p. 108)
- Criminal Justice Studies, AAS (p. 109)
- Criminology & Criminal Justice, BS (p. 110)
- Forensic Psychology, Minor (p. 112)
- Forensic Studies, Minor (p. 113)
- Forensic Study of Behaviors, Certificate (p. 113)
- Law Enforcement, Minor (p. 114)

## Criminal Justice Studies (3800)

### 3800:100 Introduction to Criminal Justice (3 Credits)

Overview of criminal justice system, its history, development and evolution within the United States including subsystems of police, courts, corrections. Constitutional limitations, current criminal justice practices human relations, professionalization, prevention.

### 3800:101 Introduction to Security Administration Technology (3 Credits)

Introduces fundamentals such as equipment, technology, design theories, management practices, trends, concerns, and issues in security administration.

### 3800:102 Principles of Criminal Law (3 Credits)

Prerequisite: 3800:100. This course examines the central principles of criminal law, including its history, philosophy, the elements of major crimes and criminal defenses.

### 3800:103 Introduction to Corrections (3 Credits)

Prerequisite: 3800:100. Introduction to history and goals of institutional and community corrections.

### 3800:104 Evidence & Criminal Legal Process (3 Credits)

Prerequisite: 3800:100. Study of evidence law, constitutional perspectives and law enforcement officer's relationship thereto. Court procedures from arrest to incarceration.

### 3800:105 Introduction to Police Studies (3 Credits)

Prerequisite: 3800:100. Provides a foundation for understanding police role, structure, and function in American society at the local, state, and federal levels.

### 3800:106 Juvenile Justice Process (3 Credits)

Prerequisite: 3800:100. Examination of juvenile justice system, functions of its various components; adolescent subculture, legislation, causative factors, prevention and treatment methodologies and programs.

### 3800:120 Crime Prevention: Theory, Practice, and Management (3 Credits)

Examines contemporary crime prevention and security strategies used in target hardening. Central theme is the use of community resources to prevent crime.

### 3800:224 Profiling Serial Killers (3 Credits)

Prerequisite: 3800:100. Introduction to the theories, analyses, and methodology used in profiling serial killers. Actual serial profiles and paradigms of crime scene analyses also examined.

### 3800:225 The Police Experience (3 Credits)

Prerequisites: 3800:100 and permission. Academic refresher course of basic police academy. Completion (C or better) and 3800:100 qualifies a commissioned police officer to test out of certain courses (see adviser).

### 3800:226 Interviews, Interrogations, and Hostage Negotiations (3 Credits)

Prerequisite: 3800:100. An overview of the legal, theoretical, and applied aspects of conducting interviews, interrogations, and hostage negotiations within the field of law enforcement.

### 3800:231 Physical Security: Systems, Design, and Control (3 Credits)

Topics include: controlling and monitoring the access of persons and vehicles, prevention and detection of unauthorized intrusions and surveillance, and safeguarding key assets.

### 3800:232 Legal Issues in Security Administration (3 Credits)

Survey of laws applicable to the security administration function including tort, labor, employment, unemployment, workers' compensation, contract, insurance, cyber, criminal and constitutional law.

### 3800:233 Security Investigations: Principles and Practice (3 Credits)

Overview of investigative methods employed by the security manager. Students will examine legal and ethical duties and issues related to investigation.

### 3800:234 Computer and Information Security (3 Credits)

Examines practical applications of effective information security measures and legal, ethical and privacy issues concerning the storage and use of information in society.

**3800:235 School Crime and Violence Prevention (3 Credits)**

Prerequisites: 3800:101, 3800:120. Examines the nature and extent of crime and deviance in American schools. Particular focus is on the use of a systems approach to prevent crime.

**3800:240 Vice & Organized Crime (3 Credits)**

Prerequisites: 3800:100 and permission. An overview of organizations operating nationally and internationally in a variety of criminal activities with a particular emphasis on narcotics trafficking.

**3800:245 Homeland Security: Principles and Practice (3 Credits)**

Overview of fundamental homeland security concepts and issues such as: intelligence, critical infrastructure protection, hazards, strategy, policy, risk, organizational design and leadership.

**3800:251 Criminal Investigation (3 Credits)**

Prerequisite: 3800:100. The course provides the student with fundamental investigative skills and the ability to manage a criminal case from initiation through conclusion.

**3800:253 Basic Forensic Methods (3 Credits)**

Introduction to the science, technology and application of forensic methods in the investigation of crime.

**3800:255 Introduction to Forensic Investigation (3 Credits)**

Prerequisite: 3800:100. This course is designed to introduce the student to the field of forensic science. The emphasis will be on skills and techniques of evidence evaluation.

**3800:270 Community Corrections (3 Credits)**

Prerequisite: 3800:100. Examines the corrections component of the criminal justice system. Special focus on the development and use of probation, parole, and other alternative forms of sentencing.

**3800:275 Legal Aspects of Corrections (3 Credits)**

Examination of the influence of the legal system on corrections, especially United States Supreme Court decisions.

**3800:286 Courtroom Communication (3 Credits)**

Prerequisite: 3800:100. Witnessing studies the trial process, emphasizing role of witnesses. Effective communication to juries, applicable evidentiary rules and preparation techniques are taught, preparing students for direct and cross-examination.

**3800:287 The Legal System and Psychology (3 Credits)**

Prerequisite: 3800:100. Examination of various areas where law and psychology interface, particularly in criminal cases by examining the expanding role of psychology in justice system and the courtroom.

**3800:292 Special Topic: Criminal Justice (1-4 Credits)**

(May be repeated for a total of six credits). Prerequisite: Permission. Workshops and special programs in selected areas of criminal justice such as community relations, crime statistics, ethics, survival.

**3800:296 Current Topics in Criminal Justice (1-3 Credits)**

Prerequisite: 3800:100. A variety of course topics on current subjects relative to law enforcement and the Criminal Justice System. May be repeated for up to 12 credits.

**3800:297 Independent Study: Criminal Justice (1-3 Credits)**

Prerequisite: 3800:100 and permission. Selected topics and special areas of study in Criminal Justice Technology under the supervision of a selected faculty member with whom specific arrangements have been made.

**3800:298 Applied Ethics in Criminal Justice (3 Credits)**

Prerequisite: 3800:100. This course deals with ethical considerations which confront justice practitioners and the legal ramifications of misconduct.

**3800:302 Theory of Criminal Law (3 Credits)**

Prerequisite: 3800:102. Criminal law is built on a number of core issues. This course examines the principles and doctrines that shape and limit criminal liability and punishment.

**3800:305 Policing Administration and Management (3 Credits)**

This course prepares students for promotion through the ranks of policing organizations, covering issues of interest to first-line supervisors and mid-level managers.

**3800:307 Foundations of Crime Analysis (3 Credits)**

Introduction to the profession of crime analysis. Provides an overview of crime analysis techniques.

**3800:325 Information Privacy (3 Credits)**

This course examines the origins, development and scope of individual control over, or government regulation of, personal information.

**3800:386 Courtroom Proceedings and Testimony (3 Credits)**

All criminal justice professionals will appear as a witness at some point in their career. This course examines the courtroom process and how to effectively prepare and present testimony before a judge or jury.

**3800:405 Policing Theory and Strategy (3 Credits)**

Students will use social science theory and methods to evaluate police officers, practices and organizations.

**3800:407 Advanced Crime Analysis (3 Credits)**

Prerequisite: 3800:307. Introduction to advanced concepts and techniques for all major types of crime analysis: tactical, strategic, operations, administrative, intelligence, and investigative.

**3800:457 Crime Analysis Applications (3 Credits)**

Prerequisites: 3800:307 and 3800:407. Students apply theories, strategies, techniques, and methods with the breadth and quality of work expected of crime analysis professionals. Students should complete all technology core requirements for the Bachelor of Science degree in Criminal Intelligence Analysis before attempting this course.

**3800:465 Crisis & Trauma: Assessments & Interventions (3 Credits)**

Introduction to the stressors and emotions of dealing with people in crisis situations. Intervention, assessment and prevention strategies to help people in traumatic situations.

**3800:480 Special Topics in Criminal Justice (1-3 Credits)**

The exact topic for this course will vary each semester. It will cover relevant topics in policing, courts, corrections, or criminology.

**3800:497 Independent Study and Research (1-3 Credits)**

Prerequisite: Permission of Department. This course allows students to explore a topic of interest in criminal justice with the guidance of a faculty member.

## Corrections, Certificate

### Certificate in Corrections (380011C)

**\*Admission to this program has been suspended\***

This certificate introduces the student to a variety of current issues in corrections. This certificate may be earned independent of earning a degree.

**Program Contact**

*Dr. David Licate*

*Professor and Program Coordinator for Criminal Justice Studies*

*330-972-7392*

*licate@uakron.edu*

The following information has official approval of the **Department of Criminal Justice Studies** and **The Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Criminal Justice Studies - Corrections" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		18
Total Hours		18

## Required Courses

Code	Title	Hours
2260:255	Effective Workplace Relationships	3
3800:100	Introduction to Criminal Justice	3
3800:103	Introduction to Corrections	3
3800:270	Community Corrections	3
3800:275	Legal Aspects of Corrections	3
7750:269	Criminal Justice & Addiction	3
Total Hours		18

## Corrections, Minor

### Minor in Corrections (380011M)

**\*Admission to this program has been suspended\***

#### Program Contact

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330-972-7392

licate@uakron.edu

The following information has official approval of the **Department of Criminal Justice Studies** and **The Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Corrections" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		18
Total Hours		18

## Required Courses

Code	Title	Hours
2260:255	Effective Workplace Relationships	3
3800:100	Introduction to Criminal Justice	3
3800:103	Introduction to Corrections	3
3800:270	Community Corrections	3
3800:275	Legal Aspects of Corrections	3
7750:269	Criminal Justice & Addiction	3
Total Hours		18

## Criminal Intelligence Analysis, BS

### Bachelor of Science in Criminal Intelligence Analysis (380002BS)

More on the Criminal Intelligence Analysis major (<https://www.uakron.edu/ccj/criminal-intelligence-analysis/>)

The following information has official approval of **The Department of Criminal Justice Studies** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements

### Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Foundation Requirements		24
Core Requirement		18-21
Technology Core Requirements		24
Internship Requirement		2-9
Additional Credits for Graduation *		18-8
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

<b>Tier I: Academic Foundations</b>	<b>12</b>
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*Quantitative Reasoning: 3 credit hours*

Speaking: 3 credit hours	
Writing: 6 credit hours	
<b>Tier II: Disciplinary Areas</b>	<b>22</b>
Arts/Humanities: 9 credit hours	
Natural Sciences: 7 credit hours	
Social Sciences: 6 credit hours	
<b>Tier III: Tagged Courses</b>	
Select one class from each of the following subcategories:	
Complex Systems	
Critical Thinking	
Domestic Diversity	
Global Diversity	
Review the General Education Requirements page for detailed course listings.	
<b>Total Hours</b>	<b>34</b>

## College of Arts & Sciences Requirement

Code	Title	Hours
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Foundation Requirements

Code	Title	Hours
<b>Part I</b>		
3700:100	Government & Politics in the United States	3
3700:480	Policy Problems in Political Science (varies exp-Policy Prob in Criminal Justice)	3
3800:100	Introduction to Criminal Justice	3
3800:105	Introduction to Police Studies	3
3850:100	Introduction to Sociology	3
3850:330	Criminology	3
3850:433	Sociology of Deviant Behavior	3
<b>Part II</b>		
3700:301 or 3850:301	Introduction to Political Research Methods of Social Research I	3
<b>Total Hours</b>		<b>24</b>

## Core Requirement

Code	Title	Hours
3800:307	Foundations of Crime Analysis	3
3800:405	Policing Theory and Strategy	3
3800:407	Advanced Crime Analysis	3
3800:457	Crime Analysis Applications	3
3850:302	Methods of Social Research II	3
3850:401 or 3700:401	Advanced Topics in Research Methods Advanced Topics in Research Methods	3-6

or 3350:483	Spatial Analysis	
<b>Total Hours</b>		<b>18-21</b>

## Technology Core Requirements

Code	Title	Hours
<b>Computer Information Systems</b>		
2440:105	Introduction to Computers and Application Software	12
2440:121	Introduction of Logic/Programming	
2440:145	Introduction to Unix/Linux	
2440:180	Introduction to Database Management	
<b>Geographic Information Sciences<sup>1</sup></b>		
<b>12</b>		
Select one of the following sequences:		
<b>2985 Sequence</b>		
2985:101	Introduction to Geographic & Land Information Systems	
2985:201	Intermediate Geographic and Land Information Systems	
2985:205	Building Geodatabases	
2985:210	Geographic and Land Information Systems Project	
<b>3350 Sequence</b>		
3350:405	Geographic Information Systems	
3350:407	Advanced Geographic Information Systems	
3350:444	Applications In Cartography & Geographic Information Systems	
3350:445	GIS Database Design	
<b>Total Hours</b>		<b>24</b>

<sup>1</sup> All classes must be taken in same sequence.

## Foreign Culture

Code	Title	Hours
<b>Select at least 6 credits<sup>1</sup></b>		
		<b>6</b>
<b>Total Hours</b>		<b>6</b>

<sup>1</sup> At least six credits of coursework which will introduce the student to a foreign culture. Such courses shall be selected from the department approved list.

## Criminal Justice Studies, AAS

### Associate of Applied Science in Criminal Justice Studies (380016AAS)

More on the Criminal Justice Studies major (<https://www.uakron.edu/ccj/>)

## Program Contact

Stephanie Yuhas, JD  
 Criminal Justice Studies Department  
 330-972-7768  
 syuhas (<https://bulletin.uakron.edu/undergraduate/colleges-programs/arts-sciences/criminal-justice-studies/criminal-justice-studies-aas/syuhas@uakron.edu>)@uakron.edu (nmarion@uakron.edu)

## Program Information

The Criminal Justice Studies Associate of Arts degree provides a core foundation in policing, courts, law, and corrections for students new to the field, as well as for those employed as criminal justice professionals. The program features general education courses and a wide variety of electives allowing students to tailor the degree to a specific career path or interest.

## Career Information

- Police Officer - Additional training is required. See your advisor for more information.
- Court Services Officer - also referred to as bailiffs, court services officers provide police services to the courts. They handle security issues and physical disturbances that take place within the courts.
- Parole Officer - Supervises offenders who have been released from jail or prison. Oversee community service or work responsibilities. Oversee recently-freed inmates.
- Probation Officer - Probation officers supervise offenders who are awaiting trial, or serving a sentence in the community, rather than in jail or prison.
- Private Investigators work in the private sector or in police departments. Additional training and certification may be required.
- Crime Scene Technician
- Crime Intelligence Analyst
- Please visit the Bureau of Labor Statistics for updated information <http://www.bls.gov/>

## Bachelor Degree Options

- Continue your study in the College of Applied Science & Technology to obtain an Emergency Management and Homeland Security Bachelor of Science degree.
- Continue your study in the College of Applied Science & Technology to obtain an Organization Supervision Bachelor degree.
- Transfer to the College of Arts and Sciences to obtain a Political Science/Criminal Justice Bachelor of Science degree.

The following information has official approval of **The Department of Criminal Justice Studies** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	15
	Criminal Justice Core	12
	Introductory Coursework	6
	Criminology and Criminal Justice Electives	24

General Electives	3
<b>Total Hours</b>	<b>60</b>

## General Education Requirements

Code	Title	Hours
	Writing Requirement	6
	Quantitative Reasoning Requirement	3
	Speaking Requirement	3
<i>Complete one area:</i>		3
	Arts or Humanities Requirement	
	Natural Science Requirement	
<b>Total Hours</b>		<b>15</b>

## Criminal Justice Core

Code	Title	Hours
3800:100	Introduction to Criminal Justice	3
3800:102	Principles of Criminal Law	3
3800:103	Introduction to Corrections	3
3800:105	Introduction to Police Studies	3
<b>Total Hours</b>		<b>12</b>

## Introductory Coursework

Code	Title	Hours
3700:100	Government & Politics in the United States	3
3850:100	Introduction to Sociology	3
<b>Total Hours</b>		<b>6</b>

## Criminology and Criminal Justice Electives

Code	Title	Hours
<b>Credits may come from the Departments of Criminal Justice, Political Science, and Sociology</b>		
3700:xxx	Political Science	
3800:xxx	Criminal Justice	
3850:xxx	Sociology	

## General Electives

Code	Title	Hours
<b>Seminars and Workshops do not apply to this requirement</b>		
xxxx:xxx		3
<b>Total Hours</b>		<b>3</b>

## Criminology & Criminal Justice, BS Bachelor of Science in Criminology & Criminal Justice (38001BS)

More on the Criminology & Criminal Justice major (<https://www.uakron.edu/ccj/criminology-and-criminal-justice/>)

The criminology and criminal justice program prepares students for careers in policing, courts, corrections, and criminology at any level of government or in the private sector. This program is also appropriate for

students who desire to pursue graduate or law school. Students will take a broad core of criminal justice courses, and then select courses from concentrations in policing, courts, corrections, or criminology. Students have a number of electives to tailor their degrees to particular career paths of interest.

The following information has official approval of **The Department of Criminal Justice Studies** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Core Requirement	18
	Foundation Requirements	17-27
	Foreign Culture	6
	Concentration Requirement	18
	Additional Credits for Graduation *	27-17
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	
	<i>Social Sciences: 6 credit hours</i>	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
	Complex Systems	
	Critical Thinking	
	Domestic Diversity	
	Global Diversity	

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## College of Arts & Sciences Requirement

Code	Title	Hours
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**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Core Requirement

Code	Title	Hours
3700:100	Government & Politics in the United States	3
3800:100	Introduction to Criminal Justice	3
3800:102	Principles of Criminal Law	3
3800:103	Introduction to Corrections	3
3800:105	Introduction to Police Studies	3
3850:100	Introduction to Sociology	3
<b>Total Hours</b>		<b>18</b>

## Foundation Requirements

Code	Title	Hours
<b>Part I</b>		
3700:301	Introduction to Political Research	3
or 3850:301	Methods of Social Research I	
<b>Part II</b>		
3700:361	Politics of the Criminal Justice System	3
3700:395	Internship in Government & Politics <sup>1</sup>	3-9
3850:320	Social Inequalities	3
3850:330	Criminology	3
<b>Part III</b>		
3700:401	Advanced Topics in Research Methods	3-6
or 3700:480	Policy Problems in Political Science	
or 3850:302	Methods of Social Research II	
or 3850:401	Advanced Topics in Research Methods	
<b>Total Hours</b>		<b>18-27</b>

<sup>1</sup> Minimum Internship requirement is three credit hours.

## Foreign Culture

Code	Title	Hours
<b>Foreign Culture <sup>1</sup></b>		<b>6</b>
Select at least six credits		
<b>Total Hours</b>		<b>6</b>

<sup>1</sup> At least six credits of coursework which will introduce the student to a foreign culture. Such courses shall be selected from the department approved list.

## Concentration Requirement

Code	Title	Hours
<b>Select one of the following concentration areas:</b>		<b>18</b>
<b>Policing Concentration</b>		
3800:305	Policing Administration and Management	
3800:307	Foundations of Crime Analysis	
3800:405	Policing Theory and Strategy	
<i>Select three of the following elective courses:</i>		
3700:334	Law, Mediation, and Violence	
3700:370	Public Administration: Concepts & Practices	
3700:481	The Challenges of Police Work	
3800:407	Advanced Crime Analysis	
3800:457	Crime Analysis Applications	
3800:465	Crisis & Trauma: Assessments & Interventions	
<b>Courts and Law Concentration</b>		
3700:335	Law & Society	
or 3850:441	Sociology of Law	
3700:360	The Judicial Process	
3800:302	Theory of Criminal Law	
<i>Select three of the following elective courses:</i>		
3700:334	Law, Mediation, and Violence	
3700:339	Terrorism and the Constitution	
3700:370	Public Administration: Concepts & Practices	
3700:461	The Supreme Court & Constitutional Law	
3700:462	The Supreme Court & Civil Liberties	
3700:483	Constitutional Problems in Criminal Justice	
3800:286	Courtroom Communication	
3850:428	Victim in Society	
<b>Corrections Concentration</b>		
3700:450	Administering Prisons, Probation, and Parole	
or 3850:431	Theories and Practices of Correctional Systems	
3850:350	Drugs in Society	
3850:430	Juvenile Delinquency	
<i>Select four of the following elective courses:</i>		
3700:363	Crime, Punishment, Politics: A Comparative Perspective	
3700:370	Public Administration: Concepts & Practices	
3800:465	Crisis & Trauma: Assessments & Interventions	
3850:415	Women in Prison	
3850:433	Sociology of Deviant Behavior	
3850:450	Sociology of Mental Health and Well-Being	
3850:455	Family Violence	
7750:401	Social Work Practice I	
7750:405	Practice I Skills Lab	
<b>Criminology Concentration</b>		
3700:335	Law & Society	
or 3850:441	Sociology of Law	
3850:433	Sociology of Deviant Behavior	
<i>Select four of the following elective courses:</i>		
3850:350	Drugs in Society	
3850:415	Women in Prison	
3850:416	Women and Crime	

3850:428	Victim in Society	
3850:430	Juvenile Delinquency	
3850:431	Theories and Practices of Correctional Systems	
3850:455	Family Violence	
Total Hours		18

## Forensic Psychology, Minor Minor in Forensic Psychology (380021M)

The Forensic Psychology Minor provides an educational foundation in the application of psychological theory and methods in criminal justice.

### Program Contact

Stephanie Yuhas, JD  
Criminal Justice Studies Department  
330-972-7768  
syuhas@uakron.edu (nmarion@uakron.edu)

The following information has official approval of the **Department of Criminal Justice Studies** and **The Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Forensic Psychology" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minor in Forensic Psychology may only be awarded at the time a student receives a baccalaureate degree. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		20
Electives		4
Total Hours		24

## Required Courses

Code	Title	Hours
3750:100	Introduction to Psychology	3
3750:110	Quantitative Methods in Psychology	4
3750:410	Psychological Tests & Measurements	4
3800:100	Introduction to Criminal Justice	3
3800:286	Courtroom Communication	3
3800:287	The Legal System and Psychology	3
Total Hours		20

## Electives

Code	Title	Hours
<b>Select one of the following:</b>		<b>4</b>
3750:320	Biopsychology	
3750:420	Abnormal Psychology	



3750:430	Psychological Disorders of Children	
Total Hours		4

xxxx:xxx	Select one approved elective in an area of specialization (e.g., Forensic Accounting, Forensic Nursing, etc.)	3
Total Hours		21

## Forensic Studies, Minor

### Minor in Forensic Studies (380020M)

**\*Admission to this program has been suspended\***

The Forensic Studies Minor is designed for individuals interested in the application of scientific methods to the criminal legal process. The minor provides the student with a foundation in physical and digital forensic methods, the investigative process, professional communication, the law of evidence, and the opportunity to explore a forensics discipline of their own choosing. The minor is appropriate for students majoring in a degree in any of the disciplines that currently have a forensic specialization such as chemistry, biology, nursing, computer science, or accounting. Individuals working in the legal and investigative fields that seek to enhance their scientific reasoning skills and beginners with a general interest in the subject area are welcome.

#### Program Contact

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 330-972-7768  
 syuhas@uakron.edu (nmarion@uakron.edu)

The following information has official approval of the **Department of Criminal Justice Studies** and **The Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Forensic Studies" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Prerequisite for the computer courses is 2440:105 Introduction to Computers and Application Software or a placement test. A minor in Forensic Studies may only be awarded at the time a student receives a baccalaureate degree. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

### Summary

Code	Title	Hours
Required Courses		21
Total Hours		21

### Required Courses

Code	Title	Hours
2235:281	Computer Forensic Methods	3
3800:100	Introduction to Criminal Justice	3
3800:104	Evidence & Criminal Legal Process	3
3800:251	Criminal Investigation	3
3800:253	Basic Forensic Methods	3
3800:286	Courtroom Communication	3

## Forensic Study of Behaviors, Certificate

### Certificate in Forensic Study of Behaviors (380022C)

**\*Admission to this program has been suspended\***

This certificate program is intended for individuals who wish to enhance their knowledge of behavioral sciences in criminal justice settings. This certificate is independent of a degree and is designed for individuals in one of the following categories:

1. Criminal justice majors who wish to specialize in the study of behaviors within the criminal justice field
2. Non-criminal justice majors who want an introduction to the discipline of criminal justice
3. Professionals employed in the field who would like to further develop their expertise in this area

#### Program Contact

Stephanie Yuhas, JD  
 Criminal Justice Studies Department  
 330-972-7768  
 syuhas@uakron.edu (nmarion@uakron.edu)

The following information has official approval of the **Department of Criminal Justice Studies** and **The Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Forensic Study of Behaviors" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

### Summary

Code	Title	Hours
Required Courses		18
Total Hours		18

### Required Courses

Code	Title	Hours
3800:100	Introduction to Criminal Justice	3
3800:224	Profiling Serial Killers	3
3800:226	Interviews, Interrogations, and Hostage Negotiations	3
3800:255	Introduction to Forensic Investigation	3
3800:260		3
3850:428	Victim in Society	3
Total Hours		18

## Law Enforcement, Minor

### Minor in Law Enforcement (380016M)

**\*Admission to this program has been suspended\***

#### Program Contact

*Dr. David Licate*

*Professor*

330-972-7392

licate@uakron.edu

The following information has official approval of the **Department of Criminal Justice Studies** and **The Buchtel College of Arts and Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a “Minor in Criminal Justice Technology-Law Enforcement” and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student’s record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		18
Total Hours		18

## Required Courses

Code	Title	Hours
3800:100	Introduction to Criminal Justice	3
3800:102	Principles of Criminal Law	3
3800:104	Evidence & Criminal Legal Process	3
3800:105	Introduction to Police Studies	3
3800:251	Criminal Investigation	3
3800:260		3
Total Hours		18

## Dance, Theatre, and Arts Administration

### Dance

The University of Akron can help you choose the undergraduate dance degree program that best supports your academic, personal and career goals. Both degree programs prepare students for performing, graduate studies in dance, fields related to dance such as arts administration, dance history, physical therapy, dance therapy, dance education, or dance ethnology, as well as teaching in private studios. Students in the Dance Program enjoy exceptional opportunities to study, perform, and collaborate with regionally, nationally, and internationally renowned professionals. The University of Akron Dance Program has been accredited by the National Association of Schools of Dance since 1986. Whatever your goals in dance are, The University of Akron Dance Program can help you develop the necessary skills.

### Theatre Arts

The University of Akron Theatre Arts degree puts today’s student on the forefront of creating opportunities for theatre to stimulate change and improve the quality of life in our community - hands on. At UA, theatre education is not limited to the production of plays, but rather becomes a set of tools that allows the student to enter into collaborative, experiential partnerships which may involve advocacy, story-sharing, civic application and cross-sector innovation. UA Theatre Arts strives to integrate ensemble artistic practice with interdisciplinary, community-based research; innovation with tradition; and the global with the grassroots.

### Arts Administration

The University of Akron Arts Administration Graduate Program is designed to prepare students for successful careers in all disciplines of the non-profit arts. The strength of the program lies in a commitment to balancing theoretical study in the classroom with an application through practical experiences and internships. The M.A. in Arts Administration is awarded after the successful completion of the graduate course work, the completion of a professional internship experience, and the acceptance of a thesis/project. The curriculum provides students with a philosophical base for decision-making and planning, as well as a comprehensive range of techniques for working effectively in the field.

### Dance, Theatre, and Arts Administration Facilities

Our Center for Dance and Theatre at Guzzetta Hall is world class. It features seven technology-enhanced dance studios, including an alternative/experimental performance venue; a design and lighting studio; scene and costume shops; trainer and physiotherapy facilities; locker rooms; and technology-enhanced classrooms.

Additional information about the school, its faculty, and programs can be accessed at <https://uakron.edu/dtaa/>

#### Program Contact

*Marc Reed, DMA*

*Director, School of Dance, Theatre, and Arts Administration*

*Director, School of Music*

330-972-5761

marcreed@uakron.edu (marcreed@uakron.edu)

- Dance with Business Cognate, BA (p. 118)
- Dance, BFA (p. 119)
- Dance, Minor (p. 121)
- Theatre Arts, Applied Theatre & Business Entrepreneurship, BAT (p. 122)
- Theatre Arts, BA (p. 123)
- Theatre Arts, BAT (p. 125)
- Theatre Arts, Minor (p. 126)
- Theatre Arts, Physical Theatre, BAT (p. 127)
- Theatre Arts, Theatre & Film Studies, BAT (p. 128)
- Theatre, Applied Theatre & Social Entrepreneurship, BAT (p. 129)

## Dance (7900)

### 7900:101 Dance Somatics: Yoga (1 Credit)

Prerequisite: 7900:120 or 7900:125, or higher levels of ballet or modern dance technique. Exploration of alternative movement disciplines aimed at increasing body-mind awareness and dancer health. Must be taken by dance majors in first two years of study.

### 7900:102 Dance Somatics: Pilates (1 Credit)

Prerequisite: 7900:219 or 7900:224, or higher levels of ballet or modern dance technique. Exploration of alternative movement disciplines aimed at increasing body-mind awareness and dancer health. Must be taken by dance majors in first two years of study.

### 7900:103 Orientation for Dance (0 Credits)

Orientation to the dance program and field. Must be taken by all dance majors in their first semester of study. Dance Orientation is a degree requirement and is offered on a credit/noncredit basis.

### 7900:104 Dance Somatics: Gyrokinesis (1 Credit)

Prerequisite: 7900:120 or 7900:125, or higher levels of ballet or modern dance technique. Exploration of alternative movement disciplines aimed at increasing body-mind awareness and dancer health. Must be taken by dance majors in first two years of study.

### 7900:105 Dance Somatics: Alexander Technique (1 Credit)

Prerequisite: 7900:120 or 7900:125, or higher levels of ballet or modern dance technique. Exploration of alternative movement disciplines aimed at increasing body-mind awareness and dancer health. Must be taken by dance majors in first two years of study.

### 7900:111 Topics in World Dance (1 Credit)

May be repeated for a total of six credits. Prerequisite: 7900:120 or 7900:125, or higher levels of ballet or modern dance technique. Exploration of various dance genres from world and historical traditions.

### 7900:115 Dance As An Art Form (2 Credits)

Survey of dance for novice observer: aesthetics, philosophies, methods of training. Lecture and discussion of readings, viewing of film, videotape and live performances.

### 7900:116 Physical Analysis for Dance I (2 Credits)

Prerequisites: 3100:200, 3100:201; 7760:133. Required for all dance majors. Recommended to be taken in the first two years. Lecture/laboratory. Skeletal and muscular analysis for dance technique.

### 7900:117 Physical Analysis for Dnce II (2 Credits)

Prerequisite: 7900:116. Support systems, conditioning injury prevention, rehabilitation, nutrition for dancers.

### 7900:119 Modern I (2 Credits)

(May be repeated for a total of four credits) Exploring the basic principles of modern dance with an emphasis on body alignment and muscular awareness.

### 7900:120 Modern II (2 Credits)

Prerequisite: permission or grade of B or better for one semester in 7900:119. (May be repeated for a total of four credits) Continuation of 119. Increasing movement vocabulary, muscular strength and coordination of modern dance.

### 7900:122 Ballet V (4 Credits)

(May be repeated for a total of 16 credits) Prerequisite: permission or a grade of B+ or better for one semester in 7900:225. Theory, vocabulary, structure, placement. Concurrent enrollment in pointe class recommended.

### 7900:124 Ballet I (2 Credits)

(May be repeated for a total of four credits) Emphasis on body placement, muscular awareness.

### 7900:125 Ballet II (2 Credits)

Prerequisite: permission or grade of B or better for one semester of 7900:124. (May be repeated for a total of four credits) Continuation of 124. Basic exercises of classical ballet.

### 7900:130 Jazz Dance I (2 Credits)

(May be repeated for a total of four credits.) Basic jazz dance technique and jazz dance origins.

### 7900:141 Pointe I (2 Credits)

(May be repeated for a total of eight credits) Prerequisite: permission or 7900:122 or above. Corequisite: 7900:122 or above. Reinforcement of selection principles for pointe shoes, proper holding of foot muscularly and control of heel while ascending and descending from pointe.

### 7900:144 Tap Dance I (2 Credits)

(May be repeated for a total of four credits.) Basic tap dance technique and terminology.

### 7900:145 Tap Dance II (2 Credits)

(May be repeated for a total of four credits.) Prerequisite: permission or a grade of B or better for one semester in 7900:144. Refinement of tap technique and stylistic range of tap dance.

### 7900:150 Ballroom Dance I (1 Credit)

(May be repeated for a total of four credits.) Introduction to the basic patterns and techniques of major ballroom dances.

### 7900:200 Viewing Dance (3 Credits)

To explore dance as an art form through experiential activities, dance literature, film and live performance for non-dance majors.

Gen Ed: Tier 2 - Arts

### 7900:219 Modern III (2 Credits)

(May be repeated for a total of 4 credits.) Prerequisite: permission or a grade of B or better for one semester in 7900:120. Continuation of 120. Introduction to current modern dance styles and technique.

### 7900:220 Modern IV (2 Credits)

(May be repeated for a total of 4 credits.) Prerequisite: permission or a grade of B or better for one semester in 7900:219. Continuation of 219. Application of basic modern dance theory of current modern dance styles and techniques.

### 7900:222 Ballet VI (4 Credits)

(May be repeated for a total of 16 credits) Prerequisite: permission or a grade of B+ or better for one semester in 7900:122. Continuation of 122, expanding theory on vocabulary, structure, placement. Concurrent enrollment in pointe class recommended.

### 7900:224 Ballet III (3 Credits)

(May be repeated for a total of 6 credits.) Prerequisite: permission or a grade of B or better for one semester in 7900:125. Continuation of 125. Emphasis on barre and developing strength.

### 7900:225 Ballet IV (3 Credits)

Prerequisite: Permission or grade of B or better for one semester in 7900:224. Continuation of 224. Emphasis on the increase of strength and flexibility. (May be repeated for a total of twelve credits)

### 7900:228 Modern V (3 Credits)

(May be repeated for a total of 6 credits.) Prerequisite: Permission or a grade of B or better for one semester in 7900:220. The intermediate study of modern dance styles and technique through the application of more complex movement theories, rhythmic patterns, and improvisational studies.

**7900:229 Modern VI (3 Credits)**

(May be repeated for a total of 6 credits.) Prerequisite: permission or a grade of B or better for one semester in 7920:228. Introduction to intermediate theory of current modern dance styles and techniques.

**7900:230 Jazz Dance II (2 Credits)**

(May be repeated for a total of 4 credits.) Prerequisite: permission or a grade of B or better in 7900:130. Continuation of basic jazz technique and stylistic range of jazz dance.

**7900:241 Pointe II (2 Credits)**

(May be repeated for a total of 12 credits) Prerequisite: permission or a grade of B or better for one semester in 7900:141. Corequisite: 7900:222 or above. Continuation of 141. Continued development of strength, coordination and endurance of holding foot muscularly. Further development and emphasis on principles of weight transfer.

**7900:246 Tap Dance III (2 Credits)**

(May be repeated for a total of 4 credits.) Prerequisite: permission or a grade of B or better for one semester in 7900:145. Advancement of tap dance technique through the use of complex combinations, syncopation, routines, and styles.

**7900:274 Digital Technology for Dance (3 Credits)**

Hands-on exploration of theories and methods used in electronic development of promotional and creative materials. Activities include still and motion image capture, editing, and distribution.

**7900:316 Choreography I (2 Credits)**

Prerequisite: Permission or 7900:220 or above. Theoretical and practical introduction to principles of choreography: space, time, energy.

**7900:317 Choreography II (2 Credits)**

Prerequisite: 7900:316 or permission. Continuation of 316. Emphasis on musical choices and finding movement specific to the individual choreographer.

**7900:320 Movement Fundamentals (2 Credits)**

Beginning study of Labanotation method of recording movement, and Laban's theories of effort, space, and shape.

**7900:321 Rhythmic Analysis - Dance (2 Credits)**

Prerequisites: 32 credits and 7900:120 or 7900:125, or higher levels of ballet or modern dance technique, or permission. Lecture and application of basic rhythmic structures used in dance and dance instruction.

**7900:322 Ballet VII (4 Credits)**

(May be repeated for a total of 24 credits.) Prerequisite: Permission or a grade of B+ or better for one semester in 7900:222 Ballet VI. Continuation of 222. Emphasis on technique, style, line. Concurrent enrollment in point class is recommended.

**7900:328 Modern VII (3 Credits)**

(May be repeated for a total of 12 credits.) Prerequisite: permission or a grade of B or better in 7900:229. Refinement and stylization of modern techniques for performance of modern dance.

**7900:329 Modern VIII (3 Credits)**

(May be repeated for a total of 12 credits.) Prerequisite: permission or a grade of B or better in 7920:328 Modern VII. Application of advanced modern dance techniques and styles.

**7900:333 Partnering (2 Credits)**

Prerequisite: [7900:122 or 7900:222 or 7900:322 or 7900:422] and [7900:228 or 7900:299 or 7900:328 or 7900:329] or permission. An exploration of the fundamentals of dance partnering: weight sharing, centering, safety via contact improvisation.

**7900:334 Pas De Deux I (2 Credits)**

(May be repeated for a total of eight credits) Prerequisites: Permission; concurrent enrollment in a pointe class recommended. Provides student with the beginning understanding and practice of pas de deux.

**7900:347 Tap Dance IV (2 Credits)**

(May be repeated for a total of 8 credits.) Prerequisite: Permission or a grade of B or better for one semester in 7920:246. Advanced tap combinations, styles, routines.

**7900:351 Jazz Dance III (2 Credits)**

(May be repeated for a total of 4 credits.) Prerequisite: permission or a grade of B or better for one semester in 7900:230. Intermediate jazz dance technique and the jazz eras.

**7900:361 Learning Theory for Dance (2 Credits)**

Prerequisites: 7900:115, 7900:224 (or higher levels of ballet technique); 3750:100 or 5100:220; or permission of instructor. Theories of learning and their use in teaching dance.

**7900:362 Instructional Strategies for Dance (2 Credits)**

Prerequisite: 7900:361. Practical work and development of teaching skills in dance for public and private settings.

**7900:403 Special Topics in Dance (1-4 Credits)**

(May be repeated. No more than 10 credits may be applied toward the B.F.A. or B.A.) Prerequisite: Permission. Traditional and nontraditional topics in dance.

**7900:416 Choreography III (2 Credits)**

Prerequisite: 7900:317 or permission. Continuation of 317. Emphasis on form and choreographic analysis.

**7900:417 Choreography IV (2 Credits)**

Prerequisite: 7900:416 or permission. Continuation of 416. Expanding into group choreography and longer works.

**7900:422 Ballet VIII (4 Credits)**

(May be repeated for a total of 32 credits.) Prerequisite: permission or a grade of B+ or better for one semester in 7900:322. Continuation of 322. Advanced level of technique. Concurrent enrollment in pointe class recommended.

**7900:432 History of Ballet (2 Credits)**

Prerequisite: 7900:115 or 7900:200 or permission. Development of ballet beginning with its origins in French Courts through the Romantic and Diaghilev Eras to current times.

**7900:433 Dance History: 20th Century (2 Credits)**

Prerequisite: 7900:115 or 7900:200 or permission. Development of modern dance as an art form and the further evolution of ballet and concert dance.

**7900:445 Dance Philosophy and Criticism (3 Credits)**

Prerequisites: 3400:210 or 3400:221, 3600:101, 7900:115 and 7900:432 or 7900:433. Review of historical dance philosophies, performance, attributes, choreographic and theatrical elements of dance and criticism.

**7900:451 Jazz Dance IV (2 Credits)**

(May be repeated for a total of eight credits.) Prerequisite: permission or a grade of B or better for one semester in 7920:351. Advanced jazz dance technique and styles for the professional dancer.

**7900:461 Seminar & Field Experience in Dance Education (2 Credits)**

Prerequisite: 7900:362. Corequisite: 7910:108. Supervised observation and teaching experience in dance education in the field.

**7900:462 Professional Issues in Dance Education (2 Credits)**

Prerequisite: 7900:461. An examination of current issues and goals in dance education. Concurrent enrollment in 7910:108 Choreographers' Workshop.

**7900:471 Senior Seminar (1 Credit)**

Prerequisite: 7900:274; senior standing or permission. A forum to develop professional skills to make the transition to a dance career: artistic, academic, or business.

**7900:490 Workshop in Dance (1-3 Credits)**

(May be repeated for a total of eight credits) Prerequisite: Permission. Group study/projects investigating a particular field of dance not covered by other courses.

**7900:497 Independent Study in Dance (1-3 Credits)**

(May be repeated for a total of four credits) Prerequisite: Permission and prearrangement with instructor. Individual creative project, research or readings in dance with faculty advisor.

**7900:498 Honors Research Project in Dance (1-3 Credits)**

May be repeated for a total of six credits. Prerequisite: Approval of department preceptor. Creative project or research supervised by dance preceptor.

## Theatre (7800)

**7800:100 Experiencing Theatre (3 Credits)**

Experience the theatre as a live, dynamic art form through an exposure to and participation in University productions.

**Gen Ed:** Tier 2 - Arts

**7800:103 Theatre Orientation (0 Credits)**

Orientation to the information and strategies necessary to aid new theatre students in their understanding of the field of theatre.

**7800:108 Introduction to the Visual Arts of World Theatre (3 Credits)**

Introduction to the theories and styles of scenic, costume, and lighting design from around the world, including the application of these principles to various media.

**7800:145 Ensemble Theatre Lab (3 Credits)**

An introduction to the techniques of collaborative creation and physical theatre especially space awareness, movement training, and storytelling.

**7800:151 Vocal Dynamics (3 Credits)**

This course is concerned with the various techniques and principles of vocal production in their practical application providing a structure to discover your vocal potential.

**7800:172 Acting I (3 Credits)**

Introductory fundamentals of acting through the investigation of the body as an instrument for the stage, improvisation and basic scene study.

**7800:264 Playscript & Performance Analysis (3 Credits)**

An introduction to various methods of how to read and analyze a play script for theatre production, utilizing theories and tools from Aristotle to today.

**Gen Ed:** Tier 2 - Arts

**7800:265 Basic Stagecraft (3 Credits)**

Basic stagecraft including equipment, construction and handling of two-dimensional scenery and theatrical hardware. Laboratory required.

**7800:274 Digital Technology for Theatre (3 Credits)**

Hands-on exploration of theories and methods used in electronic development of promotional and creative materials. Activities include still and motion image capture, editing and distribution.

**7800:301 Introduction to Theatre Through Film (3 Credits)**

Prerequisite: 3400:210 or 3400:221. A study of the Theatre with emphasis on its cultural and social influences on our society. Does not meet the Humanities requirement for Theatre majors.

**7800:306 Costume Design for the Performing Arts and Media (3 Credits)**

Prerequisites: 7800:108. Costume design and construction techniques, organization and maintenance of wardrobe for stage performance and other types of production. Lab required.

**7800:335 History of Theatre and Dramatic Literature: Origins through 18th Century (3 Credits)**

The history and theory of dramatic literature and theatre practices from their origins through the 18th Century, including select non-western theatre traditions.

**Gen Ed:** Tier 3 - Global Diversity

**7800:336 Scenic Design for Performing Arts & Media (3 Credits)**

Prerequisites: 7800:108. The theory, principles, and practice of scene design for the theatre and other media. Lab required.

**7800:351 Advanced Ensemble Theatre Lab (3 Credits)**

Prerequisites: 7800:145. Advanced training in the techniques and principles of collaborative creation and physical theatre leading toward performance of a devised solo and/or group performance.

**7800:355 Lighting Design and Technology (3 Credits)**

Prerequisites: 7800:108 The art and technique of lighting design for the stage and other media: light plotting, color theory, and special effects. Lab required.

**7800:370 Directing I (3 Credits)**

Prerequisites: 7800:100, 7800:172, and 7800:264. Emphasizes fundamentals of play directing, including responsibilities of director, stage nomenclature, play selection, analysis, and rehearsal techniques.

**7800:373 Acting II (3 Credits)**

Prerequisite: 7800:172. Continuation of 7800:172. Further emphasis on the psychology of the actor and development of performing techniques through scene study.

**7800:374 Acting III (3 Credits)**

Prerequisite: 7800:373. Further in-depth actor training with emphasis on the language and interpretation of classic plays including Shakespeare.

**7800:403 Special Topics: Theatre Arts (1-3 Credits)**

Prerequisite: Permission. Traditional and nontraditional topics in theatre arts. (May be repeated, only 3 credits may apply to Theatre major and on 9 credits toward B.A degree).

**7800:433 Theatre Organization & Production Management (3 Credits)**

Study of successful methods of theatre organization and production stage management of professional and non-professional performing arts operations.

**7800:435 History of Theatre and Dramatic Literature: 1800 to Present (3 Credits)**

The history and theory of dramatic literature and theatre practices from the nineteenth century through the present, including select non-western theatre traditions.

**Gen Ed:** Tier 3 - Global Diversity

**7800:436 Styles of Scenic Design for the Performing Arts and Media (3 Credits)**

Prerequisite: 7800:336. Theatrical and practical exploration of the styles and periods of production design and designers for stage and media. Lab required.

**7800:455 Creating Performance (3 Credits)**

(May be repeated for a total of six credits.) This course introduces devising processes, improvisation, ensemble work, and physical theatre techniques appropriate to the preparation of practical performance projects from sources other than a conventional play.

**7800:461 Directing II (3 Credits)**

Prerequisite: 7800:370. Emphasizes fundamentals of play directing, including responsibilities of director, stage nomenclature, play selection, analysis, and rehearsal techniques.

**7800:467 Multi-Cultural Theatre (3 Credits)**

A detailed examination of contemporary performances, performance texts, and theoretical writings that reference the history and experience of diverse communities of America and the world.

**Gen Ed:** Tier 3 - Domestic Diversity

**7800:471 Senior Seminar (1 Credit)**

Prerequisites: 7800:274, upper class standing, and permission from the theatre advisor. A forum to develop professional skills to make the transition to a theatre career: artistic, academic, business and professional.

**7800:476 Theatre and Community Action (3 Credits)**

This course will explore civic engagement strategies and situations linking theatre and community in which students tackle community issues and concerns utilizing various performative techniques.

**7800:480 Independent Study: Theatre (1-3 Credits)**

Practice, study, and/or research in selected elements of theatre arts and production including preparation and presentation of creative and technological projects..

**7800:490 Workshop in Theatre Arts (1-3 Credits)**

(May be repeated for a total of 6 credits) Prerequisite: advanced standing or permission. Group study or group projects investigating particular phases of theatre arts not covered by other courses in curriculum.

**7800:495 Honors Research Project in Theatre (1-3 Credits)**

Prerequisite: Approval of department preceptor. Creative project or research supervised by theatre preceptor.

## Dance with Business Cognate, BA

### Bachelor of Arts in Dance with Business Cognate (C90002BA)

More on the Dance with Business Cognate major (<https://www.uakron.edu/dtaa/dance/degree-programs.dot>)

This BA degree is designed to offer students a broad learning experience in dance, including ballet, modern, tap, and jazz, supplemented by business studies. Core coursework includes choreography, dance history, pedagogy, and physical analysis. This program prepares students for dance studio management, graduate studies in the fields related to dance such as arts administration, dance history, physical therapy, dance therapy, or dance ethnology, as well as teaching in private studios.

Placement into the dance program for the first year of study as a probationary dance major is by audition only. Promotion in levels of dance techniques is by receipt of a "B+" grade or better for one semester for advancement from Ballet IV to V to VI to VII to VIII respectively, and by receipt of a "B" grade or better for one semester in all other technique classes.

To be admitted to the BA program in Dance in the School of Dance, Theatre and Arts Administration, students must complete one year of

study as a probationary dance major, demonstrate acceptable work habits, pass the Freshman Jury and Interview and maintain a 2.785 GPA in all dance classes. All students are required to be enrolled in a dance technique class each semester until they satisfy their technique requirements. Completion of two semesters of Ballet V is required for the BA in Dance Studies with a Business Cognate.

The following information has official approval of **The School of Dance, Theatre, and Arts Administration** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Business Cognate	9
	Ballet Technique	14
	Modern Technique	9
	Jazz and Tap	8
	Somatic, World Dance, and Other	7
	Dance Lecture Courses	27
	Dance Organizations	5
	Additional Credits for Graduation *	8
	<b>Total Hours</b>	<b>121</b>

\* This major requires a minimum of 121 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	

*Social Sciences: 6 credit hours*

3750:100 Introduction to Psychology

**Tier III: Tagged Courses***Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

**College of Arts & Sciences Requirement**

Code Title Hours

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

**Business Cognate**

Code Title Hours

**Select nine credits of the following business minors: 9**

Entrepreneurship

Business Administration for Non-Business Majors

Pre-MBA for Non-Business Majors

Sales Management

Consumer Marketing

Total Hours 9

**Ballet Technique (Ballet III-V)**

Code Title Hours

**Select 14 credits with two semesters of Ballet V 14**

7900:xxx Ballet

7900:122 Ballet V

7900:122 Ballet V

Total Hours 14

**Modern Technique (Modern III-V)**

Code Title Hours

**Select nine credits with one semester of Modern V 9**

79xx:xxx Modern

7900:228 Modern V

Total Hours 9

**Jazz and Tap**

Code Title Hours

7900:130 Jazz Dance I 2

7900:144 Tap Dance I 2

7900:145 Tap Dance II 2

7900:230 Jazz Dance II 2

Total Hours 8

**Somatics, World Dance, and Other**

Code Title Hours

7900:xxx Dance Somatics 1

7900:xxx Dance Somatics 1

7900:111 Topics in World Dance 1

7900:111 Topics in World Dance 1

7900:150 Ballroom Dance I 1

7900:333 Partnering 2

Total Hours 7

**Dance Lecture Courses**

Code Title Hours

7900:103 Orientation for Dance 0

7900:115 Dance As An Art Form 2

7900:116 Physical Analysis for Dance I 2

7900:117 Physical Analysis for Dnce II 2

7900:274 Digital Technology for Dance 3

7900:316 Choreography I 2

7900:317 Choreography II 2

7900:320 Movement Fundamentals 2

or 7900:321 Rhythmic Analysis - Dance 2

7900:361 Learning Theory for Dance 2

7900:362 Instructional Strategies for Dance 2

7900:432 History of Ballet 2

7900:433 Dance History: 20th Century 2

7900:445 Dance Philosophy and Criticism 3

7900:471 Senior Seminar 1

7910:201 Freshman Jury and Interview 0

Total Hours 27

**Dance Organizations**

Code Title Hours

**Select a minimum of five credits of the following: 5**

7910:111 Touring Ensemble (two semesters)

7910:112 Dance Production Ensemble

7910:xxx

Total Hours 5

**Dance, BFA****Bachelor of Fine Arts in Dance (C90000BFA)**More on the Dance major (<https://www.uakron.edu/dtaa/dance/degree-programs.dot>)

The BFA dance major is designed for the student who wishes to pursue professional training in dance through an emphasis in ballet and modern dance techniques. This program offers extensive training in technical, performing and choreographic skills and is supported by a core of coursework in dance history, pedagogy, and physical analysis. The BFA in

Dance prepares students for performing, graduate studies in performance and choreography, fields related to dance such as arts administration, dance history, physical therapy, dance therapy, dance education, or dance ethnology, as well as teaching in private studios.

Placement into the dance program for the first year of study as a probationary dance major is by audition only. Promotion in levels of dance techniques is by receipt of a "B+" grade or better for one semester for advancement from Ballet IV to V to VI to VII to VIII respectively, and by receipt of a "B" grade or better for one semester in all other technique classes.

To be admitted to the BFA degree program in Dance in the School of Dance, Theatre, and Arts Administration, students must work for one year of study as a probationary dance major, demonstrate acceptable work habits, pass the Freshman Jury and Interview to gain admittance to the college and status as a BA in Dance major in preparation for auditioning for the BFA program at the end of the sophomore year. BFA students must maintain a 2.875 GPA in all dance classes for a total of two years and may be placed on artistic probation if they demonstrate less acceptable work habits. Full status must be regained to graduate. To graduate with the BFA in Dance, students must complete one full year of Ballet VIII with a minimum of "B" and be enrolled in a ballet technique class each semester until they satisfy their technique requirements and maintain an overall 2.875 GPA in all dance classes.

The following information has official approval of **The School of Dance, Theatre, and Arts Administration** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Ballet Technique	28
	Modern Technique	12
	Jazz and Tap	2
	Somatic, World Dance, and Other	6
	Dance Lecture Courses	31
	Dance Organizations	5
	Additional Major Electives *	8
	<b>Total Hours</b>	<b>126</b>

\* This major requires a minimum of 126 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
3750:100	Introduction to Psychology	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
<b>Total Hours</b>		<b>34</b>

## College of Arts & Sciences Requirement

Code	Title	Hours
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Ballet Technique

Code	Title	Hours
<b>Select 28 credits with two semesters of Ballet VIII</b>		<b>28</b>
7900:xxx	Ballet	
7900:422	Ballet VIII <sup>1</sup>	
7900:422	Ballet VIII <sup>1</sup>	
<b>Total Hours</b>		<b>28</b>

<sup>1</sup> A grade of B or better must be earned.



## Modern Technique

Code	Title	Hours
7900:228	Modern V	3
7900:229	Modern VI	3
7900:328	Modern VII	3
7900:329	Modern VIII	3
Total Hours		12

## Jazz and Tap

Code	Title	Hours
<b>Choose one of the following for two credits:</b>		
7900:xxx	Jazz I-IV	2
-or-		
7900:xxx	Tap I-IV	2
Total Hours		2

## Somatics, World Dance, and Other

Code	Title	Hours
7900:101	Dance Somatics: Yoga	1
or 7900:102	Dance Somatics: Pilates	
or 7900:104	Dance Somatics: Gyrokinesis	
7900:111	Topics in World Dance	1
7900:141	Pointe I	2
or 7900:241	Pointe II	
or 7900:334	Pas De Deux I	
7900:333	Partnering	2
Total Hours		6

## Dance Lecture Courses

Code	Title	Hours
7900:103	Orientation for Dance	0
7900:115	Dance As An Art Form	2
7900:116	Physical Analysis for Dance I	2
7900:117	Physical Analysis for Dnce II	2
7900:274	Digital Technology for Dance	3
7900:316	Choreography I	2
7900:317	Choreography II	2
7900:321	Rhythmic Analysis - Dance	2
7900:361	Learning Theory for Dance	2
7900:362	Instructional Strategies for Dance	2
7900:416	Choreography III	2
7900:417	Choreography IV	2
7900:432	History of Ballet	2
7900:433	Dance History: 20th Century	2
7900:445	Dance Philosophy and Criticism	3
7900:471	Senior Seminar	1
7910:200	BFA Audition	0
7910:201	Freshman Jury and Interview	0
Total Hours		31

## Dance Organizations

Code	Title	Hours
<b>Select a minimum of five credits of the following:</b>		
7910:112	Dance Production Ensemble	5
7910:xxx		
Total Hours		5

## Dance, Minor

### Minor in Dance (C90000M)

#### Program Contact

Marc Reed, DMA

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The following information has official approval of the **School of Dance, Theatre, & Arts Administration** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Dance" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minor in Dance may only be awarded at the time a student receives a baccalaureate degree. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
	Ballet Technique	4
	Modern Dance	4
	Jazz or Tap	2
	Somatics	1
	World Dance or Ballroom	1
	Required	2-3
	Dance Lecture	6
Total Hours		20-21

## Ballet Technique

Code	Title	Hours
<b>Select one to two ballet technique classes for a minimum of 4 credits of the following (see school director for placement):<sup>1</sup></b>		
7900:124	Ballet I	
7900:125	Ballet II	
7900:224	Ballet III	
7900:225	Ballet IV	
7900:122	Ballet V	
7900:222	Ballet VI	
7900:322	Ballet VII	

7900:422	Ballet VIII	
Total Hours		4

## Modern Dance

Code	Title	Hours
<b>Select two modern dance classes for a minimum of 4 credits of the following (see school director for placement):</b> <sup>1</sup>		
7900:119	Modern I	
7900:120	Modern II	
7900:219	Modern III	
7900:220	Modern IV	
7900:228	Modern V	
7900:229	Modern VI	
7900:328	Modern VII	
7900:329	Modern VIII	
Total Hours		4

## Jazz or Tap

Code	Title	Hours
<b>Select one jazz or tap class for a minimum of 2 credits of the following (see school director for placement):</b>		
7900:130	Jazz Dance I	
7900:230	Jazz Dance II	
7900:351	Jazz Dance III	
7900:451	Jazz Dance IV	
7900:144	Tap Dance I	
7900:145	Tap Dance II	
7900:246	Tap Dance III	
7900:347	Tap Dance IV	
Total Hours		2

## Somatics

Code	Title	Hours
<b>Select one of the following:</b>		
7900:101	Dance Somatics: Yoga	
7900:102	Dance Somatics: Pilates	
7900:104	Dance Somatics: Gyrokinesis	
7900:105	Dance Somatics: Alexander Technique	
Total Hours		1

## World Dance or Ballroom

Code	Title	Hours
7900:111	Topics in World Dance	1
or 7900:150	Ballroom Dance I	
Total Hours		1

## Required

Code	Title	Hours
7900:115	Dance As An Art Form	2-3
or 7900:200	Viewing Dance	
Total Hours		2-3

## Dance Lecture

Code	Title	Hours
<b>Select a minimum of 6 credits of Dance Lecture Classes of the following (or others approved by advisor):</b>		
7900:316	Choreography I	
7900:321	Rhythmic Analysis - Dance	
7900:361	Learning Theory for Dance	
7900:432	History of Ballet	
7900:433	Dance History: 20th Century	
Total Hours		6

<sup>1</sup> Dance minors must complete at least one semester of 7900:125 Ballet II and 7900:120 Modern II or higher.

**Note:** 6 credits must come from 300/400 level courses

## Theatre Arts, Applied Theatre & Business Entrepreneurship, BAT

### Bachelor of Arts in Theatre, Applied Theatre and Business Entrepreneurship (C80103BAT)

More on the Theatre, Applied Theatre and Business Entrepreneurship major (<https://www.uakron.edu/dtaa/theatre/undergraduate-degree-programs.dot>)

The Applied Theatre and Business Entrepreneurship Option is an interdisciplinary, liberal arts degree that allows the student to specialize in applied theatre and receive a Certificate in Entrepreneurship through the College of Business Administration.

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## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Theatre Core		40
Interdisciplinary Option		28
Electives		18
Total Hours		120

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
3450:145	Algebra for Calculus	
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
7800:100	Experiencing Theatre	
7800:264	Playscript & Performance Analysis	
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
3250:200	Principles of Microeconomics	
	or 3250:244 Introduction to Economic Analysis	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
7800:467	Multi-Cultural Theatre	
Global Diversity		
7800:335	History of Theatre and Dramatic Literature: Origins through 18th Century	
	or 7800:435 History of Theatre and Dramatic Literature: 1800 to Present	
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirement

Code	Title	Hours
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Theatre Core

Code	Title	Hours
7800:100	Experiencing Theatre	3
7800:103	Theatre Orientation	0
7800:108	Introduction to the Visual Arts of World Theatre	3
7800:145	Ensemble Theatre Lab	3
7800:172	Acting I	3
7800:264	Playscript & Performance Analysis	3
7800:265	Basic Stagecraft	3
7800:274	Digital Technology for Theatre	3
7800:335	History of Theatre and Dramatic Literature: Origins through 18th Century	3
7800:370	Directing I	3
7800:435	History of Theatre and Dramatic Literature: 1800 to Present	3
7800:471	Senior Seminar	1
7800:476	Theatre and Community Action	3
7810:xxx	Production Lab <sup>1</sup>	3
7810:xxx	Performance or Production Lab <sup>1</sup>	3
Total Hours		40

<sup>1</sup> Must be taken for a minimum of three semesters.

## Interdisciplinary Option

Code	Title	Hours
<b>Required Theatre Courses</b>		
7800:433	Theatre Organization & Production Management	3
7800:455	Creating Performance	3
7800:461	Directing II	3
7800:467	Multi-Cultural Theatre	3
7810:100	Production Laboratory-Design/Technology	1
<b>Entrepreneurship Certificate</b>		
6100:101	Business Issues in a Connected World	3
6300:201	Introduction to Entrepreneurship	3
6300:301	New Venture Creation	3
6400:300	Introduction to Finance	3
6600:275	Professional Selling	3
Total Hours		28

## Electives

Code	Title	Hours
<b>Select 18 credits of Free Electives</b>		<b>18</b>
Total Hours		18

## Theatre Arts, BA

### Bachelor of Arts in Theatre Arts (C80002BA)

More on the Theatre Arts major (<https://www.uakron.edu/dtaa/theatre/undergraduate-degree-programs.dot>)

The Bachelor of Arts (Theatre) is a liberal arts degree which introduces the student to all facets of Theatre, Arts, plus 14 credits of a foreign language.

The following information has official approval of **The School of Dance, Theatre, and Arts Administration** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Theatre Core	40
	Theatre Electives	12
	Electives	20
	<b>Total Hours</b>	<b>120</b>

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations **12**

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas **22**

*Arts/Humanities: 9 credit hours*

7800:100 Experiencing Theatre

7800:264 Playscript & Performance Analysis

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

7800:467	Multi-Cultural Theatre Global Diversity	
7800:335	History of Theatre and Dramatic Literature: Origins through 18th Century	
or 7800:435	History of Theatre and Dramatic Literature: 1800 to Present	
<i>Review the General Education Requirements page for detailed course listings.</i>		
<b>Total Hours</b>		<b>34</b>

## College of Arts & Sciences Requirements

Code	Title	Hours
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**Degree requirements in Arts & Sciences include the demonstration of 14 ability to use another language by completion of the second year of a foreign language.**

### Foreign Language

101 Beginning I

102 Beginning II

201 Intermediate I

202 Intermediate II

7700:222 Survey of Deaf Culture in America (American Sign Language option only)

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Theatre Core

Code	Title	Hours
7800:100	Experiencing Theatre	3
7800:103	Theatre Orientation	0
7800:108	Introduction to the Visual Arts of World Theatre	3
7800:145	Ensemble Theatre Lab	3
7800:172	Acting I	3
7800:264	Playscript & Performance Analysis	3
7800:265	Basic Stagecraft	3
7800:274	Digital Technology for Theatre	3
7800:335	History of Theatre and Dramatic Literature: Origins through 18th Century	3
7800:370	Directing I	3
7800:435	History of Theatre and Dramatic Literature: 1800 to Present	3
7800:471	Senior Seminar	1
7800:476	Theatre and Community Action	3
7810:xxx	Production Lab <sup>1</sup>	3
7810:xxx	Performance or Production Lab <sup>1</sup>	3
<b>Total Hours</b>		<b>40</b>

<sup>1</sup> Must be taken for a minimum of three semesters.

## Theatre Electives

Code	Title	Hours
<b>Select 12 credits from the following:</b>		<b>12</b>
7800:151	Vocal Dynamics	
7800:301	Introduction to Theatre Through Film	
7800:306	Costume Design for the Performing Arts and Media	
7800:336	Scenic Design for Performing Arts & Media	
7800:351	Advanced Ensemble Theatre Lab	
7800:355	Lighting Design and Technology	
7800:373	Acting II	
7800:374	Acting III	
7800:403	Special Topics: Theatre Arts	
7800:433	Theatre Organization & Production Management	
7800:436	Styles of Scenic Design for the Performing Arts and Media	
7800:455	Creating Performance	
7800:461	Directing II	
7800:467	Multi-Cultural Theatre	
7800:480	Independent Study: Theatre	
7800:490	Workshop in Theatre Arts	
	or 7800:590 Workshop in Theatre Arts	
7800:495	Honors Research Project in Theatre	
Total Hours		12

## Electives

Code	Title	Hours
<b>Select 20 credits of Free Electives</b>		<b>20</b>
Total Hours		20

## Theatre Arts, BAT

### Bachelor of Arts in Theatre Arts (C80002BAT)

More on the Theatre Arts major (<https://www.uakron.edu/dtaa/theatre/undergraduate-degree-programs.dot>)

The Bachelor of Arts in Theatre Arts (TAG) is a liberal arts degree which introduces the students to all facets of Theatre Arts and allows the student to specialize in one area of theatre such as Acting/Directing or Design/Tech or branch out into an inter-disciplinary specialization such as Communication, Media Arts, or English Literature.

The following information has official approval of **The School of Dance, Theatre, and Arts Administration** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer

process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Theatre Core		40
Theatre Electives		12
TAG Requirement		14
Electives		20
Total Hours		120

## Recommended General Education Courses

Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
7800:100	Experiencing Theatre	
7800:264	Playscript & Performance Analysis	
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
7800:467	Multi-Cultural Theatre	
Global Diversity		
7800:335	History of Theatre and Dramatic Literature: Origins through 18th Century	
	or 7800:435 History of Theatre and Dramatic Literature: 1800 to Present	
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirement

Code	Title	Hours
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Theatre Core

Code	Title	Hours
7800:100	Experiencing Theatre	3
7800:103	Theatre Orientation	0
7800:108	Introduction to the Visual Arts of World Theatre	3
7800:145	Ensemble Theatre Lab	3
7800:172	Acting I	3
7800:264	Playscript & Performance Analysis	3
7800:265	Basic Stagecraft	3
7800:274	Digital Technology for Theatre	3
7800:335	History of Theatre and Dramatic Literature: Origins through 18th Century	3
7800:370	Directing I	3
7800:435	History of Theatre and Dramatic Literature: 1800 to Present	3
7800:471	Senior Seminar	1
7800:476	Theatre and Community Action	3
7810:xxx	Production Lab <sup>1</sup>	3
7810:xxx	Performance or Production Lab <sup>1</sup>	3
Total Hours		40

<sup>1</sup> Must be taken for a minimum of three semesters.

## Theatre Electives

Code	Title	Hours
<b>Choose 12 credits from the following:</b>		
7800:151	Vocal Dynamics	12
7800:301	Introduction to Theatre Through Film	
7800:306	Costume Design for the Performing Arts and Media	
7800:336	Scenic Design for Performing Arts & Media	
7800:351	Advanced Ensemble Theatre Lab	
7800:355	Lighting Design and Technology	
7800:373	Acting II	
7800:374	Acting III	
7800:403	Special Topics: Theatre Arts	
7800:433	Theatre Organization & Production Management	
7800:436	Styles of Scenic Design for the Performing Arts and Media	
7800:455	Creating Performance	
7800:461	Directing II	
7800:467	Multi-Cultural Theatre	
7800:480	Independent Study: Theatre	

7800:490 Workshop in Theatre Arts

or 7800:590 Workshop in Theatre Arts

7800:495 Honors Research Project in Theatre

Total Hours 12

## TAG Requirement

Code	Title	Hours
<b>Select 14 credits from the theatre electives above or from other disciplines, in consultation with an advisor.</b>		
Total Hours		14

## Electives

Code	Title	Hours
<b>Select 20 credits of Free Electives</b>		
Total Hours		20

## Theatre Arts, Minor

### Minor in Theatre Arts (C80002M)

In order to obtain a Minor in Theatre Arts, the student must successfully complete a minimum of 18 credits; 12 credits of required theatre core courses and 6 credits of theatre electives from 300-400 level courses.

#### Program Contact

*James Slowiak*

*Professor, Theatre Arts*

330-972-5909

slowiak@uakron.edu

The following information has official approval of the **School of Dance, Theatre, & Arts Administration** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Theatre Arts" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minor in Theatre Arts may only be awarded at the time a student receives a baccalaureate degree. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		12
Electives		6
Total Hours		18

## Required Courses

Code	Title	Hours
7800:100	Experiencing Theatre	3
7800:108	Introduction to the Visual Arts of World Theatre	3
7800:172	Acting I	3

7800:264	Playscript & Performance Analysis	3
Total Hours		12

## Electives

Code	Title	Hours
<b>Select 6 credits of 300/400 level electives of the following (or others as approved by advisor):</b>		
7800:335	History of Theatre and Dramatic Literature: Origins through 18th Century	
7800:336	Scenic Design for Performing Arts & Media	
7800:355	Lighting Design and Technology	
7800:370	Directing I	
7800:373	Acting II	
7800:435	History of Theatre and Dramatic Literature: 1800 to Present	
7800:455	Creating Performance	
7800:467	Multi-Cultural Theatre	
7800:476	Theatre and Community Action	
Total Hours		6

## Theatre Arts, Physical Theatre, BAT Bachelor of Arts in Theatre, Physical Theatre (C80102BAT)

More on the Theatre, Physical Theatre major (<https://www.uakron.edu/dtaa/theatre/undergraduate-degree-programs.dot>)

The Physical Theatre Option is an interdisciplinary, liberal arts degree that allows the student to specialize in physical theatre, ensemble methods, and devising performance.

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## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Theatre Core		40
Interdisciplinary Option		26
Electives		20
Total Hours		120

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

7800:100 Experiencing Theatre

7800:264 Playscript & Performance Analysis

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

7800:467 Multi-Cultural Theatre

Global Diversity

7800:335 History of Theatre and Dramatic Literature: Origins through 18th Century

or 7800:435 History of Theatre and Dramatic Literature: 1800 to Present

*Review the General Education Requirements page for detailed course listings.*

Total Hours		34
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## College of Arts & Sciences Requirement

Code	Title	Hours
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**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Theatre Core

Code	Title	Hours
7800:100	Experiencing Theatre	3
7800:103	Theatre Orientation	0
7800:108	Introduction to the Visual Arts of World Theatre	3
7800:145	Ensemble Theatre Lab	3

7800:172	Acting I	3
7800:264	Playscript & Performance Analysis	3
7800:265	Basic Stagecraft	3
7800:274	Digital Technology for Theatre	3
7800:335	History of Theatre and Dramatic Literature: Origins through 18th Century	3
7800:370	Directing I	3
7800:435	History of Theatre and Dramatic Literature: 1800 to Present	3
7800:471	Senior Seminar	1
7800:476	Theatre and Community Action	3
7810:xxx	Production Lab <sup>1</sup>	3
7810:xxx	Performance or Production Lab <sup>1</sup>	3
Total Hours		40

<sup>1</sup> Must be taken for a minimum of three semesters.

## Interdisciplinary Option

Code	Title	Hours
7800:351	Advanced Ensemble Theatre Lab	3
7800:373	Acting II	3
7800:374	Acting III	3
7800:455	Creating Performance	3
or 7800:467	Multi-Cultural Theatre	3
7900:xxx	Ballet, Modern, Jazz, or Tap Technique	8
7900:xxx	Somatics, World Dance, or Ballroom	6
Total Hours		26

## Electives

Code	Title	Hours
Select 20 credits of Free Electives		20
Total Hours		20

# Theatre Arts, Theatre & Film Studies, BAT

## Bachelor of Arts in Theatre, Theatre and Film Studies (C80101BAT)

More on the Theatre, Theatre and Film Studies major (<https://www.uakron.edu/dtaa/theatre/undergraduate-degree-programs.dot>)

The Film Studies Option is an interdisciplinary, liberal arts degree that introduces the student to all facets of Theatre Arts and allows the student to specialize in the analysis of film and film history.

The following information has official approval of **The School of Dance, Theatre, and Arts Administration** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer

process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Theatre Core		40
Interdisciplinary Option		26
Electives		20
Total Hours		120

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

7800:100 Experiencing Theatre

7800:264 Playscript & Performance Analysis

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

7800:467 Multi-Cultural Theatre

Global Diversity

7800:335 History of Theatre and Dramatic Literature: Origins through 18th Century

or 7800:435 History of Theatre and Dramatic Literature: 1800 to Present

*Review the General Education Requirements page for detailed course listings.*

Total Hours	34
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## College of Arts & Sciences Requirement

Code	Title	Hours
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Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

### Theatre Core

Code	Title	Hours
7800:100	Experiencing Theatre	3
7800:103	Theatre Orientation	0
7800:108	Introduction to the Visual Arts of World Theatre	3
7800:145	Ensemble Theatre Lab	3
7800:172	Acting I	3
7800:264	Playscript & Performance Analysis	3
7800:265	Basic Stagecraft	3
7800:274	Digital Technology for Theatre	3
7800:335	History of Theatre and Dramatic Literature: Origins through 18th Century	3
7800:370	Directing I	3
7800:435	History of Theatre and Dramatic Literature: 1800 to Present	3
7800:471	Senior Seminar	1
7800:476	Theatre and Community Action	3
7810:xxx	Production Lab <sup>1</sup>	3
7810:xxx	Performance or Production Lab <sup>1</sup>	3
Total Hours		40

<sup>1</sup> Must be taken for a minimum of three semesters.

### Interdisciplinary Option

Code	Title	Hours
<b>Choose 12 credits from the following:</b>		<b>12</b>
7800:301	Introduction to Theatre Through Film	
7800:306	Costume Design for the Performing Arts and Media	
7800:336	Scenic Design for Performing Arts & Media	
7800:355	Lighting Design and Technology	
7800:461	Directing II	
7800:467	Multi-Cultural Theatre	
<b>Choose 14 credits from the following:</b>		<b>14</b>
3300:283	Film Appreciation	
3300:380	Film Criticism	
3300:440	Women and Film	
3300:460	Film and Literature	
3520:413	French Cinema	
3501:210	Arabic Culture through Film	
3502:210	Chinese Culture Through Film	

3560:210	Japanese Culture through Film	
Total Hours		26

### Electives

Code	Title	Hours
<b>Select 20 credits of Free Electives</b>		<b>20</b>
Total Hours		20

## Theatre, Applied Theatre & Social Entrepreneurship, BAT

### Bachelor of Arts in Theatre, Applied Theatre and Social Entrepreneurship (C80104BAT)

More on the Theatre, Applied Theatre and Social Entrepreneurship major (<https://www.uakron.edu/dtaa/theatre/undergraduate-degree-programs.dot>)

The Applied Theatre and Social Entrepreneurship Option is an interdisciplinary, liberal arts degree that allows the student to specialize in applied theatre and receive a Certificate in Social Entrepreneurship and Conflict Transformation.

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### Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Theatre Core		40
Interdisciplinary Option		28
Electives		18
Total Hours		120

### Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

**Tier I: Academic Foundations** **12**

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

**Tier II: Disciplinary Areas** **22**

*Arts/Humanities: 9 credit hours*

7800:100 Experiencing Theatre

7800:264 Playscript & Performance Analysis

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

3230:150 Human Cultures

**Tier III: Tagged Courses**

*Select one class from each of the following subcategories:*

Complex Systems

3230:460 Field Methods in Cultural Anthropology

Critical Thinking

Domestic Diversity

7800:467 Multi-Cultural Theatre

Global Diversity

7800:335 History of Theatre and Dramatic Literature: Origins through 18th Century

or 7800:435 History of Theatre and Dramatic Literature: 1800 to Present

*Review the General Education Requirements page for detailed course listings.*

Total Hours **34**

## College of Arts & Sciences Requirement

**Code Title Hours**

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Theatre Core

Code	Title	Hours
7800:100	Experiencing Theatre	3
7800:103	Theatre Orientation	0
7800:108	Introduction to the Visual Arts of World Theatre	3
7800:145	Ensemble Theatre Lab	3
7800:172	Acting I	3
7800:264	Playscript & Performance Analysis	3
7800:265	Basic Stagecraft	3
7800:274	Digital Technology for Theatre	3
7800:335	History of Theatre and Dramatic Literature: Origins through 18th Century	3
7800:370	Directing I	3

7800:435	History of Theatre and Dramatic Literature: 1800 to Present	3
7800:471	Senior Seminar	1
7800:476	Theatre and Community Action	3
7810:xxx	Production Lab <sup>1</sup>	3
7810:xxx	Performance or Production Lab <sup>1</sup>	3
Total Hours		40

<sup>1</sup> Must be taken for a minimum of three semesters.

## Interdisciplinary Option

Code	Title	Hours
<b>Required Theatre Courses</b>		
7800:351	Advanced Ensemble Theatre Lab	3
7800:433	Theatre Organization & Production Management	3
7800:455	Creating Performance	3
7800:467	Multi-Cultural Theatre	3
<b>Conflict Transformation and Social Entrepreneurship Certificate</b>		
3230:460	Field Methods in Cultural Anthropology	4
3700:334	Law, Mediation, and Violence	3
3700:333	Social Entrepreneurship	3
or 6300:301	New Venture Creation	
3850:490	Organizations, Community, and Social Action	3
Experiential Learning Component <sup>1</sup>		3
Total Hours		28

<sup>1</sup> Internship or Service Learning Project can be completed in any department with director's approval.

## Electives

Code	Title	Hours
<b>Select 18 credits of Free Electives</b>		<b>18</b>
Total Hours		18

## English

### Statement of Policies—Admission and Graduation

For students enrolled at The University of Akron and for students wishing to transfer directly into Buchtel College of Arts and Sciences from other institutions, the following criteria must be satisfied for admission to the Department of English:

- The student must be admissible to the Buchtel College of Arts and Sciences
- The student must have a minimum grade point average of 2.20 in all university coursework

In order to graduate with an English major, the following requirements must be satisfied:

- The student must achieve a grade of C- or higher in all these required courses:

Code	Title	Hours
3300:300	Critical Reading & Writing	3
3300:301	English Literature I	3
3300:315	Shakespeare: The Early Plays	3
or 3300:316	Shakespeare: The Mature Plays	
3300:341	American Literature I	3
3300:371	Introduction to Linguistics	3
3300:492	Senior Seminar	3

- The student must earn a cumulative grade point average of 2.20 in English courses
- Creative Writing, Minor (p. 135)
- English, BA (p. 136)
- English, Minor (p. 137)
- Linguistic Studies, Certificate (p. 138)
- Popular Literature and Film, Minor (p. 138)
- Professional Writing, Minor (p. 139)
- Teaching English as a Second Language, Certificate (p. 140)

## English (2020)

### 2020:120 Writing and Editing (1 Credit)

Examination of the editing process of writing. Focuses on developing a clear, effective, and correct professional writing style appropriate for academic and business documents.

### 2020:121 English (3 Credits)

English composition focused on inventive writing, essay structure, process, consideration of strength, source of evidence, and citation; and development options leading to persuasion and argument.

**Gen Ed:** Tier 1 - Writing First Course

### 2020:123 Writing for Presentations (1 Credit)

A writing intensive course that focuses on the rhetorical and theoretical challenges and considerations of effective presentations.

### 2020:216 Collaborative Writing (1 Credit)

Prerequisite: 3300:111 or 2020:121 or equivalent. A writing course that focuses on strategies and techniques for successful collaborative writing in the workplace.

### 2020:220 Writing and Research (1 Credit)

Prerequisite: 2020:121 or 3300:111 or equivalent. Practical examination of writing effectively and professionally about primary and secondary research sources in the student's choice of several citation methods.

### 2020:222 Technical Report Writing (3 Credits)

Prerequisite: 2020:121 or 3300:110 or 3300:111 or equivalent. Prepares students to write the types of reports most often required of technicians, engineers, and scientists. Includes types of reports, memoranda, and letters; techniques of research, documentation and oral presentations.

**Gen Ed:** Tier 1 - Writing Second Course

### 2020:224 Writing for Advertising (3 Credits)

Prerequisite: 2020:121 or 3300:111 or equivalent. Introduction to the copywriter's role in print, broadcast, and Web advertising. Study of advertising language; practice in writing advertisements and producing collateral copywriting materials.

### 2020:226 Electronic Reference Resources in the Computer Age (3 Credits)

Prerequisite: 2020:121 or 3300:111. Designed for individuals to broaden their scope and understanding of various electronic research techniques. Study, evaluation, and use of current and emerging technologies will be examined.

### 2020:227 Writing for the World Wide Web (3 Credits)

Prerequisite: 2020:121 or 3300:111 or equivalent, and familiarity with Internet (or attend Computer Center training seminar) knowledge of word processing software. Introductory course examines spoken and written contexts merging into one "writing space"; provides writing theory and practice for effective e-mail, newsgroup, chat, and web site writing.

### 2020:290 Special Topics: Associate Studies (1-4 Credits)

(May be repeated with a change in topic) Prerequisite: permission. Selected topics on subject areas of interest in associate studies.

### 2020:325 Signs of Professional Writing (1 Credit)

Prerequisite: 2020:121 or 3300:111 or equivalent. Practical examination of concrete and abstract indicators that lead readers to judge the professional quality of a written text beyond its meaning and correctness.

## English (3300)

### 3300:110 English Composition I + Workshop (4 Credits)

Prerequisite: Placement. Extensive and varied experience in developing writing skills, with practice in expressive, reflective, and analytic forms of writing. Includes one credit, support-intensive workshop.

**Gen Ed:** Tier 1 - Writing First Course

### 3300:111 English Composition I (3 Credits)

Extensive and varied experience in developing writing skills, with practice in expressive, reflective, and analytic forms of writing.

**Gen Ed:** Tier 1 - Writing First Course

### 3300:112 English Composition II (3 Credits)

Prerequisite: 3300:110 or 3300:111 or 3300:113 or 2020:121. Designed to develop skills in analyzing and writing persuasive arguments.

**Gen Ed:** Tier 1 - Writing Second Course

### 3300:113 African American Language and Culture I: College Composition (3 Credits)

Discussion, argumentation, and writing related to African American culture and language. An option to 3300:111 English Composition I. Open to all students.

### 3300:114 African American Language and Culture II: College Composition (3 Credits)

Prerequisites: 3300:110 or 3300:111 or 3300:113 or 2020:121.

Composition and discussion topics focus on the structure, history, and culture of African American English. An option to 3300:112 English Composition II. Open to all students.

### 3300:250 Classic & Contemporary Literature (3 Credits)

Prerequisites: 3300:111 and 3300:112 or their equivalents, and 3400:210 or 3300:221, or permission of the instructor. Close reading and analysis of fiction, poetry, and drama from the evolving canon of American, British, and World literature. This course fulfills the General Education Humanities Requirement. It cannot be used to meet requirements in English.

**3300:252 Shakespeare & His World (3 Credits)**

Prerequisite: 3300:112 or equivalent. An introduction to the works of Shakespeare and their intellectual and social contexts. Each section "places" Shakespeare through compact readings of works by the playwright's contemporaries. This course fulfills the General Education Humanities Requirement. It cannot be used to meet requirements in English.

**Gen Ed:** Tier 2 - Humanities

**3300:275 Specialized Writing (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. (May be repeated for different topics, with permission) Principles and practice of style, structure and purpose in writing, with special applications to writing demands of a specific career area.

**3300:276 Introduction to Creative Nonfiction Writing (3 Credits)**

Prerequisites: 3300:111 and 3300:112. This course introduces the techniques of Creative Nonfiction through writing exercises that give experience with the form.

**3300:277 Introduction to Poetry Writing (3 Credits)**

Prerequisite: 3300:111 and 3300:112. Practice in writing poems. Study of techniques in poetry, using contemporary poems as models. Class discussion of student work. Individual conferences with instructor to direct student's reading and writing.

**3300:278 Introduction to Fiction Writing (3 Credits)**

Prerequisite: 3300:111 and 3300:112. Practice in writing short stories. Study of various techniques in fiction, using contemporary stories as models. Class discussion of student work. Individual conferences with instructor to direct student's reading and writing.

**3300:279 Introduction to Script Writing (3 Credits)**

Prerequisite: 3300:111 and 3300:112. Practice in writing scripts. Study of various techniques in script writing, using contemporary models for study. Class discussion of student work. Individual conferences with instructor to direct student's reading and writing.

**3300:280 Poetry Appreciation (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Close reading of a wide selection of British and American poems with emphasis on dramatic situation, description, tone, analogical language, theme and meaning.

**3300:281 Fiction Appreciation (3 Credits)**

Prerequisites: Completion of 3300:111 and 3300:112 or their equivalents. Close reading of modern masters of short story and novel. Fulfills the General Education Humanities Requirement. It cannot be used to meet requirements in English.

**Gen Ed:** Tier 2 - Humanities

**3300:283 Film Appreciation (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course. Introduction to dramatic choices made by filmmakers in scripting, directing, editing and photographing narrative films; and qualities of reliable film reviews.

**Gen Ed:** Tier 2 - Arts

**3300:300 Critical Reading & Writing (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. An introduction to English studies, focusing on critical methods for reading and writing about literature, with attention to research skills and uses of computer technology.

**Gen Ed:** Tier 3 - Critical Thinking

**3300:301 English Literature I (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Studies in English literature from Old English to 1800, with emphasis upon specific representative works and upon the cultural and intellectual background which produced them. Literature to be read will include both major and minor poetry, prose and drama.

**3300:315 Shakespeare: The Early Plays (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Introduction to early drama of Shakespeare with close reading of tragedies, histories and comedies. Includes explanatory lectures of both the plays and their backgrounds.

**3300:316 Shakespeare: The Mature Plays (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Study of Shakespeare's plays after 1598, beginning with mature comedies. Concentration on major tragedies and romances.

**3300:341 American Literature I (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Historical survey of major and minor American writers to 1865.

**3300:350 Black American Literature (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level course, or permission of the instructor. Survey of representative black American writers from the 19th Century to present, with particular attention to historical and social backgrounds.

**Gen Ed:** Tier 3 - Domestic Diversity

**3300:360 Old Testament As Literature (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300-, or 3300:400-] level course. History of Hebrews to 586 B.C., as revealed through epic, fiction, saga and poetry, viewed against background of the Asian World.

**3300:361 The New Testament and Apocrypha as Literature (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300-, or 3300:400-] level course. These two bodies of literature read with emphasis on form of gospel and epistle, and concept of apocalypse. Both are viewed against their historical and social backgrounds.

**3300:362 World Literatures (3 Credits)**

The course is a study of short fiction, poems, plays, and novels of the non-Western world from early antiquity to the present.

**Gen Ed:** Tier 3 - Global Diversity

**3300:364 Women Writers (3 Credits)**

Prerequisite: 3300:112 or equivalent, or permission of instructor. A study of the diverse voices of female experiences through literature written by women.

**3300:366 European Background of English Literature (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300-, or 3300:400-] level course. Representative continental texts from Homer to Cervantes, selected both for their excellence and for their important influence on English and American literature.

**3300:367 The Rhetoric of God (3 Credits)**

Addresses the nature of language and the purpose of rhetoric as applied to the possibility/impossibility of transcendence. Fulfills General Education Global Diversity requirement.

**Gen Ed:** Tier 3 - Global Diversity

**3300:371 Introduction to Linguistics (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level English course or permission. Scientific introduction to the study of written and spoken linguistic behavior in English. History of English, varieties of English, and acquisition of English also introduced.

**3300:376 Legal Writing (3 Credits)**

Prerequisite: Completion of 3300:112 or any [3300:200-, or 3300:300-, or 3300:400-] level course. Intensive practice in writing for prelaw students through assignments based on actual legal situations and real cases. Particular attention to stating legal issues, writing persuasively, applying rules of law, and other topics that will help those preparing for law school and the profession.

**3300:377 Advanced Poetry Writing (3 Credits)**

Prerequisites: 3300:277, 3300:111 and 3300:112. Advanced practice in writing poems, emphasis on shaping publishable works. Survey of market. Class discussion of student poems; individual conference with instructor.

**3300:378 Advanced Fiction Writing (3 Credits)**

Prerequisites: 3300:278, 3300:111 and 3300:112. Advanced practice in writing short stories, emphasis on shaping publishable works. Survey of market. Class discussion of student stories; individual conference with instructor.

**3300:379 Advanced Script Writing (3 Credits)**

Prerequisites: 3300:112 and 3300:279. This course focuses on writing for the screen and developing the visual imagination.

**3300:380 Film Criticism (3 Credits)**

Prerequisite: 3300:112 or any 200-, 300- or 400-level English course. Application of literary critical theory to the study of film.

**3300:381 Advanced Creative Nonfiction Writing (3 Credits)**

Prerequisite: 3300:276. This course advances student practice in the craft of Creative Nonfiction through writing exercises and workshop sessions.

**3300:389 Special Topics: Literature & Language (3 Credits)**

Prerequisite: Completion of 3300:112 or any [3300:200-, or 3300:300- or, 3300:400-] level course. (May be repeated for credit as different topics are offered). Traditional and nontraditional topics in English literature and language, supplementing course listed in this General Bulletin, generally constructed around theme, genre and language study.

**3300:390 Professional Writing I (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [330:200-, or 3300:300-, or 3300:400-] level English course, or permission of the instructor. Designed to help prepare student for a career as professional business writer. Stresses theory and practice of written and oral communication in business organization. Individual and group performance, relating to communication theories, concepts of semantics. Functional writing as well as special needs of business are illustrated by actual cases. Adapting style and organization is practiced.

**3300:391 Professional Writing II (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [330:200-, or 3300:300-, or 3300:400-] level English course, or permission of the instructor. Designed to help prepare student for a career as professional technical writer. Covers principles and practices concerning editing company technical communications, such as specifications, annual reports, promotional brochures for technical products, services, scientific abstracts, proposals. Also treats problems of adapting materials to formats, graphic display of technical information, adaptation of technical material to nontechnical reader.

**3300:392 Internship in English (1-3 Credits)**

Prerequisite: Minimum GPA of 2.5, permission of the instructor. (May be repeated for a maximum of six credits.) Critical reading and writing focused on career applications of the discipline of English. May count up to three credit hours toward the English major.

**3300:399 The Gothic Imagination (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course. A loosely chronological study of major British, American, and European authors in the Gothic tradition. Focus on the literary conventions of Gothic fiction, to the "popular" nature of the literature and to its major themes/motifs.

**3300:400 Anglo Saxon (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level English course, and a minimum of Junior standing or higher, or permission of the instructor. Studies in Old English language and Old English prose and poetry, including Beowulf.

**3300:403 Development of the Arthurian Legend (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Traces evolution of Arthurian materials from 540 to 1500 and beyond, with emphasis on characters, themes, events and treatments.

**3300:406 Chaucer (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Close study of Chaucer's major works *The Canterbury Tales* and *Troilus and Criseyde* in Middle English.

**3300:407 Middle English Literature (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112, 64 credits or permission. Study of genres, topics, styles and writers of the Middle English literary works from 12th to 15th Centuries. Readings in Middle English.

**3300:424 Early English Fiction (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112, 64 credits or permission. Development of English novel before 1830. Focus on works of Defoe, Richardson, Fielding, Smollett, Sterne, Austen and Scott.

**3300:425 Studies in Romanticism (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Literary, philosophical, psychological and social revolutions of romantic period as reflected in works of such major writers as Wordsworth, Byron and Keats.

**3300:430 Victorian Poetry & Prose (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Poetry, prose of the late 19th Century, excluding fiction, with attention to Tennyson, Browning, Arnold, Carlyle, Ruskin and other major writers.

**3300:431 Victorian Fiction (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Reading of at least five major novels of Victorian era, of varying length, by Emily Bronte, Dickens, Eliot, Thackeray and Hardy. Characterization, theme and attitude toward life emphasized.

**3300:435 20th Century British Poetry (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. Concentrated study of major poems of Yeats, Eliot and Auden, with attention also to Hardy, Housman, Spender, C. Day Lewis, Dylan Thomas and others.

**3300:436 British Fiction: 1900-1925 (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. Study of Conrad, Joyce, D. H. Lawrence and Virginia Woolf, with attention to their innovations in narrative and style, their psychological realism and symbolism. Brief consideration of other important fiction writers of the period, including Wells, Bennett and Mansfield.

**3300:437 British Fiction Since 1925 (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. Study of important British novelists since 1925, excluding Lawrence, Joyce and Woolf. Attention to development of British short story from 1925 to present.

**3300:440 Women and Film (3 Credits)**

Prerequisites: [3300:111 and 3300:112] or any 200-, 300- or 400-level English course. Junior standing. This course explores representations of the feminine and treatments of gender issues in mainstream Hollywood films within a critical framework of feminist film theory.

**3300:448 American Romantic Fiction (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Examination of early American fiction, tracing its genesis, romantic period and germinal movements toward realism. Writers discussed include Cooper, Poe, Hawthorne and Melville.

**3300:449 American Fiction: Realism & Naturalism (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Examination of American writers of realistic and naturalistic fiction (e.g., Howells, James, Crane, Dreiser), tracing developments in American fiction against background of cultural and historical change.

**3300:450 Modern American Fiction (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. Study of significant American short and long fiction from World War I to the present.

**3300:451 American Poetry to 1900 (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Survey of American poetry of the 17th, 18th and 19th Centuries.

**3300:452 Modern American Poetry (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. Survey of 20th Century American poetry beginning with Edwin Arlington Robinson and ending with contemporary poets.

**3300:453 American Women Poets (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. Study of modern poets' uses and revisions of tradition, women's relationships, conceptions of art and of the artist-as-woman, and the debate between "public" and "private" poetry.

**3300:454 20th Century American Drama (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. Examination of major, established playwrights (including O'Neill, Miller and Williams) and sampling of new and rising ones.

**3300:455 The American Short Story (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. A study of the development of the short story as a particularly American genre, from Washington Irving to the present.

**3300:456 Thoreau, Emerson, and Their Circle (3 Credits)**

Prerequisite: A minimum of Junior academic standing or higher, or permission. A study of work and life of Henry David Thoreau, Ralph Waldo Emerson, and other key figures of the American Renaissance.

**3300:457 Writers on Writing (3 Credits)**

Prerequisite: 3300:111 and 3300:112 and Junior standing. A close look at what established writers have to say about the process of writing. Students write response essays and take exams on readings.

**3300:460 Film and Literature (3 Credits)**

Prerequisites: 3300:111 and 3300:112 or their equivalents, 64 credits or permission of instructor. Analysis of literary texts and their film adaptations. Emphasis on genre, structure, and visual elements as counterparts to written texts.

**3300:466 Linguistics and Language Arts (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level course, and a minimum of Junior standing or higher, or permission of the instructor. Foundation course in linguistics with pedagogical implications for second language learners. Fundamental topics (morphology, syntax, semantics, phonetics, pragmatics) and related topics (sociolinguistics, contrastive analysis) covered.

**3300:467 Modern European Fiction (3 Credits)**

Prerequisite: Completion of [3300:112 or equivalent], or any [200- or 300- or 400-level] English course, minimum Junior standing, or permission. Representative European writers from about 1850 to present, in translation. Focus on fiction of such writers as Dostoyevsky, Gide, Camus, Mann, Kafka and Kundera.

**3300:468 International Poetry (3 Credits)**

Prerequisite: 3300:112 or equivalent, 64 credits or permission of instructor. Junior standing. This survey of world poetry focuses on the stylistic concerns and social consequences of literature from Latin America, Africa, Asia, Europe, and beyond.

**3300:469 Eros & Love in Early Western Literature (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. An analysis of the use of sex and love in the literature of the Western World from Greco-Roman times to 1800, with special emphasis on how sexuality and "romantic" love are used as allegorical, satiric, fantastic or realistic devices.

**3300:470 History of English Language (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level English course, and a minimum of Junior standing or higher, or permission of the instructor. Development of English language, from its beginnings: sources of its vocabulary, its sounds, its rules; semantic change; political and social influences on changes; dialect origins; correctness.

**3300:471 U.S. Dialects: Black & White (3 Credits)**

Prerequisite: Completion of 3300:112 or any [3300:200-, or 3300:300- or, 3300:400-] level course or equivalent, and a minimum of Junior standing or higher, or permission of the instructor. Study of differences in pronunciation, vocabulary and grammar among U.S. language varieties. Origins, regional and social dimensions are explored. Correctness, focusing on black English and Appalachian speech, explored.

**3300:472 Syntax (3 Credits)**

Prerequisite: [3300:371 and 3300:112] or any [3300:200-, or 3300:300-, or 3300:400-] level English course or their equivalents, minimum of Junior standing or higher, or permission of the instructor. Principles of syntactic description. Sentence structures are investigated from a variety of languages, with emphasis on English.

**3300:473 Theoretical Foundations and Principles of ESL (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level course and a minimum of Junior standing or higher, or permission. Second language acquisition theories and teaching methodologies surveyed. Second language teaching principles from research in linguistics, psycholinguistics, and second language pedagogy explored.

**3300:474 African American English (3 Credits)**

Prerequisite: 64 credits or permission. Junior standing. African American English grammatical structure, pronunciations, origins, and cultural role. Comparisons with academic English. Discussion of language correctness, legal status, and role in education.

**3300:475 Theory of Rhetoric (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Ancient and modern theories of rhetoric, with attention to classical oration, "topics" of rhetoric and their application to teaching of English.

**3300:477 Sociolinguistics (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level course, or permission of the instructor. Major sociolinguistic concepts and methodology examined, as well as relationships between language, socio-cultural factors, and education. Issues of Standard English, power, and gender also examined.

**3300:478 Grammatical Structures of Modern English (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level course, and a minimum of Junior standing or higher, or permission of the instructor. Contemporary understanding of Modern English sentence structure: parts of speech, sentence types, phrase types, modification, coordination and subordination, parentheticals. Traditional grammar and sentence rhetoric discussed.

**3300:479 Management Reports (3 Credits)**

Prerequisites: Completion of 3300:112 or any [3300:200-, or 3300:300- or, 3300:400-] level course or equivalent, and a minimum of Junior standing or higher, or permission. Study of principles and writing practice in effective business style, specialized structure, and purpose for business reports.

**3300:482 Senior Honors Project in English (1-3 Credits)**

(May be repeated for a total of six credits). Prerequisites: Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor, senior standing in Honors College and approval of honors preceptor; open only to English majors enrolled in Honors College. Independent study leading to completion of senior honors thesis or other original work.

**3300:484 Fantasy (3 Credits)**

Prerequisite: [3300:111 and 3300:112] or any or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. A study of forms of literature, primarily fiction, based on and controlled by an overt violation of what is generally considered as possibility.

**3300:485 Science Fiction (3 Credits)**

Prerequisite: 64 credits or permission. Junior standing. A study of twentieth-century British and American science fiction, featuring primary forms of the science fiction story and the work of major authors.

**3300:486 Learner English (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level course, or permission of the instructor. Introduction to tools for and practice in analyzing second language learners' production of English. Theory and practice of teaching oral and written English also covered.

**3300:487 Field Experience: Teaching Second Language Learners (3 Credits)**

Prerequisite: Permission of instructor. Practical experience in which second language teachers-in-training observe, participate in, and practice teaching under the supervision of the instructor and/or an experienced, certified teacher.

**3300:489 Seminar in English (2-3 Credits)**

Prerequisite: 3300:112 or any [3300:200-, or 3300:300- or, 3300:400-] level course or equivalent, and a minimum of Junior standing or higher, or permission. (May be repeated with different topics.) Special studies, and methods of literary research, in selected areas of English and American literature and language.

**3300:490 Workshop in English (1-3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. (May be repeated with different topics) Group studies of special topics in English. Cannot be used to meet undergraduate or graduate major requirements in English; for elective credit only.

**3300:492 Senior Seminar (3 Credits)**

Discussion of select literary topic and reflection on student development in the major. Requires independent research and reflection papers. Limited to senior English majors.

**3300:498 Independent Study in English (1-3 Credits)**

Prerequisite: completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission. Directed study in a special field of interest chosen by student in consultation with instructor.

## Creative Writing, Minor

### Minor in Creative Writing (330007M)

The Creative Writing Minor allows students to develop their skills in four areas of writing: Creative Nonfiction, fiction, poetry, and script writing.

**Program Contact**

*Dr. Mary Biddinger*  
Professor, Department of English  
330-972-6960  
marybid@uakron.edu

The following information has official approval of the **Department of English** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Creative Writing" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minor in Creative Writing may only be awarded at the time a student receives a baccalaureate degree. If a student desires a minor from the same department/school as their major, there is a college requirement for a minimum of nine (9) non-overlapping credits between the minor and the major, as well as between the minor and other minor programs in the department/school. The following English courses are not accepted for any English minors:

- 3300:111 English Composition I
- 3300:112 English Composition II
- 3300:250 Classic & Contemporary Literature

- 3300:252 Shakespeare & His World
- 3300:281 Fiction Appreciation

Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		12
Electives		6
Total Hours		18

## Required Courses

Code	Title	Hours
3300:457	Writers on Writing	3
<b>Select two of the following:</b>		<b>6</b>
3300:276	Introduction to Creative Nonfiction Writing	
3300:277	Introduction to Poetry Writing	
3300:278	Introduction to Fiction Writing	
3300:279	Introduction to Script Writing	
<b>Select at least one of the following:</b>		<b>3</b>
3300:377	Advanced Poetry Writing	
3300:378	Advanced Fiction Writing	
3300:379	Advanced Script Writing	
3300:381	Advanced Creative Nonfiction Writing	
Total Hours		12

## Electives

Code	Title	Hours
<b>Select two additional courses in any form of creative writing or literature at the 300 or 400 level</b> <sup>1</sup>		<b>6</b>
3300:3xx	300-level Creative Writing or Literature Elective	
3300:4xx	400-level Creative Writing or Literature Elective	
Total Hours		6

<sup>1</sup> The following courses taken to fulfill specific requirements in the English major cannot also be used to fulfill the 18 hours requirement in this minor: 3300:300 Critical Reading & Writing, 3300:301 English Literature I, 3300:315 Shakespeare: The Early Plays, 3300:316 Shakespeare: The Mature Plays, 3300:341 American Literature I, and one course in world or multicultural literature.

## English, BA

### Bachelor of Arts in English (330000BA)

More on the English major (<https://www.uakron.edu/english/academics/undergraduate/majors.dot>)

Our course of study of literature, language, rhetoric, and creative writing fosters the development of critical thinking, skilled communication, appreciation of cultural contexts, informed citizenship, and knowledge of the various literary texts representing human thought and inquiry through the centuries. Students majoring in English studies go on to become successful professionals in their chosen fields. Graduates have taken the department's reputation into the world outside the campus gates and

hold careers ranging from positions in successful law practices, to jobs as published authors, technical writers, and journalists.

The following information has official approval of **The Department of English** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
College of Arts & Sciences Requirements		14
English Core		18
Distribution Requirements		3
400 Level Course Requirements		9
English Electives		18
Additional Credits for Graduation *		24
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.2 cumulative GPA in all 3300 courses is required for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		



Review the General Education Requirements page for detailed course listings.

Total Hours 34

## College of Arts & Sciences Requirements

**Code Title Hours**

**Degree requirements in Arts & Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.**

*Foreign Language* 14

101 Beginning I

102 Beginning II

201 Intermediate I

202 Intermediate II

7700:222 Survey of Deaf Culture in America (American Sign Language option only)

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## English Core <sup>1</sup>

Code	Title	Hours
3300:300	Critical Reading & Writing	3
3300:301	English Literature I	3
3300:315	Shakespeare: The Early Plays	3
or 3300:316	Shakespeare: The Mature Plays	
3300:341	American Literature I	3
3300:371	Introduction to Linguistics	3
or 3300:400	Anglo Saxon	
or 3300:470	History of English Language	
3300:492	Senior Seminar	3
Total Hours		18

<sup>1</sup> Students must achieve a grade of C- or higher in all core courses

## Distribution Requirements

Code	Title	Hours
<b>Complete one course in the following subcategory:</b>		
	World or multicultural literature outside the canon of British and American Writers	3
Total Hours		3

## 400-Level Course Requirements

Code	Title	Hours
<b>Complete three 400 Level courses:</b>		
3300:4xx		3
3300:4xx		3

3300:4xx	3
Total Hours	9

## English Electives

Code	Title	Hours
<b>18 credits <sup>1</sup></b>		<b>18</b>
Total Hours		18

<sup>1</sup> Includes Distribution Requirements and 400 Level courses

## English, Minor Minor in English (330000M)

### Program Contact

*Dr. Mary Biddinger*  
Professor, Department of English  
330-972-6960  
marybid@uakron.edu

The following information has official approval of the **Department of English** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in English" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minor in English may only be awarded at the time a student receives a baccalaureate degree. If a student desires a minor from the same department/school as their major, there is a college requirement for a minimum of nine (9) non-overlapping credits between the minor and the major, as well as between the minor and other minor programs in the department/school. The following English courses are not accepted for any English minors:

- 3300:111 English Composition I
- 3300:112 English Composition II
- 3300:250 Classic & Contemporary Literature
- 3300:252 Shakespeare & His World
- 3300:281 Fiction Appreciation

Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Electives		18
Total Hours		18

## Electives

Code	Title	Hours
<b>Select at least 6 credits from the English Department at the 300 or 400 level</b>		
3300:3xx	300-level English courses	
3300:4xx	400-level English courses	
<b>Select 12 additional credits from the English Department</b>		<b>12</b>

3300:1xx	100-level English courses	
3300:2xx	200-level English courses	
3300:3xx	300-level English courses	
3300:4xx	400-level English courses	
Total Hours		18

## Linguistic Studies, Certificate

### Certificate in Linguistic Studies (330008C)

Completion of five linguistically oriented courses is required as follows: the foundation course, two core courses and at least two elective courses. Three or more of the courses must be at the 300/400 level. (Subject to approval by the program director, other theoretically oriented linguistics courses may substitute for core courses.)

To obtain the certificate, a student must have at least two semesters of language. A student entering the program should discuss plans with the director.

#### Program Contact

*Dr. Grace Zhang*  
Associate Professor, Department of English  
330-972-5216  
wz23@uakron.edu

The following information has official approval of the **Department of English** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Linguistic Studies" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. To obtain the certificate, the student must have at least two semesters of a second language. A student entering the program should discuss plans with the director. Completion of six linguistically oriented courses is required as follows: the foundation course, two core courses and at least three elective courses. Three or more of the courses must be at the 300/400 level.

### Summary

Code	Title	Hours
Foundational Course		3
Core Requirements		6-7
Electives		9-12
Total Hours		18-22

### Foundational Course

Code	Title	Hours
3300:371	Introduction to Linguistics	3
or 3300:466	Linguistics and Language Arts	
Total Hours		3

### Core Requirements

Code	Title	Hours
<b>Complete 2 of the following courses:</b>		<b>6</b>
3300:470	History of English Language	
3300:477	Sociolinguistics	
3300:478	Grammatical Structures of Modern English	
3600:481	Philosophy of Language	
7700:230	Language Science & Acquisition	
7700:430	Aspects of Normal Language Development	
Total Hours		6

### Electives

Code	Title	Hours
<b>Select 2 courses from the following:</b>		<b>6</b>
3230:150	Human Cultures	
3230:251	Human Diversity	
3300:400	Anglo Saxon	
3300:473	Theoretical Foundations and Principles of ESL	
3460:430	Theory of Programming Languages	
3460:440	Compiler Design	
3460:460	Artificial Intelligence & Heuristic Programming	
3580:403	Advanced Grammar	
3600:170	Introduction to Logic	
3600:374	Symbolic Logic	
3600:418	20th Century Analytic Philosophy	
3600:471	Metaphysics	
3700:402	Politics and the Media	
3700:403	Media, Crime and Public Opinion	
7600:325	Intercultural Communication	
7700:101	American Sign Language I	
7700:210	Introduction to Clinical Phonetics	

Note: Three or more courses must be at the 300/400-level.

## Popular Literature and Film, Minor

### Minor in Popular Literature & Film (330009M)

#### Program Contact

*Dr. Mary Biddinger*  
Professor, Department of English  
330-972-6960  
marybid@uakron.edu

The following information has official approval of the **Department of English** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Popular Literature & Film" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minor in Popular Literature & Film may only be awarded at the time a student

receives a baccalaureate degree. If a student desires a minor from the same department/school as their major, there is a college requirement for a minimum of nine (9) non-overlapping credits between the minor and the major, as well as between the minor and other minor programs in the department/school. The following English courses are not accepted for any English minors:

- 3300:111 English Composition I
- 3300:112 English Composition II
- 3300:250 Classic & Contemporary Literature
- 3300:252 Shakespeare & His World
- 3300:281 Fiction Appreciation

The following courses taken to fulfill specific requirements in the English Major cannot also be used to fulfill the 18 hours requirement in this minor:

- 3300:300 Critical Reading & Writing
- 3300:301 English Literature I
- 3300:315 Shakespeare: The Early Plays
- 3300:316 Shakespeare: The Mature Plays
- 3300:341 American Literature I
- one course in world or multicultural literature.

Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
	Popular Literature or Film Electives	12
	Additional Electives	6
	Total Hours	18

## Popular Literature or Film Electives

Code	Title	Hours
	<b>Select 12 credits of the following:</b>	<b>12</b>
3300:380	Film Criticism	
3300:389	Special Topics: Literature & Language. <sup>1</sup>	
3300:399	The Gothic Imagination	
3300:440	Women and Film	
3300:460	Film and Literature	
3300:484	Fantasy	
3300:485	Science Fiction	
3300:489	Seminar in English <sup>2</sup>	
	Total Hours	12

## Additional Electives

Code	Title	Hours
	<b>Select 6 credits of the following (or any courses that were not already selected from above):</b>	<b>6</b>
3300:283	Film Appreciation	
3300:350	Black American Literature	
3300:362	World Literatures	
3300:364	Women Writers	
3300:435	20th Century British Poetry	

3300:436	British Fiction: 1900-1925
3300:437	British Fiction Since 1925
3300:450	Modern American Fiction
3300:452	Modern American Poetry
3300:453	American Women Poets
3300:454	20th Century American Drama
3300:455	The American Short Story
3300:457	Writers on Writing
3300:468	International Poetry
Total Hours	6

<sup>1</sup> For 3300:389 Special Topics: Literature & Language., choose between American Noir, Detective Fiction, Popular Culture, Stephen King, Jewish Women in Literature, Modern Jewish Novel, AfroAmerican Novel, Literary Ohio.

<sup>2</sup> For 3300:489 Seminar in English, choose between 20th Century Irish Drama, 20th Century Women Writers, Harlem Renaissance, Holocaust Literature, International Short Story, New Fiction, American Literature Since Civil War, Jewish American Literature, New Poetry, Women's Writing/Lives, Literature of the Occult, Contemporary Gothic Women Writers.

## Professional Writing, Minor Minor in Professional Writing (330006M)

**Program Contact**  
*Dr. Mary Biddinger*  
 Professor, Department of English  
 330-972-6960  
 marybid@uakron.edu

The following information has official approval of the **Department of English** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Professional Writing" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minor in Professional Writing may only be awarded at the time a student receives a baccalaureate degree. If a student desires a minor from the same department/school as their major, there is a college requirement for a minimum of nine (9) non-overlapping credits between the minor and the major, as well as between the minor and other minor programs in the department/school. The following English courses are not accepted for any English minors:

- 3300:111 English Composition I
- 3300:112 English Composition II
- 3300:250 Classic & Contemporary Literature
- 3300:252 Shakespeare & His World
- 3300:281 Fiction Appreciation

The following courses taken to fulfill specific requirements in the English Major cannot also be used to fulfill the 18 hours requirement in this minor:

- 3300:300 Critical Reading & Writing
- 3300:301 English Literature I
- 3300:315 Shakespeare: The Early Plays
- 3300:316 Shakespeare: The Mature Plays
- 3300:341 American Literature I
- one course in world or multicultural literature.

Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		12
Electives		6
Total Hours		18

## Required Courses

Code	Title	Hours
3300:390	Professional Writing I <sup>1</sup>	3
3300:391	Professional Writing II <sup>1</sup>	3
<b>Select one of the following:</b>		<b>3</b>
3300:376	Legal Writing	
3300:479	Management Reports	
3300:489	Seminar in English <sup>2</sup>	
<b>Select one of the following:</b>		<b>3</b>
3300:371	Introduction to Linguistics	
3300:400	Anglo Saxon	
3300:470	History of English Language	
3300:472	Syntax	
3300:473	Theoretical Foundations and Principles of ESL	
3300:474	African American English	
3300:489	Seminar in English <sup>3</sup>	
Total Hours		12

<sup>1</sup> 3300:390 Professional Writing I and 3300:391 Professional Writing II do not have to be taken in sequence

<sup>2</sup> Science Writing

<sup>3</sup> Grammatical Structures, Sociolinguistics, Linguistics & Language Arts

## Electives

Code	Title	Hours
<b>Select 2 additional courses from any of the literature, language or writing offerings in the department</b>		<b>6</b>
3300:xxx	Literature, Language, or Writing Electives	
Total Hours		6

# Teaching English as a Second Language, Certificate

## Certificate in Teaching English as a Second Language (330003C)

This program is intended for both native and non-native speakers of English who seek training in the teaching of English as a second language (ESL) and wish to obtain an initial qualification to teach ESL/ EFL (English as a foreign language) in educational settings other than public schools in Ohio or in countries outside the United States. For Ohio qualification in teaching ESL in the Ohio public school system, see the TESOL Endorsement requirements in this bulletin under the College of Education.

This program is designed to introduce the student to central issues in the theory and practice of teaching English to non-native speakers through courses in modern and applied linguistics, in second language pedagogy, and in related disciplines.

### Program Contact

*Dr. Grace Zhang*  
Associate Professor, Department of English  
330-972-5216  
wz23@uakron.edu

The following information has official approval of the **Department of English** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/ withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Teaching English as a Second Language" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. This program is intended for those who seek training in the teaching of English as a second language (ESL) at the elementary or high school level or who wish to obtain an initial qualification in teaching ESL in order to teach in settings other than the Ohio public school system. For Ohio certification in teaching ESL, see TESOL Validation requirements at [www.uakron.edu/achieve/tesol.dot](http://www.uakron.edu/achieve/tesol.dot) (<http://www.uakron.edu/achieve/tesol.dot>). Students who do not have English as a native language must demonstrate adequate proficiency in English with a valid TOEFL score of at least 550. The awarding of this certificate is not contingent upon completion of a degree program.

## Summary

Code	Title	Hours
Core Requirements		12
Electives		3-4
Total Hours		15-16

## Core Requirements

Code	Title	Hours
3300:371	Introduction to Linguistics	3
or 3300:466	Linguistics and Language Arts	
3300:470	History of English Language	3
or 3300:477	Sociolinguistics	

3300:473	Theoretical Foundations and Principles of ESL	3
3300:478	Grammatical Structures of Modern English	3
Total Hours		12

## Electives

Code	Title	Hours
<b>Select one of the following:</b>		
3300:470	History of English Language	3-4
3300:477	Sociolinguistics	
3300:487	Field Experience: Teaching Second Language Learners	
3580:403	Advanced Grammar	
5500:456	Scaffolding Language and Content Learning for English Learners	
5500:485	Teaching Literacy to English Learners	
5500:487	Techniques of Teaching English as a Second Language	
7600:325	Intercultural Communication	
7700:230	Language Science & Acquisition	
7700:430	Aspects of Normal Language Development	
Total Hours		3-4

## Geosciences

Geoscientists focus on problems related to how the Earth works, and our students are given opportunities to build the skills necessary for understanding the Earth System. Through a variety of field and laboratory experiences, our curriculum emphasizes hands-on learning. Students may find employment opportunities in the Earth resources field, environmental consulting, the government sector, or a variety of other career paths.

## Transfer to College of Arts & Sciences

Students should apply to the college upon the attainment of:

- a cumulative GPA of 2.0 or better (includes transfer coursework until 30 credits are earned at UA)
- a major GPA of 2.0 or better (includes transfer coursework until 30 credits are earned at UA)
- 30 credits completed including both required English composition courses and 3 credits of mathematics or statistics that meets the General Education requirement

Students can arrange inter-college transfers through an appointment with their academic advisor; advisor contact information is listed in "My Akron."

## Placement

A student is encouraged to check with his/her major department and with the Career Center, Student Union 211, (330) 972-7747, regarding employment opportunities in the field.

## College of Arts & Sciences

Degree requirements in Arts and Sciences include the demonstration of ability to use another language by completion of the second year of

a foreign language or sign language and a minimum of 40 credits of 300/400 level courses (excluding workshops) consisting of either:

- Upper level (300/400) courses both in and outside the student's major
- Any courses outside the major department as specified in and approved by the student's major department chair (permission should be obtained prior to enrollment) except workshops

## Geology Websites

- For careers in Geoscience visit: <http://www.earthscienceworld.org>
- Ask-a-Geologist at <http://walrus.wr.usgs.gov/ask-a-geologist/>
- Geological Survey at <http://www.usgs.gov>
- Association of American State Geologists at <https://www.stategeologists.org/>
- Link to other geology websites: <http://www.uakron.edu/colleges/artsci/depts/geology/links.php>

## Geosciences Contact

Dr. David Steer  
122 Crouse Hall  
330-972-2099  
[steer@uakron.edu](mailto:steer@uakron.edu)

- Environmental Studies, Certificate (p. 144)
- Geology, BS (p. 145)
- Geology, Earth Science, BA (p. 146)
- Geology, Environmental Science, BA (p. 148)

## Geology (3370)

### 3370:100 Earth Science (3 Credits)

Introduction to earth science for non-science majors. Survey of earth in relation to its physical composition, structure, history, atmosphere, oceans; and relation to solar system and universe.

**Gen Ed:** Tier 2 - Natural Science

### 3370:101 Introductory Physical Geology (4 Credits)

A study of the nature of earth, its materials, and the processes which continue to change it. Laboratory, field trips.

**Gen Ed:** Tier 2 - Natural Science w/LAB

### 3370:102 Introductory Historical Geology (4 Credits)

Prerequisite: 3370:101 or [3370:104 and 3370:211] or permission. Geologic history of earth, succession of major groups of plants and animals interpreted from rocks, fossils. Laboratory, field trips.

**Gen Ed:** Tier 2 - Natural Science w/LAB

### 3370:103 Natural Science: Geology (3 Credits)

Study of basic principles and investigative techniques in various fields of geology with emphasis on relationship of geologic processes to society.

### 3370:104 Exercises in Physical Geology (1 Credit)

Prerequisite: 3370:100 or 3370:103 or 3370:200 or 3370:211 or permission of geology adviser. Laboratory exercises on the identification of earth materials and the utilization and interpretation of geologic data and maps.

### 3370:105 Geology for Engineers (3 Credits)

Introduction of physical geology to engineers, including mechanics, hydraulics and case studies that illustrate interactions between geology and engineering. Laboratory, field trips.

**3370:121 Dinosaurs (1 Credit)**

Introductory course exploring the geological occurrence, mode of fossilization, evolutionary development, habits, and sudden extinction of the largest known land vertebrates.

**Gen Ed:** Tier 2 - Natural Science

**3370:122 Mass Extinctions & Geology (1 Credit)**

Catastrophic changes in plants and animals have occurred throughout earth history. The causes of these extinctions have sparked debate which has enlivened the scientific world.

**Gen Ed:** Tier 2 - Natural Science

**3370:125 Earthquakes: Why, Where, When? (1 Credit)**

Causes and effects of earthquakes, geological settings for earthquakes, seismic measurements, mechanical response of rock to stress, earthquake prediction and precautionary measures.

**3370:126 Natural Disasters & Geology (1 Credit)**

A study of the earth's natural hazards including earthquakes, landslides, meteorites and tsunamis.

**3370:127 The Ice Age & Ohio (1 Credit)**

Introductory course covering the effects of the ice age on the geology, vegetation, fauna and economy of Ohio.

**3370:128 Geology of Ohio (1 Credit)**

Survey of Ohio's geologic setting and history, natural resources, landforms, and their significance in terms of human activity, from early settlement to future economy.

**3370:129 Medical Geology (1 Credit)**

Abundance and distribution of trace elements in surface and groundwater, soils and rocks. The effects of trace elements to health through dose-response relationships.

**3370:130 Geologic Record of Climate Change (1 Credit)**

Examines evidence for natural climate changes in geologic past and evaluates the role of modern society in influencing future climate.

**Gen Ed:** Tier 2 - Natural Science

**3370:132 Gemstones & Precious Metals (1 Credit)**

Introduction to minerals which form gemstones and precious metals. Topics to be covered include physical properties, geologic occurrences, and geographic locations of major deposits.

**3370:133 Caves (1 Credit)**

Topics include: karst processes and the origin of caverns; carbonate depositional environments and the origin of limestones; environmental problems associated with karst landscapes.

**Gen Ed:** Tier 2 - Natural Science

**3370:134 Hazardous & Nuclear Waste Disposal (1 Credit)**

Disposition of hazardous waste in secured landfill site. Geologic factors which determine the selection of low-level and high-level radioactive waste sites.

**3370:135 Geology of Energy Resources (1 Credit)**

Topics include the origin of hydrocarbon and coal deposits, global distribution of energy resources, environmental impact of energy consumption.

**Gen Ed:** Tier 2 - Natural Science

**3370:137 Earth's Atmosphere & Weather (1 Credit)**

Structure and composition of the atmosphere; earth's radiation budget; atmospheric moisture, clouds and precipitation; weather systems and storms, severe weather, Ohio weather.

**Gen Ed:** Tier 2 - Natural Science

**3370:139 Current Topics in Geology (1 Credit)**

(May be repeated for up to 2 credits.) Special topics offered once or only occasionally in areas where no formal course exists.

**3370:140 Rocky Mountain National Parks (1 Credit)**

Badlands, Yellowstone, Grand Canyon and other Rocky Mountain National Parks will be used to illustrate basic principles of geology.

**3370:141 Natural Environment of China (1 Credit)**

Introduction to geographical and geological environments of China. Geography and geology of geoparks will be presented and discussed as examples.

**3370:171 Introduction to the Oceans (3 Credits)**

Provides a basic introduction to the oceans. Topics include formation of the oceans, ocean circulation, waves and tides, marine animals, marine communities, and climate change.

**Gen Ed:** Tier 2 - Natural Science

**3370:200 Environmental Geology (3 Credits)**

Analysis of geologic aspects of the human environment with emphasis on geologic hazards and environmental impact of society's demand for water, minerals and energy.

**Gen Ed:** Tier 2 - Natural Science

**3370:201 Exercises in Environmental Geology I (1 Credit)**

Prerequisite or corequisite: 3370:200. Recognition, and evaluation of environmental problems related to geology through laboratory exercises and demonstrations which apply concepts discussed in introductory geoscience courses. Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3370:203 Exercises in Environmental Geology II (1 Credit)**

Prerequisite: 3370:201. Prerequisite or Corequisite: 3370:200. Recognition and evaluation of environmental problems related to geology. (Continuation of 201) Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3370:211 Introduction to Environmental Science (3 Credits)**

Interdisciplinary analysis of our relationship with nature and dependence upon the environment, with emphasis on evaluation of current environmental problems and rational solutions.

**Gen Ed:** Tier 2 - Natural Science

**3370:230 Mineral Science (4 Credits)**

Prerequisite: 3370:101 or [3370:104 and 3370:211]. Corequisites: 3150:151 and 3150:152. Crystallography and chemistry of minerals. Topics also covered include physical, chemical and optical properties, occurrences and uses of the common non silicate minerals. Laboratory, field trips.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3370:231 Silicate Mineralogy and Petrology (4 Credits)**

Prerequisites: [3370:101 and 3370:230] or appropriate test score. Corequisites: 3150:151 and 3150:152. Physical and chemical properties, occurrence, and uses of common silicate minerals, followed by megascopic and microscopic identification, classification, and petrogenesis of rocks. Laboratory.

**Gen Ed:** Tier 3 - Critical Thinking

**3370:301 Engineering Geology (3 Credits)**

Prerequisite: 3370:101 or [3370:100 and 3370:104] or [3370:104 and 3370:211] or permission of instructor. Presents quantitative analysis of geologic features and processes and is supported by the study of case histories. Lecture, lab, field study, field trips.

**3370:310 Geomorphology (3 Credits)**

Prerequisite: 3370:101 or [3370:100 and 3370:104] or [3370:104 and 3370:221]. Study of landforms as a function of structure, process, and time. Laboratory, field trips.

**3370:324 Sedimentation & Stratigraphy (4 Credits)**

Prerequisite: 3370:102. Introduction to sedimentary processes and environments; stratigraphic principles and techniques. Hand specimens, thin sections, and sedimentary sequences studied. Laboratory, field trips.

**3370:350 Structural Geology (4 Credits)**

Prerequisite: 3370:101 or [3370:100 and 3370:104] or [3370:104 and 3370:211]. Origins and characteristics of folds, faults, joints and rock cleavage. Structural features of sedimentary, igneous and metamorphic rocks. Laboratory, field trips.

**Gen Ed:** Tier 3 - Critical Thinking

**3370:355 Contemporary Issues in Environmental Science (3 Credits)**

Prerequisite: 3370:100, 3370:101, or 3370:211. Advanced interdisciplinary analysis of our relationship with nature and dependence upon the environment, with emphasis on evaluation of current environmental problems and rational solutions.

**3370:360 Paleobiology (4 Credits)**

Prerequisite: 3370:101 or 3100:111. Introductory course emphasizing morphology and evolution of major invertebrate groups with consideration of practical applications of paleontology. Laboratory, field trips.

**3370:371 Oceanography (4 Credits)**

Prerequisite: 3370:101. Study of the dominant feature of our planet, the oceans, emphasizing ocean basins evolution, and physical, chemical and biological processes in the various marine environments. Field trips.

**3370:405 Archaeological Geology (3 Credits)**

Prerequisite: 3370:101. Provides background in geologic principles and techniques relevant to archaeologists. Topics include stratigraphy, absolute dating, locality assessment, zooarchaeology, taphonomy, and remote sensing. Laboratory, field trips.

**3370:407 Archaeogeophysical Survey (3 Credits)**

Prerequisites: 3240:250 or 3370:101 or 3350:310. Advanced instruction in subsurface geophysical survey techniques in archaeology. Emphasis on magnetic gradiometry and electrical resistivity techniques, image processing and geological and archaeological interpretation.

**3370:410 Regional Geology of North America (3 Credits)**

Prerequisites: 3370:101 and 3370:102. Examination of physiographic provinces of North America emphasizing structure, tectonic setting, stratigraphy and processes responsible for landforms in each province. Laboratory, field trips.

**3370:411 Glacial Geology (3 Credits)**

Causes and effects of Pleistocene expansion of polar ice masses with emphasis on glacial deposits and world climatic changes. Laboratory, field trips.

**3370:421 Coastal Geology (3 Credits)**

Prerequisites: 3370:101, 3370:324 or permission of instructor. Study of the origins and evolution of coasts and coastal deposits with particular attention paid to the interaction of waves and currents with sediment, and the development of associated sedimentary features. Field trips.

**Gen Ed:** Tier 3 - Complex Systems

**3370:425 Principles of Sedimentary Basin Analysis (3 Credits)**

Prerequisites: 3370:324 and 3370:360 or permission. Primarily the study of depositional systems, regional and global stratigraphic cycles, and sedimentation and plate tectonics.

**3370:432 Optical Mineralogy - Introductory Petrology (3 Credits)**

Prerequisites: 3370:230 and 3370:231. Optical techniques for identification, characterization, and classification of minerals and rocks using the petrographic microscope. Laboratory.

**3370:433 Advanced Petrology (3 Credits)**

Prerequisite: 3370:432. Petrogenesis of igneous, metamorphic and sedimentary rocks as determined by microscopic studies of textures and mineral assemblages using thin sections. Laboratory.

**3370:435 Petroleum Geology (3 Credits)**

Prerequisite: 3370:350. Natural occurrences of petroleum. Characteristics, origin, entrapment and exploration methods. Laboratory, field trips.

**3370:436 Coal Geology (3 Credits)**

Prerequisites: 3370:101 and 3370:102. Origin, composition and occurrence of coal with emphasis on depositional environments, coalification processes, exploration, evaluation and exploitation. Laboratory, field trips.

**3370:437 Economic Geology (3 Credits)**

Prerequisites: 3370:231 and 3370:350. Study of metallic and nonmetallic mineral deposits emphasizing paragenesis and exploration. Laboratory, field trips.

**3370:441 Fundamentals of Geophysics (3 Credits)**

Prerequisites: 3450:223 or permission and 3650:292. Fundamental concepts in solid earth geophysics, planetary physics, geodesy, and geomagnetism. Contributions of geophysics to recent major developments in geoscience.

**3370:443 Rivers (3 Credits)**

Prerequisite: Permission of department. Study of the geologic and environmental aspects of river systems and related human impacts. Includes mandatory, 0 credit weekend field work.

**Gen Ed:** Tier 3 - Complex Systems

**3370:444 Environmental Magnetism (3 Credits)**

Prerequisite: 3370:101 or permission. Introduction to the theory and methods of environmental magnetism and the application of environmental magnetism to interpreting sedimentary deposits.

**Gen Ed:** Tier 3 - Critical Thinking

**3370:445 Environmental and Engineering Geophysics (3 Credits)**

Prerequisite: 3650:261 or 3650:291 or permission of instructor. Corequisite: 3650:262 or 3650:292 or permission of instructor. Basic subsurface exploration using ground penetrating radar and multi-channel electrical resistivity. Applications in environmental assessment, civil engineering and geotechnical engineering. Field trips.

**3370:446 Exploration Geophysics (3 Credits)**

Prerequisites: 3450:223 and 3650:292. Basic principles and techniques of geophysical exploration with emphasis on gravimetric, magnetic, seismic and electrical methods and application to geological problems. Laboratory, field trips.

**3370:449 Borehole Geophysics (3 Credits)**

Basic principles and techniques of geophysical well logging with emphasis on electrical, radioactive, and sonic measures and their quantitative evaluation. Applications in oil, gas, and groundwater exploration. Laboratory.

**3370:450 Advanced Structural Geology (3 Credits)**

Prerequisite: 3370:350. Fundamental and advanced concepts of structural geology with emphasis on current and developing concepts. Laboratory, field trips.

**3370:451 Field/Lab Studies in Environmental Science (3 Credits)**

Field/Laboratory inquiry into a specific interdisciplinary, environmental science topic. Students complete a research project involving collecting, analyzing and interpreting real world data. (May be repeated once.)

**3370:452 Geology and Environmental Science Service Learning (1-3 Credits)**

Prerequisite: Permission of instructor. Team service-learning project that involves collection, organization, analysis, and presentation of data. Field trips. (May be repeated for a maximum of four credits.)

**Gen Ed:** Tier 3 - Complex Systems

**3370:453 Geology Field Camp I (3 Credits)**

Prerequisite: 3370:101, 3370:102, and permission of instructor. Introduction to collection and interpretation of field data and construction of geologic maps. Student will bear trip expenses.

**3370:454 Geology Field Camp II (3 Credits)**

Prerequisites: 3370:231, 3370:350, 3370:453, and permission of instructor. Advanced techniques and methods of field geology necessary for detailed geological maps and interpretation. Student will bear trip expenses.

**3370:455 Field Studies in Geology (1-3 Credits)**

Field trip course emphasizing aspects of geology not readily studied in Ohio. Includes pre-trip preparation and post-trip examination. Student will bear trip expenses. (May be repeated for a total of four credits.)

**3370:462 Macroevolution (3 Credits)**

Prerequisites: 3370:360 or 3100:111. Provides a comprehensive treatment of macroevolutionary theory, focusing on evidence from the fossil record. Topics include genetics, speciation, development, and fossil lineages. Laboratory.

**3370:463 Environmental Micropaleontology (3 Credits)**

Prerequisite: 3370:360. Introduction to techniques of micropaleontology as proxy indicators for environmental and climate change. Laboratory. Field trips.

**3370:465 Geomicrobiology (3 Credits)**

Prerequisites: 3150:151 and 3150:153. A course addressing the physiology, ecology, and activities of microorganisms that mediate important biogeochemical processes, and the interdisciplinary approaches to studying them.

**3370:470 Geochemistry (3 Credits)**

Prerequisites: 3370:101, 3370:230, 3150:151, and 3150:152. Application of chemical principles to the study of geologic processes. Laboratory, field trips.

**3370:472 Stable Isotope Geochemistry (3 Credits)**

Prerequisite: 3370:101 and 3370:102; 3150:151, 3150:152 and 3150:153; 3450:221. Application of stable isotope geochemistry to the study of hydrologic and carbon cycles, modern sedimentary environments, and the interpretation of sedimentary rocks.

**3370:474 Groundwater Hydrology (3 Credits)**

Prerequisite: 3370:101 or [3370:104 and 3370:211]. Origin, occurrence, regimen and utilization of groundwater. Qualitative and quantitative presentation of geological and geochemical aspects of groundwater hydrology. Laboratory, field trips.

**3370:480 Seminar in Environmental Studies (2 Credits)**

Discussion of specific environmental topic(s) from an interdisciplinary viewpoint; resource persons are drawn from the University and surrounding community.

**3370:481 Analytical Methods in Geology (2 Credits)**

Prerequisite: 3370:230, 3370:231. A survey of analytical methods used to solve geologic problems with emphasis on method selection, proper sample collection, analysis of data quality and data presentation.

**3370:484 Geoscience Research & Consulting Methods (2 Credits)**

Prerequisite: Must be a Geology Department graduate student or senior major in Geology, or have permission of instructor. Methods for finding, gathering, managing, and evaluating geoscience information. Emphasis on finding data sources (including electronic), creating valid data sets, visualizing data.

**3370:485 Individual Readings in Geology and Environmental Science (1-3 Credits)**

Prerequisite: Permission of instructor. (May be repeated for a total of 4 credits) Independent study and directed readings on a selected topic to fit an individual student's program.

**3370:490 Workshop in Geology and Environmental Science (1-4 Credits)**

Group studies of special topics in geology and environmental science. May not be used to meet undergraduate major requirements in the Department. May be used for elective credit only. (May be repeated for up to 4 credits.)

**3370:491 Internship in Geology and Environmental Science (1-3 Credits)**

Prerequisite: Permission of Department Chair. Supervised professional experience in geology or environmental science. Only three credits may be applied toward a degree in geology. (May be repeated for a total of six credits.)

**3370:497 Honors Project in Geology (1-3 Credits)**

(May be repeated for a total of six credits.) Prerequisite: permission of department honors preceptor, Honors student only. Exploration of research topics and issues in geology. Selection of research topic and writing of research paper in proper scholarly form under direction of faculty member.

**3370:498 Special Topics in Geology (1-3 Credits)**

Prerequisite: Permission of instructor. Special lecture courses offered once or only occasionally in areas where no formal course exists.

**3370:499 Research Problems in Geology (1-3 Credits)**

(May be repeated for a total of four credits) Prerequisite: Permission. Independent research leading to the completion of a written paper or presentation at a professional meeting.

## Environmental Studies, Certificate

### Certificate in Environmental Studies (337004C)

**Program Contact**

*Dr. Ira Sasowsky*  
Professor, Geosciences  
330-972-5389  
ids@uakron.edu

The following information has official approval of the **Department of Geosciences** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Environmental Studies" and must be completed with a minimum grade point average of 2.0



overall for the certificate to be noted on the student's record. To qualify for the certificate program, students must request admission to the program by completing the certificate application form. Contact the Director of the Center for Environmental Studies to develop a program including the core requirements to fulfill remaining electives. To satisfy the requirements, a student must complete the core courses and 11 credits from the list of elective courses or other courses identified as acceptable by the director. Elective courses will be selected from outside the student's academic major.

## Summary

Code	Title	Hours
Required Courses		5
Electives		11
Total Hours		16

## Required Courses

Code	Title	Hours
3370:211	Introduction to Environmental Science	3
3370:480	Seminar in Environmental Studies	2
Total Hours		5

## Electives

Code	Title	Hours
<b>Electives must be completed from a minimum of three departments and approved by the Director.</b>		<b>11</b>
XXXX:XXX	Electives	
Total Hours		11

## Geology, BS

### Bachelor of Science in Geology (337000BS)

More on the Geology major (<https://www.uakron.edu/geology/academics/undergraduate/geology-program.dot>)

The following information has official approval of **The Department of Geosciences** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. Students are encouraged to visit The Department of Geosciences their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

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### 1st Year

Fall Semester		Hours
3370:101	Introductory Physical Geology	4
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
	English Composition I Requirement <sup>2</sup>	3
	Speech/Oral Communication Requirement	3
Select one of the following:		3-4
	Beginning Language I <sup>3</sup>	
7700:101	American Sign Language I	
Hours		17-18

### Spring Semester

3370:102	Introductory Historical Geology	4
3450:222	Analytic Geometry-Calculus II	4
	English Composition II Requirement <sup>2</sup>	3
Select one of the following:		3-4
	Beginning Language II <sup>3</sup>	
7700:102	American Sign Language II	
Hours		14-15

### 2nd Year

Fall Semester		Hours
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3370:230	Mineral Science	4
3400:210	Humanities in the Western Tradition from	4
or 3400:221	Ancient Times to 1500	
	or Humanities in the World since 1300	
Select one of the following:		3
	Intermediate Language I	
7700:201	American Sign Language III	
Hours		15

### Spring Semester

3150:153	Principles of Chemistry II	3
3370:231	Silicate Mineralogy and Petrology	4
	Humanities Requirement	3
	Social Science Requirement <sup>4</sup>	2-4
Select one of the following:		3-5
	Intermediate Language II	
7700:202 & 7700:222	American Sign Language IV and Survey of Deaf Culture in America	
Hours		15-19

### 3rd Year

Fall Semester		Hours
3370:350	Structural Geology	4
3650:291	Elementary Classical Physics I	4
3370:3xx/4xx	Upper Level Geology Electives <sup>5</sup>	3
	Humanities Requirement	3
Hours		14

### Spring Semester

3370:324	Sedimentation & Stratigraphy	4
3370:360	Paleobiology	4
3650:292	Elementary Classical Physics II	4
3370:3xx/4xx	Upper Level Geology Electives <sup>5</sup>	3

Social Science Requirement <sup>4</sup>		3
Hours		18
<b>Summer Semester</b>		
3370:453	Geology Field Camp I	3
3370:454	Geology Field Camp II	3
Hours		6
<b>4th Year</b>		
<b>Fall Semester</b>		
3370:3xx/4xx	Upper Level Geology Electives <sup>5</sup>	3
3370:3xx/4xx	Upper Level Geology Electives <sup>5</sup>	4
Area Studies/Cultural Diversity Requirement		2
Upper Level Electives <sup>6</sup>		4
Hours		13
<b>Spring Semester</b>		
Area Studies/Cultural Diversity Requirement		2
Upper Level Electives <sup>6</sup>		12
Hours		14
Total Hours		126-132

<sup>1</sup> All Geology majors should take the Math Placement Test. The BS requirement is 3450:221 Analytic Geometry-Calculus I and 3450:222 Analytic Geometry-Calculus II

<sup>2</sup> For English Composition I, 3300:111 English Composition I or 3300:113 African American Language and Culture I: College Composition are the recommended classes to meet the General Education English requirement. 2020:121 English fulfills the English Composition I requirement. For English Composition II, 3300:112 English Composition II or 3300:114 African American Language and Culture II: College Composition are the recommended classes to meet the General Education English requirement. 2020:222 Technical Report Writing fulfills the English Composition II requirement.

<sup>3</sup> Demonstration of ability to use another language by completion of the second year of a foreign language or sign language is required. See your advisor for placement. Please note that all four semesters must be completed in the SAME language and it's recommended you begin your first language class as soon as possible.

<sup>4</sup> 3350:100 Introduction to Geography is strongly recommended to meet the Social Sciences general education requirement.

<sup>5</sup> A total of 13 Geology electives at the 300/400 level is required. Please contact a Department of Geology adviser to discuss alternatives.

<sup>6</sup> General electives can be any course not already required by your major and Upper Level (300/400) electives can be any course in or outside your major excluding General Education courses and workshops.

## Alert

- By the end of your first 48 credit hours attempted, you must have completed your General Education English, Math, and Communications (Speech) requirements
- By the end of your first 48 credit hours attempted, you must have declared a major and transferred to (been accepted by) a degree granting college at The University of Akron.

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## Geology, Earth Science, BA Bachelor of Arts in Geology, Earth Science (337001BA)

More on the Geology, Earth Science major (<https://www.uakron.edu/geology/academics/undergraduate/>)

### Earth Science Fundamentals

Earth scientists study earth materials, structures and processes and how they've changed through time. This knowledge may be applied to exploration for natural resources — including metals, petroleum and water; understanding natural hazards such as earthquakes, volcanoes and landslides; addressing problems associated with environmental contamination; and investigating Earth's history to understand the evolution of life and global climate change. Earth scientists are employed by natural resource companies, environmental consulting firms, government agencies, nonprofit organizations and universities.

Core courses provide the fundamentals in:

- physical and historical geology
- mineralogy and petrography
- structural geology and plate tectonics
- sedimentology, paleontology and stratigraphy

Degree program can be tailored to a major field of interest by taking additional courses in the supporting sciences and mathematics.

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Students are encouraged to visit The Department of Geosciences their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

#### 1st Year

Fall Semester		Hours
3370:101	Introductory Physical Geology <sup>1</sup>	4
	English Composition I Requirement <sup>2</sup>	3
	Social Sciences Requirement <sup>3</sup>	3
	Speech/Oral Communication Requirement	3
	Select one of the following:	3-4
	Beginning Language I <sup>4</sup>	

7700:101	American Sign Language I	
	Hours	16-17
<b>Spring Semester</b>		
3370:102	Introductory Historical Geology	4
3450:149	Precalculus Mathematics <sup>5</sup>	4
	English Composition II Requirement <sup>2</sup>	3
Select one of the following:		3-4
	Beginning Language II <sup>4</sup>	
7700:102	American Sign Language II	
	Hours	14-15
<b>2nd Year</b>		
<b>Fall Semester</b>		
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3400:210	Humanities in the Western Tradition from	4
or 3400:221	Ancient Times to 1500	
	or Humanities in the World since 1300	
	Science Elective <sup>6</sup>	3
Select one of the following:		3
	Intermediate Language I	
7700:201	American Sign Language III	
	Hours	14
<b>Spring Semester</b>		
3370:231	Silicate Mineralogy and Petrology	4
	Science Elective <sup>6</sup>	4
	Area Studies/Cultural Diversity Requirement	2
Select one of the following:		3-5
	Intermediate Language II	
7700:202	American Sign Language IV	
& 7700:222	and Survey of Deaf Culture in America	
	Hours	13-15
<b>3rd Year</b>		
<b>Fall Semester</b>		
3370:350	Structural Geology	4
	Humanities Requirement	3
3370:xxx	Geology electives <sup>7</sup>	6
3370:3xx/4xx	Upper level Geology electives <sup>7,8</sup>	3-4
	Hours	16-17
<b>Spring Semester</b>		
3370:360	Paleobiology	4
	Social Science Requirement <sup>3</sup>	3
3370:3/4xx	Upper level Geology electives <sup>7,8</sup>	3-4
3370:xxx	Geology electives	3
	Hours	13-14
<b>Summer Semester</b>		
3370:453	Geology Field Camp I	3
3370:454	Geology Field Camp II	3
	Hours	6
<b>4th Year</b>		
<b>Fall Semester</b>		
3370:3/4xx	Upper level Geology electives <sup>7,8</sup>	3

	Humanities Requirement	3
3370:xx	Geology electives	3
	Area Studies/Cultural Diversity Requirement	2
	Upper Level Electives <sup>8</sup>	2
	Hours	13
<b>Spring Semester</b>		
	Upper Level Electives <sup>8</sup>	15-9
	Hours	15-9
	Total Hours	120

- <sup>1</sup> 3370:101 Introductory Physical Geology Strongly Preferred, **OR** 3370:100 Earth Science, **OR** 3370:200 Environmental Geology, **OR** (by permission only) 3370:211 Introduction to Environmental Science, **AND** 3370:104 Exercises in Physical Geology.
- <sup>2</sup> For English Composition I, 3300:111 English Composition I or 3300:113 African American Language and Culture I: College Composition are the recommended classes to meet the General Education English requirement. 2020:121 English fulfills the English Composition I requirement. For English Composition II, 3300:112 English Composition II or 3300:114 African American Language and Culture II: College Composition are the recommended classes to meet the General Education English requirement. 2020:222 Technical Report Writing fulfills the English Composition II requirement.
- <sup>3</sup> 3350:100 Introduction to Geography and 3240:100 Introduction to Archaeology recommended.
- <sup>4</sup> Demonstration of ability to use another language by completion of the second year of a foreign language or sign language is required. See your advisor for placement. Please note that all four semesters must be completed in the SAME language and it's recommended you begin your first language class as soon as possible.
- <sup>5</sup> All Geology majors should take the Math Placement Test. The B.A. requirement is 3450:149 Precalculus Mathematics.
- <sup>6</sup> B.A. degree requires completion of at least 7 credits from the following and these options can satisfy the upper level requirement for Arts & Sciences as well (300/400 level): 3100:111 Principles of Biology I, 3100:112 Principles of Biology II, 3150:153 Principles of Chemistry II, 3650:291 Elementary Classical Physics I/3650:292 Elementary Classical Physics II, 3450:221 Analytic Geometry-Calculus I, 3450:222 Analytic Geometry-Calculus II.
- <sup>7</sup> A total of 18 departmental (3370) credits are required, eight of which must be at the 300/400 level. Please contact a Department of Geosciences adviser to discuss alternatives.
- <sup>8</sup> **Buchtel College of Arts & Sciences (BCAS)** – requires **40 credits** at the 300/400 level. Please contact an adviser to determine how many additional 300/400 courses you need to complete this requirement.

## Alert

1. By the end of your first 48 credit hours attempted, you must have completed your General Education English, Math, and Communications (Speech) requirements
2. By the end of your first 48 credit hours attempted, you must have declared a major and transferred to (been accepted by) a degree granting college at The University of Akron.

# Geology, Environmental Science, BA

## Bachelor of Arts in Environmental Science (337004BA)

More on the Environmental Science major (<https://www.uakron.edu/geology/academics/undergraduate/environmental-science-program.dot>)

### Environmental Science Fundamentals

Environmental science is the study of society's relationship with the physical and biological world. This knowledge may be applied to understanding natural hazards such as earthquakes, volcanoes and landslides; addressing problems associated with environmental contamination; and investigating earth's history to understand the global climate change. Environmental scientists are employed by environmental consulting firms, government agencies, nonprofit organizations and universities.

Core courses provide the fundamentals in:

- physical geology
- biology
- chemistry

Degree program can be tailored to a major field of interest by taking additional courses in the supporting sciences and mathematics.

The following information has official approval of **The Department of Geosciences** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. Students are encouraged to visit The Department of Geosciences their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

Students are encouraged to visit The Department of Geosciences their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

1st Year		
Fall Semester		Hours
3370:101	Introductory Physical Geology <sup>1</sup>	4
	English Composition I Requirement <sup>2</sup>	3
	Speech/Oral Communication Requirement	3
	Social Science Requirement <sup>4</sup>	3
Select one of the following:		3-4
	Beginning Language I	
7700:101	American Sign Language I <sup>3</sup>	
Hours		16-17
Spring Semester		
3450:149	Precalculus Mathematics <sup>5</sup>	4
	English Composition II Requirement <sup>2</sup>	3

	Social Science Requirement <sup>4</sup>	3
Select one of the following:		3-4
	Beginning Language II	
7700:102	American Sign Language II	
Hours		13-14

### 2nd Year

Fall Semester		
3400:210 or 3400:221	Humanities in the Western Tradition from Ancient Times to 1500 or Humanities in the World since 1300	4
3100:111	Principles of Biology I	4
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
Select one of the following:		3
	Intermediate Language I	
7700:201	American Sign Language III	
Hours		15

### Spring Semester

3370:231	Silicate Mineralogy and Petrology	4
3100:112	Principles of Biology II	4
	Humanities Elective Requirement	3
	Area Studies/Cultural Diversity Requirement	2
Select one of the following:		3-5
	Intermediate Language II	
7700:202 & 7700:222	American Sign Language IV and Survey of Deaf Culture in America	
Hours		16-18

### 3rd Year

Fall Semester		
3370:452 or 3370:453	Geology and Environmental Science Service Learning or Geology Field Camp I	1-3
	Humanities Requirement	3
3370:3/4xx	Upper level Geology electives <sup>6</sup>	6
3370:3/4xx	Upper level Science electives <sup>7</sup>	2
3370:xxx	Geology elective <sup>6</sup>	3
Hours		15-17

### Spring Semester

3370:310	Geomorphology	3
xxxx:3/4xx	Upper level Science Elective <sup>7</sup>	3
3370:3/4xx	Upper level Geology electives <sup>6</sup>	9
Hours		15

### Summer Semester

3370:453 or 3370:452	Geology Field Camp I or Geology and Environmental Science Service Learning	1-3
Hours		1-3

### 4th Year

Fall Semester		
	Area Studies/Cultural Diversity Requirement	2
xxxx:3/4xx	Upper level Science Elective <sup>7</sup>	3

xxxx:3/4xx	Upper level Electives <sup>7,8</sup>	3
	Electives <sup>8</sup>	5
Hours		13
<b>Spring Semester</b>		
3370:3/4xx	Upper level Geology electives <sup>6</sup>	3
	Upper level Electives <sup>7,8</sup>	5
	Electives <sup>8</sup>	8-0
Hours		16-8
Total Hours		120

- <sup>1</sup> 3370:101 Introductory Physical Geology Strongly Preferred, or 3370:100 Earth Science, or 3370:200 Environmental Geology or (by permission only) 3370:211 Introduction to Environmental Science and 3370:104 Exercises in Physical Geology.
- <sup>2</sup> For English Composition I, 3300:111 English Composition I or 3300:113 African American Language and Culture I: College Composition are the recommended classes to meet the General Education English requirement. 2020:121 English fulfills the English Composition I requirement. For English Composition II, 3300:112 English Composition II or 3300:114 African American Language and Culture II: College Composition are the recommended classes to meet the General Education English requirement. 2020:222 Technical Report Writing fulfills the English Composition II requirement.
- <sup>3</sup> Demonstration of ability to use another language by completion of the second year of a foreign language or sign language is required. See your advisor for placement. Please note that all four semesters must be completed in the **same** language and it's recommended you begin your first language class as soon as possible.
- <sup>4</sup> Introduction to Geography and 3240:100 Introduction to Archaeology recommended.
- <sup>5</sup> All Geology majors should take the Math Placement Test. The B.A. requirement is 3450:149 Precalculus Mathematics.
- <sup>6</sup> Departmental electives: at least 18 credits with a minimum of 11 credits at the 300/400 level. Up to 8 credits may be selected from the Environmental Studies Certificate electives list. Please contact a Department of Geology & Environmental Science adviser to discuss alternatives.
- <sup>7</sup> B.A. degree requires completion of at least 8 credits from the following and these options can satisfy the upper level requirement for Arts & Sciences as well (300/400 level): 3100:217 General Ecology, 3150:153 Principles of Chemistry II, 3150:154 Qualitative Analysis, 3650:291 Elementary Classical Physics I/3650:292 Elementary Classical Physics II, 3450:221 Analytic Geometry-Calculus I, 3450:222 Analytic Geometry-Calculus II.
- <sup>8</sup> General electives can be any course not already required by your major and Upper Level (300/400) electives can be any course in or outside your major excluding workshops.

## Alert

1. By the end of your first 48 credit hours attempted, you must have completed your General Education English, Math, and Communications (Speech) requirements;
2. By the end of your first 48 credit hours attempted, you must have declared a major and transferred to (been accepted by) a degree granting college at The University of Akron.

# History

## About the Department of History

Students and faculty in the Department of History explore the forces that drove past events and shaped the present. Our faculty members have a wide range of teaching and research interests, from the ancient world to the recent past. We encourage students to design degree programs that enable them to both pursue their own historical interests and obtain a broader understanding of history across time and place.

The department offers nearly a dozen degree programs and certificates. Take a look around our website to learn more about our programs, scholarships, and career opportunities for students of history!

- History Asian Studies, Certificate (p. 154)
- History Middle Eastern Studies, Certificate (p. 155)
- History, BA (p. 156)
- History, Minor (p. 158)

## History (3400)

### 3400:200 Empires of the Ancient World (3 Credits)

Comparative study of the formation of ancient empires of the Afro-Eurasian world up to the rise of Islam.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Global Diversity

### 3400:210 Humanities in the Western Tradition from Ancient Times to 1500 (3 Credits)

Prerequisites: [3300:112 or 3300:114 or 2020:222] and sophomore or greater standing. Introduction to the human condition as manifested in ideas, religions, visual arts and music of Western civilization from ancient Mesopotamia and Egypt through the Italian Renaissance. Can be used to meet major requirements in History.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Critical Thinking

### 3400:211 Humanities in the Western Tradition II (3 Credits)

Prerequisite: 3400:210. Introduction to the human condition in the past as manifested in the ideas, religions, visual arts and music of Western civilization from the Protestant Reformation to the Present. Cannot be used to meet major requirements in History.

### 3400:221 Humanities in the World since 1300 (3 Credits)

Prerequisites: 3300:112 or 3300:114 or 2020:222 and sophomore standing. Introduction to the human condition as expressed in the ideas, religions, visual arts, and music of the world since 1300. Cannot be used to meet major requirements in History.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Global Diversity

### 3400:250 U.S. History to 1877 (3 Credits)

Historical survey from the Age of Discovery and North American colonization through the creation of the United States to the Civil War and Reconstruction.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

### 3400:251 U.S. History since 1877 (3 Credits)

Survey of United States history from the end of Federal Reconstruction to the present.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

**3400:285 World Civilizations: China (2 Credits)**

Prerequisite: Completion of [3300:112, or 3300:114, or 2020:222] or equivalent and a minimum of Sophomore standing or higher. Courses 285 through 291 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses cannot be used to meet major requirements in History.

**3400:286 World Civilizations: Japan (2 Credits)**

Prerequisite: Completion of [3300:112, or 3300:114, or 2020:222] or equivalent and a minimum of Sophomore standing or higher. Courses 285 through 291 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses cannot be used to meet major requirements in History.

**3400:287 World Civilizations: Southeast Asia (2 Credits)**

Prerequisite: Completion of [3300:112, or 3300:114, or 2020:222] or equivalent and a minimum of Sophomore standing or higher. Courses 285 through 291 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses cannot be used to meet major requirements in History.

**3400:288 World Civilizations: India (2 Credits)**

Prerequisite: Completion of [3300:112, or 3300:114, or 2020:222] or equivalent and a minimum of Sophomore standing or higher. Courses 285 through 291 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses cannot be used to meet major requirements in History.

**3400:289 World Civilizations: Middle East (2 Credits)**

Prerequisite: Completion of [3300:112, or 3300:114, or 2020:222] or equivalent and a minimum of Sophomore standing or higher. Courses 285 through 291 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses cannot be used to meet major requirements in History.

**3400:290 World Civilizations: Africa (2 Credits)**

Prerequisite: Completion of [3300:112, or 3300:114, or 2020:222] or equivalent and a minimum of Sophomore standing or higher. Courses 285 through 291 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses cannot be used to meet major requirements in History.

**3400:291 World Civilizations: Latin America (2 Credits)**

Prerequisite: A minimum of Sophomore standing or higher and [3300:112, or 3300:114, or 2020:222 or equivalent]. Courses 285 through 291 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses cannot be used to meet major requirements in History.

**3400:292 Global Societies: Africa (3 Credits)**

Prerequisites: Sophomore standing and no credit in both World Civ: Africa and Global Societies: Africa. This course surveys the major social, economic, political, and cultural transformations in Africa, and explores interconnected global histories in on regional context.

**Gen Ed:** Tier 3 - Global Diversity

**3400:294 Global Societies: India (3 Credits)**

Prerequisites: Sophomore standing and no credit in World Civilization and Global Societies. This course surveys the major social, economic, political, and cultural transformations in India, and explores interconnected global histories in one regional context.

**Gen Ed:** Tier 3 - Global Diversity

**3400:295 Global Societies: Japan (3 Credits)**

Prerequisites: Sophomore standing and no credit in World Civilization: Japan and Global Societies: Japan. This course surveys the major social, economic, political and cultural transformations in Japan, and explores interconnected global histories in one regional context.

**Gen Ed:** Tier 3 - Global Diversity

**3400:296 Global Societies: Latin America (3 Credits)**

Prerequisites: Sophomore standing and no credit in both World Civilizations: Latin America and Global Societies: Latin America. This course surveys the major social, economic, political, and cultural transformations in Latin America since 1492, and explores interconnected global histories in a regional context.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Global Diversity

**3400:297 Global Societies: Middle East (3 Credits)**

Prerequisites: Sophomore standing and no credit in both World Civilizations: Middle East and Global Societies: Middle East. This course surveys the major social, economic, political, and cultural transformations in the Middle East, and explores interconnected global histories in a regional context.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Global Diversity

**3400:300 Imperial China (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. Selective study of institutional, intellectual, political and artistic developments in Chinese civilization from antiquity to 18th century. Emphasis on general features of traditional Chinese culture.

**3400:301 Modern China (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. This course examines the domestic and global roots of China's 20th century modernization and their relationship to the challenges China now faces.

**3400:303 Modern East Asia (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. Exploration of domestic and global factors that shaped modern East Asia (Japan, China, Korea and Vietnam).

**3400:307 The Ancient Near East (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. Mesopotamia, Egypt; Israel, and neighbors to Persian Empire.

**3400:308 Greece (3 Credits)**

Prerequisite: Minimum of 32 credits or permission of the instructor. Minoans and Mycenaeans; classical Greece to triumph of Macedon.

**3400:310 Historical Methods (3 Credits)**

Introduction to historical research and writing. Required for history major.

**3400:313 Eastern Roman Empire (324-1453) (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Byzantine culture and history from 324 to the fall of 1453.

**3400:317 Roman Republic (3 Credits)**

Prerequisite: Minimum academic standing of a Sophomore or greater. An intensive survey of the Roman Republic. Attention will be given to the nature of the source material, ancient historiography, text criticism and the like.

**3400:318 Roman Empire (3 Credits)**

Prerequisite: Minimum of 32 credits or permission of the instructor. An intensive survey of the Roman Empire. Attention will be given to the nature of the source material, ancient historiography, text criticism and the like.

**3400:319 Medieval Europe, 500-1200 (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Migration of peoples, Carolingian revival, renewed invasions; social, economic and intellectual stirrings lead to the birth of Europe.

**3400:320 Medieval Europe, 1200-1500 (3 Credits)**

Prerequisite: A minimum academic standing of Sophomore or higher. Middle Ages and the middle class; economic and political change, international wars, social unrest and religious crosscurrents.

**3400:321 Europe: Renaissance to Religious Wars, 1350-1610 (3 Credits)**

Prerequisite: A minimum academic standing of Sophomore or higher. Survey of the social, political, economic, religious, and intellectual history of Early Modern Europe from the Italian Renaissance to the early 17th century.

**3400:322 Europe: Absolutism to Revolution, 1610-1789 (3 Credits)**

Prerequisite: A minimum academic standing of Sophomore or higher. Survey of the social, political, economic, religious, and intellectual history of Early Modern Europe from the Thirty Years War to the French Revolution.

**3400:323 Europe from Revolution to World War, 1789-1914 (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Surveys the political, economic, social, and cultural history of modern Europe from the French Revolution to the First World War.

**Gen Ed:** Tier 3 - Critical Thinking

**3400:324 Europe from World War I to the Present (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. A survey of European political and social history from World War I to the present.

**Gen Ed:** Tier 3 - Global Diversity

**3400:325 Women in Modern Europe (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. A survey of the history of women in Europe since 1500, with emphasis on their roles and the changes attendant on modernization.

**3400:330 Modern Africa (3 Credits)**

This course will introduce major themes in modern African history, from the trans-Atlantic, slave trade, through the colonial and post-independence periods.

**3400:335 Russia to 1801 (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Survey of Russian history from Kievan period to death of Paul I, emphasizing development of autocratic government, Russian culture, reigns of Peter and Catherine.

**3400:336 Russia Since 1801 (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Survey of 19th and 20th centuries. Special emphasis on problems of modernization, the revolution and development of communism.

**3400:337 France from Napoleon to DeGaulle (3 Credits)**

Prerequisite: A minimum of Sophomore standing or permission of the instructor. Combines a study of Napoleon and DeGaulle with a survey of the political, economic, social, and cultural/artistic trends of modern French history.

**Gen Ed:** Tier 3 - Global Diversity

**3400:338 England to 1688 (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Survey of English history from the Anglo-Saxon conquest to the Revolution of 1688. Medieval and early modern institutions, social and cultural life.

**3400:339 England Since 1688 (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Survey of English history from 1688 to the present. The reform of English institutions and life, modernization of the economy, the welfare state, society and war.

**3400:340 Selected Topics in History (3 Credits)**

Prerequisite: A minimum academic standing of Sophomore or higher. Includes experimental offerings such as those crossing subject of chronological lines, and subjects not listed in this General Bulletin. See departmental office for current subject.

**3400:341 Islamic Fundamentalism & Revolution (3 Credits)**

Prerequisite: A minimum academic standing of Sophomore or higher. The political and socio-economic roots of Islamic reformism and militancy in the Middle East and North Africa since the 1960s.

**3400:342 The Crusades through Arab Eyes (3 Credits)**

Prerequisite: A minimum academic standing of Sophomore or higher. Political and military struggles, diplomatic practices and intellectual traditions of the Medieval Islamic/Arab world and the Western crusaders.

**3400:345 Native North American History (3 Credits)**

Prerequisite: minimum of 32 credits. The histories of Native Americans from Columbus to the present, emphasizing a half-millennium of adaptive responses to the presence of Europeans in North America.

**3400:350 U.S. Women's History (3 Credits)**

Prerequisite: a minimum of 32 credits History of American women's experiences and exploration of gender as a changing structure shaping American life from the colonial period through the 20th century.

**Gen Ed:** Tier 3 - Domestic Diversity

**3400:351 Global History: Encounters and Conflicts (4 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. This course explores historical encounters between societies to explain the development of the integrated economic, political, and cultural systems presently characterizing the modern world.

**3400:352 The American West (3 Credits)**

Prerequisite: a minimum of 32 credits. Examination of westward movement from revolution to closing of frontier; types of frontiers; impact of west on nation's development.

**3400:354 American Immigration (3 Credits)**

Prerequisite: a minimum of 32 credits. Examination of European migrants to American colonies and United States, their reasons for leaving Europe and coming to America, and their experience after arrival.

**3400:355 American Religious History (3 Credits)**

Prerequisite: a minimum of 32 credits. Addresses critical issues and figures in American religious history from the colonial era to present, including ways ideas have influenced political and judicial discourse.

**3400:356 Sports in American History Since 1865 (3 Credits)**

Prerequisite: a minimum of 32 credits. An examination of the reciprocal relationship between sports and various institutions of society: culture, religion, politics, education, economics, race, ethnicity, diplomacy and gender.

**3400:358 Urban America (3 Credits)**

Prerequisite: a minimum of 32 credits. This course looks at the significance of cities and urban development in shaping American society.

**3400:360 United States Military History (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Survey of United States military history from the colonial era to the present.

**3400:361 African American History, 1492-1877 (3 Credits)**

Prerequisite: Sophomore standing. This course focuses on African American history, culture and heritage from 1492 to 1877.

**3400:362 African American History, 1877 to Present (3 Credits)**

Prerequisite: Sophomore standing. This course focuses on African American history, culture and heritage from 1877 to present.

**3400:363 African American Men's History and Studies (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. This course will examine the experiences of African American Men from historical, socio-economic, philosophical, religious/spiritual, and psychological standpoints.

**3400:371 Selected Topics: North American History (3 Credits)**

Prerequisite: A minimum academic standing of Sophomore or higher. Selected topics addressing the history of North America (from the Rio Grande to the Arctic). Contact the department office concerning specific topics.

**3400:372 Selected Topics: European History (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Selected topics addressing European history from the collapse of the Roman Empire to the present. Contact the department office concerning specific topics.

**3400:373 Selected Topics: Other (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. Selected historical topics on Africa, Asia, Latin America, the ancient world and world history. Contact the department office concerning specific topics.

**3400:377 History of Women in Latin America (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. Survey of changes and continuities in the lives of Latin American women since the colonial period; emphasis on gender, race, class in shaping women's experiences.

**Gen Ed:** Tier 3 - Global Diversity

**3400:378 Spanish Conquest and Colonization of the Americas (3 Credits)**

Prerequisites: A minimum of Sophomore standing or higher, or permission of the instructor. Course examines the conquest, colonization, and three-centuries-long Spanish rule in Latin America since 1492. Emphasis on culture, power inequalities, issues of identity, and memory.

**3400:379 Modern Latin America (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. This course examines the history of Latin America during the national period, ca. 1820s to the present. Focus on politics, economic systems, and nation-state formation.

**3400:381 History of Canada (3 Credits)**

Prerequisite: a minimum of Sophomore standing or permission of the instructor. Survey of Canadian history from the age of the explorers to the present. Special emphasis will be placed on the history of French-Canadians, on economic development and on Canadian-American relations.

**3400:382 The Vietnam War (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. An examination and evaluation of all aspects of the war in Vietnam, political, military, diplomatic and economic, including its impact domestically then and later.

**3400:392 Internship in History (1-3 Credits)**

Prerequisites: 64 credits, History major or minor, prior completion of 16 credits in History (not including Humanities in the Western Tradition or World Civilizations), minimum 2.5 history GPA, and permission of instructor. Individual field experience in applied history. May be repeated up to 6 credits; 4 credits to apply to the 32 credit minimum for a history major.

**3400:395 Modern Iran (3 Credits)**

Prerequisite: A minimum of 32 credits or permission of the instructor. This course on modern Iran explores the country's history of nationalism, identity, gender, and religion, and its place in world history.

**Gen Ed:** Tier 3 - Global Diversity

**3400:396 Iraq in Historical Perspective (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. This course will offer a complex and nuanced look into the history of Iraq and will situate current events firmly in their historical context.

**3400:397 Individual Study in History (1-3 Credits)**

(May be repeated for a total of four credits) Prerequisite: Permission. For individual study or research in history, including special projects, summer study tours or specialized training.

**3400:400 Gender and Culture in China (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. This course examines the dynamic between gender and culture from late imperial to post-socialist China, with connections drawn to public policies in different periods.

**3400:401 Japan & the Pacific War, 1895-1945 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. The rise of Japanese militarism, Japan's drive to create an empire in East and Southeast Asia, 1895-1945, and its role in the Pacific War, 1937-45.

**3400:404 Studies in Roman History (3 Credits)**

Prerequisite: Minimum of 48 credits or permission of the instructor. Concentrated investigation of selected topics, such as imperialism in middle and late Republic, the age of Augustus, or the fall of western Empire.

**3400:409 Imperial Spain, 1469-1700 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. This course examines the rise and fall of Spain as the first world power. It will cover Spanish political, cultural, and social history, 1469-1700.

**3400:410 History and Film (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Repeatable once with permission. Examines films as historical experiences, historical events, and artifacts of history. Themes and foci will vary.

**3400:416 Modern India (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. History of the Indian subcontinent from c. 1500 with emphasis on India society and culture, British imperialism, and the emergence of Indian nationalism.

**3400:417 Latin America and the United States (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Inter-American relations viewed from Latin American and U.S. perspectives; U.S. policy, imperialism, economic and cultural influences.



**3400:418 History of Brazil Since 1500 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Survey of the economic, political, social and cultural history of Brazil since 1500.

**3400:424 The Renaissance (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. The age of transition from the Middle Ages to modern times (1350-1600). Special emphasis on intellectual trends, the development of humanism, and the fine arts.

**3400:425 The Reformation (3 Credits)**

Prerequisite: Completion of a minimum of 48 credits or higher. Europe in 16th century; its religious, cultural, political and diplomatic development, with special emphasis on Protestant, Anglican and Catholic reformations.

**3400:429 Europe in the French Revolutionary Era-1789-1815 (3 Credits)**

Prerequisite: a minimum of Junior standing or permission of the instructor. Development of Revolution; Napoleon's regime and satellites.

**3400:438 Nazi Germany (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. This course covers the social, economic, and political history of Germany from World War I to 1945 with emphasis on the Third Reich.

**3400:440 Tudor & Stuart Britain, 1485-1714 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. An examination of the development of, and increasing links between the British kingdoms in the early modern period, with emphasis on culture, politics, and religion.

**3400:443 Churchill's England (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. An examination of the changes that Britain experienced during the life of Winston Churchill, 1874-1965. Emphasis is on cultural, social, and political developments.

**3400:451 Colonial American History (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. This course covers the history of colonial America from the first European contact in the Americas in 1492 to the onset of the American Revolution.

**3400:452 American Revolutionary Era (3 Credits)**

Prerequisite: Completion of a minimum of 48 credits or higher. The struggle for the rights of colonists and independence; the impact of war on American society and the creation of republican institutions.

**3400:453 The Early American Republic (3 Credits)**

Prerequisite: Completion of a minimum of 48 credits or higher. The evolution of the American republic from its early beginnings after the American Revolution to the antebellum era. Emphasis upon political, social, and cultural developments.

**3400:454 Civil War & Reconstruction, 1850-1877 (4 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Sectionalism, slavery and the causes of the Civil War; wartime activities of the Union and Confederacy; leading personalities; problems of reconstruction and the new Union.

**3400:455 Origins of Modern America, 1877-1917 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. United States from Reconstruction Era to World War I (1877-1920); emphasis on political responses to rise of an industrialized-urbanized society, the populist and progressive movements.

**3400:456 America in World Wars & Depression, 1917-1945 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. World War I and Versailles; the 1920s, the Great Depression and the New Deal; World War II.

**3400:457 The United States since 1945 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Nuclear age, cold war, foreign policy and domestic affairs to present. Social, political, constitutional, diplomatic, cultural and economic changes since 1945.

**3400:461 The United States as a World Power (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. The course analyzes the emergence and functioning of the United States as a world power, with particular emphasis on the 20th century.

**3400:463 United States Constitutional History Since 1870 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. This course examines the evolution of constitutional government from the drafting of the U.S. Constitution (1787) to present.

**3400:465 American Economy Since 1900 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Survey of economic developments since 1900; topics include agriculture, business and labor. Special emphasis on role of big business and evolution of monetary and fiscal policy.

**3400:467 History of American Pop Culture (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Historical analysis of mass cultural phenomena and the social experiences associated with mass technologies that transformed modern America life in the 19th and 20th centuries.

**3400:468 African-American Social & Intellectual History (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Examination of black thought and activities reflective of African-American culture, conditions facing black people within America and efforts toward coordinated black activity.

**3400:469 African-American Women's History (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Study of black American women's lives from colonial times to the present featuring autobiographical. Fictional and secondary works authored by black women.

**3400:470 Ohio History (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Political, social, economic and intellectual history of Ohio, with special emphasis on Ohio's relationship to Old Northwest and to the nation.

**3400:471 American Environmental History (3 Credits)**

Prerequisite: a minimum of 48 credits completed or permission of the instructor. Utilization, conservation of natural resources from beginnings of American society to present; combination of economic, technological history of extensive treatment of public policy, environmental issues.

**3400:475 Mexico (3 Credits)**

History of Mexico from Indian civilizations to present with emphasis on relations with United States; social and political ramifications of the 20th Century Mexican revolution.

**3400:476 Central America & the Caribbean (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Selected aspects of the histories of Central American and Caribbean countries with emphasis on populist and peasant movements, political reform, social revolution, economic and under development, and relations with the United States.

**3400:483 History in Video Games (3 Credits)**

Prerequisite: Sophomore standing. Examines the presentation of history in video games analyzing them for accuracy, bias, structural limitations, and utility as teaching tools.

**3400:484 Museums and Archives (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. This course will focus on the work of history museums, historical societies and historic house museums and archives.

**3400:485 History, Communities, and Memory (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Course examines the interactions between the work of academic historians and the public in areas such as local history, monuments, oral history, film and the Internet.

**3400:487 Science and Technology in World History (3 Credits)**

Prerequisite: Completion of a minimum of 48 credits or higher. This course examines the development and diffusion of science and technology in human history, its impact on society, culture, and daily life.

**3400:489 Ottoman State and Society (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Explores political, economic, and social dynamics of one of the world's most enduring and expansive multiethnic empires.

**Gen Ed:** Tier 3 - Global Diversity

**3400:491 Honors Seminar in History (3 Credits)**

Prerequisite: Permission of department head or instructor. Selected readings; writing of research paper. For student seeking to graduate with honors in history and for student in Honors Program.

**3400:492 Honors Project in History (1-3 Credits)**

Prerequisite: 64 credits. An individual research project relevant to history, supervised by a member of the Department of History, culminating in an undergraduate thesis.

**3400:493 Special Studies: North American History (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Special studies in the history of North America (Rio Grande to Arctic). See department office for information on particular offerings.

**3400:494 Workshop in History (1-3 Credits)**

(May be repeated) Group studies of special subjects pertaining to history. May be used for elective credit only. May not be used to meet undergraduate or graduate major requirements in history.

**3400:495 Special Studies: European History (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Special studies in European history from the fall of the Roman Empire to the present. See department office for information on particular offerings.

**3400:496 Special Studies in History: Other (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Special studies in the history of Latin America, Asia, Africa or the Pacific. See department office for information on particular offerings.

**3400:498 Race, Nation, and Class in the Middle East (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. This course analyzes identity politics and the development of the ideas of race, nation, and class in the Middle East from a historical perspective.

**3400:499 Women and Gender in Middle Eastern Societies (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. This course explores the multi-layered processes and dimensions, including texts, cultural values and practices, institutions, and events, which have shaped women's experiences in the Middle East.

**Gen Ed:** Tier 3 - Global Diversity

## History Asian Studies, Certificate

### Certificate in History – Asian Studies (340001C)

**Program Contact**

*Dr. A Martin Wainwright*  
*Department Chair, History*  
 330-972-6512  
 mwainwright@uakron.edu

The following information has official approval of the **Department of History** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in History – Asian Studies" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. Students will need to complete the equivalent of a fourth semester level language class (South or East Asian language).

## Summary

Code	Title	Hours
Electives		15
Total Hours		15

## Electives

Code	Title	Hours
<b>Select 15 credits from at least three of the following areas:</b>		<b>15</b>
<i>Geography</i>		
3350:360	Asia	
<i>Geology</i>		
3370:141	Natural Environment of China	
3370:455	Field Studies in Geology	
<i>History</i>		
3400:200	Empires of the Ancient World	
3400:285	World Civilizations: China <sup>1</sup>	
3400:286	World Civilizations: Japan <sup>1</sup>	
3400:287	World Civilizations: Southeast Asia <sup>1</sup>	
3400:288	World Civilizations: India <sup>1</sup>	
3400:300	Imperial China	
3400:301	Modern China	
3400:303	Modern East Asia	
3400:382	The Vietnam War	
3400:400	Gender and Culture in China	
3400:401	Japan & the Pacific War, 1895-1945	
3400:416	Modern India	
3400:493	Special Studies: North American History	
<i>Japanese</i>		
3560:210	Japanese Culture through Film	
<i>Art</i>		
7100:401	Special Topics: History of Art <sup>2</sup>	

<i>Dance</i>	
7900:111	Topics in World Dance
Total Hours	15

- <sup>1</sup> Only one World Civilization class will be counted toward the certificate credits unless the course involves travel abroad. World Civilization classes do fulfill a General Education requirement.
- <sup>2</sup> Select one of the following topics; The Art of India, The Art of China, The Art of Korea and Japan, or The Art of Buddhist Japan.

# History Middle Eastern Studies, Certificate

## Certificate in History – Middle Eastern Studies (340002C)

**Program Contact**  
 Dr. A Martin Wainwright  
 Department Chair, History  
 330-972-6512  
 mwainwright@uakron.edu

The following information has official approval of the **Department of History** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in History – Middle Eastern Studies" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. Students will need to complete the equivalent of a fourth semester level language class (modern South or East Asian language for a Middle Eastern language) for the Middle Eastern Studies Certificate. Only one ancient world course will count towards the certificate.

### Summary

Code	Title	Hours
Electives		15
Total Hours		15

### Electives

Code	Title	Hours
<b>Complete 15 credits from at least three of the following areas:</b>		<b>15</b>
<i>Women's Studies</i>		
3001:485	Special Topics in Women's Studies	
<i>International Development</i>		
3004:201	Introduction to International Development	
<i>Classics</i>		
3200:220	Introduction to the Ancient World	
<i>Anthropology</i>		
3230:357	Magic, Myth, & Religion	
3230:370	Globalization and Culture	
3230:416	Anthropology of Sex and Gender	
3230:420	The Anthropology of Food	

3230:457	Medical Anthropology
3230:472	Special Topics: Anthropology
<i>Archaeology</i>	
3240:360	Ancient Near Eastern Archaeology
<i>Economics</i>	
3250:461	Principles of International Economics
<i>English</i>	
3300:362	World Literatures
3300:389	Special Topics: Literature & Language.
<i>Geography</i>	
3350:250	World Regional Geography
3350:275	Geography of Cultural Diversity
3350:497	Regional Field Studies
<i>Geology</i>	
3370:498	Special Topics in Geology
<i>History</i>	
3400:289	World Civilizations: Middle East
3400:307	The Ancient Near East
3400:340	Selected Topics in History <sup>1</sup>
3400:341	Islamic Fundamentalism & Revolution
3400:342	The Crusades through Arab Eyes
3400:351	Global History: Encounters and Conflicts
3400:395	Modern Iran
3400:493	Special Studies: North American History <sup>2</sup>
3400:496	Special Studies in History: Other
3400:499	Women and Gender in Middle Eastern Societies
<i>Modern Languages</i>	
3501:210	Arabic Culture through Film
3501:304	Cultural Readings in Arabic
<i>Philosophy</i>	
3600:340	Eastern Philosophy
<i>Political Science</i>	
3700:310	International Politics & Institutions
3700:326	Politics of Developing Nations
3700:328	American Foreign Policy Process
3700:392	Selected Topics in Political Science
or 3700:405	Politics in the Middle East
3700:405	Politics in the Middle East
3700:445	Al Qaeda and ISIS
<i>Sociology</i>	
3850:421	Race & Ethnic Relations
<i>Accountancy</i>	
6200:408	International Financial Reporting & Analysis
<i>Finance</i>	
6400:323	International Business Law
6400:437	International Business Finance
<i>Management</i>	
6500:457	International Management
<i>International Business</i>	
6800:305	International Business
6800:421	Foreign Market Entry
6800:496	Special Topics: International Business

Art	
7100:401	Special Topics: History of Art
Child & Family Development	
3760:446	Culture, Ethnicity & Family
Communication	
7600:325	Intercultural Communication
Study Abroad <sup>3</sup>	
Total Hours	15

- <sup>1</sup> Select one of the following topics; A History of Iraq and States, or Statelessness in the Middle East: Kurds and Palestinians
- <sup>2</sup> Select one of the following topics; Ottoman State and Society 1300-1922, or Women and Gender in the Middle East
- <sup>3</sup> The program strongly encourages study abroad, and will offer additional credits, to be applied toward the certificate, for certain courses that require overseas study in a country of the student's focus (Asia, Middle East) or for other individual experiences abroad.

## History, BA

### Bachelor of Arts in History (340000BA)

More on the History major (<https://www.uakron.edu/history/undergraduate/history-major/>)

In addition to the knowledge conveyed through the study of the past, students of history obtain practical skills that empower them no matter what career direction they take. History students learn to read widely and critically. They develop analytical and writing skills and gain experience with oral communication, all of which can be employed in any career or profession. Tens of thousands of attorneys, teachers, civic and business leaders, military professionals, and others have developed successful careers as a result of their decision to study history. The intellectual skills and cultural sensitivity that history teaches can be applied in all walks of life. People who study history learn to ask questions, think for themselves, and become better citizens.

The following information has official approval of **The Department of History** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	History Core	3
	History Distribution Requirements	18
	History Electives	11

Additional Credits for Graduation *	40
Total Hours	120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirements

Code	Title	Hours
<b>Degree requirements in Arts &amp; Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.</b>		
<i>Foreign Language</i>		<b>14</b>
101	Beginning I	
102	Beginning II	
201	Intermediate I	
202	Intermediate II	
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

- Upper-level (300/400) courses both in and outside of the student's major;
- or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## History Core

Code	Title	Hours
3400:310	Historical Methods	3
Total Hours		3

## History Distribution Requirements

**Note: A minimum of two courses from two different fields must be taken at the 400 level**

Code	Title	Hours
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**Select at least six credits in each of the following fields:**

*Field I (United States):* 6

3400:250	U.S. History to 1877	
3400:251	U.S. History since 1877	
3400:345	Native North American History	
3400:350	U.S. Women's History	
3400:352	The American West	
3400:355	American Religious History	
3400:360	United States Military History	
3400:371	Selected Topics: North American History	
3400:382	The Vietnam War	
3400:417	Latin America and the United States	
3400:451	Colonial American History	
3400:452	American Revolutionary Era	
3400:453	The Early American Republic	
3400:454	Civil War & Reconstruction, 1850-1877	
3400:455	Origins of Modern America, 1877-1917	
3400:456	America in World Wars & Depression, 1917-1945	
3400:457	The United States since 1945	
3400:461	The United States as a World Power	
3400:463	United States Constitutional History Since 1870	
3400:467	History of American Pop Culture	
3400:470	Ohio History	
3400:471	American Environmental History	
3400:484	Museums and Archives	
3400:485	History, Communities, and Memory	
3400:487	Science and Technology in World History	
3400:493	Special Studies: North American History	

*Field II (Europe):* 6

3400:210	Humanities in the Western Tradition from Ancient Times to 1500	
3400:319	Medieval Europe, 500-1200	
3400:308	Greece	
3400:317	Roman Republic	
3400:318	Roman Empire	
3400:319	Medieval Europe, 500-1200	
3400:320	Medieval Europe, 1200-1500	
3400:321	Europe: Renaissance to Religious Wars, 1350-1610	
3400:322	Europe: Absolutism to Revolution, 1610-1789	
3400:323	Europe from Revolution to World War, 1789-1914	
3400:337	France from Napoleon to De Gaulle	
3400:338	England to 1688	

3400:339	England Since 1688	
3400:351	Global History: Encounters and Conflicts	
3400:372	Selected Topics: European History (Balkans: 1875 to Present)	
3400:404	Studies in Roman History	
3400:409	Imperial Spain, 1469-1700	
3400:424	The Renaissance	
3400:425	The Reformation	
3400:429	Europe in the French Revolutionary Era-1789-1815	
3400:438	Nazi Germany	
3400:440	Tudor & Stuart Britain, 1485-1714	
3400:443	Churchill's England	
3400:483	History in Video Games	
3400:489	Ottoman State and Society	
3400:495	Special Studies: European History	
<i>Field III (Global, Latin America, Africa, Asia, Middle East):</i>		6
3400:200	Empires of the Ancient World	
3400:221	Humanities in the World since 1300	
3400:292	Global Societies: Africa	
3400:294	Global Societies: India	
3400:295	Global Societies: Japan	
3400:296	Global Societies: Latin America	
3400:297	Global Societies: Middle East	
3400:300	Imperial China	
3400:301	Modern China	
3400:303	Modern East Asia	
3400:351	Global History: Encounters and Conflicts	
3400:373	Selected Topics: Other	
3400:377	History of Women in Latin America	
3400:378	Spanish Conquest and Colonization of the Americas	
3400:379	Modern Latin America	
3400:382	The Vietnam War	
3400:396	Iraq in Historical Perspective	
3400:400	Gender and Culture in China	
3400:401	Japan & the Pacific War, 1895-1945	
3400:410	History and Film	
3400:416	Modern India	
3400:417	Latin America and the United States	
3400:418	History of Brazil Since 1500	
3400:475	Mexico	
3400:483	History in Video Games	
3400:489	Ottoman State and Society	
3400:496	Special Studies in History: Other	
3400:498	Race, Nation, and Class in the Middle East	
3400:499	Women and Gender in Middle Eastern Societies	
Total Hours		18

## History Electives

Code	Title	Hours
<b>Select 11 credits of the following:</b>		<b>11</b>
<i>Courses listed below count towards General Education requirements</i>		

3400:200	Empires of the Ancient World
3400:210	Humanities in the Western Tradition from Ancient Times to 1500
3400:221	Humanities in the World since 1300
3400:250	U.S. History to 1877
3400:251	U.S. History since 1877
3400:323	Europe from Revolution to World War, 1789-1914
3400:350	U.S. Women's History
Total Hours	11

## History, Minor

### Minor in History (340000M)

#### Program Contact

Rose Eichler  
Professor, History  
330-972-6760  
rteichl@uakron.edu

The following information has official approval of the **Department of History** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in History" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. A minimum of 10 credits must be at the 300/400 level. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		18
Total Hours		18

## Required Courses

Code	Title	Hours
<b>Complete 18 credits in the following areas <sup>1</sup></b>		<b>18</b>
<i>Field One-U.S. &amp; Canada</i>		
Select a minimum of one of the following courses:		
3400:250	U.S. History to 1877	
3400:251	U.S. History since 1877	
3400:345	Native North American History	
3400:350	U.S. Women's History	
3400:352	The American West	
3400:354	American Immigration	
3400:355	American Religious History	
3400:356	Sports in American History Since 1865	
3400:358	Urban America	
3400:360	United States Military History	
3400:361	African American History, 1492-1877	
3400:362	African American History, 1877 to Present	

3400:371	Selected Topics: North American History
3400:381	History of Canada
3400:382	The Vietnam War
3400:417	Latin America and the United States
3400:451	Colonial American History
3400:452	American Revolutionary Era
3400:453	The Early American Republic
3400:454	Civil War & Reconstruction, 1850-1877
3400:455	Origins of Modern America, 1877-1917
3400:456	America in World Wars & Depression, 1917-1945
3400:457	The United States since 1945
3400:461	The United States as a World Power
3400:463	United States Constitutional History Since 1870
3400:465	American Economy Since 1900
3400:467	History of American Pop Culture
3400:468	African-American Social & Intellectual History
3400:469	African-American Women's History
3400:470	Ohio History
3400:471	American Environmental History
3400:484	Museums and Archives
3400:485	History, Communities, and Memory
3400:487	Science and Technology in World History
3400:493	Special Studies: North American History

#### *Field Two-Europe*

Select a minimum of one of the following courses:

3400:319	Medieval Europe, 500-1200
3400:320	Medieval Europe, 1200-1500
3400:321	Europe: Renaissance to Religious Wars, 1350-1610
3400:322	Europe: Absolutism to Revolution, 1610-1789
3400:323	Europe from Revolution to World War, 1789-1914
3400:324	Europe from World War I to the Present
3400:325	Women in Modern Europe
3400:335	Russia to 1801
3400:336	Russia Since 1801
3400:337	France from Napoleon to DeGaulle
3400:338	England to 1688
3400:339	England Since 1688
3400:372	Selected Topics: European History <sup>2</sup>
3400:409	Imperial Spain, 1469-1700
3400:410	History and Film
3400:424	The Renaissance
3400:425	The Reformation
3400:429	Europe in the French Revolutionary Era-1789-1815
3400:438	Nazi Germany

#### *Field Three-Ancient, Asia, Latin America & Middle East*

Select a minimum of one of the following courses:

3400:200	Empires of the Ancient World
3400:300	Imperial China
3400:301	Modern China
3400:303	Modern East Asia
3400:307	The Ancient Near East
3400:308	Greece

3400:313	Eastern Roman Empire (324-1453)
3400:317	Roman Republic
3400:318	Roman Empire
3400:341	Islamic Fundamentalism & Revolution
3400:342	The Crusades through Arab Eyes
3400:351	Global History: Encounters and Conflicts
3400:373	Selected Topics: Other <sup>3</sup>
3400:377	History of Women in Latin America
3400:378	Spanish Conquest and Colonization of the Americas
3400:379	Modern Latin America
3400:381	History of Canada
3400:395	Modern Iran
3400:396	Iraq in Historical Perspective
3400:400	Gender and Culture in China
3400:401	Japan & the Pacific War, 1895-1945
3400:404	Studies in Roman History
3400:416	Modern India
3400:417	Latin America and the United States
3400:418	History of Brazil Since 1500
3400:476	Central America & the Caribbean
3400:489	Ottoman State and Society
3400:496	Special Studies in History: Other
3400:498	Race, Nation, and Class in the Middle East
3400:499	Women and Gender in Middle Eastern Societies
<hr/>	
Total Hours	18

<sup>1</sup> At least 10 credits must be at the 300/400-level

<sup>2</sup> Select Balkans: 1875 to present

<sup>3</sup> Select Latin American Popular Culture

## LeBron James Family Foundation School of Education

### School Requirements

#### Selection, Admission, Retention, and Teacher Licensure

The LeBron James Family Foundation School of Education has selective admission, retention, and graduation requirements for the completion of a program at The University of Akron.

For all students applying to a School of Education Professional Education program, the admission and degree requirements outlined in the current UA Undergraduate Bulletin will be used to determine admission (or readmission) and degree requirements for all programs.

From admission through graduation, all decisions are made following the School's or department's approved criteria. Prior to admission to a program, Ohio requires all colleges and universities preparing teachers and educational personnel to assess students in the areas of verbal communication and academic achievement. The University of Akron's School of Education admission procedures are designed to establish admission criteria, provide for assessments, allow for skills enhancement, reassessment and reapplication where appropriate.

**General Education Requirements:** To be admitted to the LeBron James Family Foundation School of Education teacher education programs, all

students must be able to meet the following criteria: A student must have completed at least 29 semester hours of coursework. This coursework must include a minimum of three (3) semester hours in each of the required courses in mathematics, natural science, social science, and public/oral communications, and six (6) semester hours in English composition. Appropriate General Education equivalencies for transfer students will be determined by the Transfer and Adult Student Enrollment Center. The remaining 10 semester hours must consist of general education coursework that meets the requirements of the University and the admission requirements of the department's program studies area.

**Grade-Point Average:** For admission, a grade point average of 2.5 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.

**Academic Achievement:** Competency in math skills as evidenced by: a composite score of 21 or higher on the ACT; 980 (Math and Verbal) on the SAT; a grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement. Competency in reading comprehension and writing as evidenced by: a composite score of 21 or higher on the ACT; 980 (Math and Verbal) on the SAT or a grade of "B" or better in a course that meets the University's General Education English Composition I requirement.

**Bureau of Criminal Investigation Clearance:** A signed Criminal Background Check Acknowledgement Form must be submitted and is included in the School of Education Application. Current Ohio Bureau of Criminal Identification and Investigation (BCII) and Federal Bureau of Investigation (FBI) background checks are required before you may participate in coursework with field experience.

**School of Education Application:** All students must complete the School of Education application (<https://www.uakron.edu/education/academic-programs/how-to-apply.dot>). Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. **Undergraduate** students should apply during the semester in which all School of Education pre-admission requirements will be met.

**Admission Timeline:** Admission to a School of Education Professional Education program is in effect for five years from the date of admission. All criteria and procedures regarding selective admission and retention are available in

The LeBron James Family Foundation School of Education  
Zook Hall 002  
The University of Akron  
Akron, OH 44325-4201  
(330) 972-7750  
[www.uakron.edu/education/](http://www.uakron.edu/education/)

### Application for Admission to Professional Education Programs

All students are required to have completed the application process no less than six weeks prior to the semester in which they wish to begin coursework in the School of Education. Additional information and applications are available on the LeBron James Family Foundation School of Education website at <https://www.uakron.edu/education/academic-programs/how-to-apply.dot>

**Program Area of Study:** All students are expected to comply with requirements specified by the program to which they are applying. These are available in the Student Services Office.

**Advisement:** All students will be assigned an advisor and will need to complete an individualized Program Course Distribution (PCD) with their advisor. This PCD must be completed during the first semester of admission. Students are encouraged to see their program advisor when necessary to assure they are maintaining progress in their program.

**Retention:** Retention of students in each program will be evaluation based. Students will have opportunities to upgrade their skills and achievement in areas where such needs may exist. Completion of program requirements will be reviewed by the student and faculty advisor. Approval to student teach is contingent on the student's progress through the program of study with satisfactory grades. Graduation is contingent on completion of coursework, student teaching, GPA of 2.50 overall, 2.50 in education classes, and 2.50 in the student's major.

**Licensure:** After graduation, students may apply for licensure through the Ohio Department of Education. The State of Ohio requires all applicants for licensure to submit a current BCII/FBI Clearance. A BCII/FBI Clearance is valid for 12 months from the date of issue. Ohio also requires all applicants for licensure to pass appropriate examination(s) for intended area(s) of licensure. Information about specific licenses can be obtained from the School of Education.

**Transfer Students:** Transfer students will be expected to meet the same admission standards as University of Akron students.

**Post-Baccalaureate Students:** Qualified post-baccalaureate students seeking licensure will be admitted to the LeBron James Family Foundation School of Education and to the appropriate program once they meet all admission requirements.

## Bachelor's Degrees

The Professional Education Program prepares students to teach in one or more of the following areas/fields: primary inclusive teacher preparation (age 3 through grade 5); middle childhood (grades 4 through 9) dual licensure with intervention specialist; the conventional academic fields found in programs for adolescent to young adult students (grades 7 through 12); in special education as an intervention specialist for early childhood (P-3 mild/moderate/intensive); mild/moderate (K-12); or moderate/intensive (K-12); and multi-age (grades PK through 12). To qualify for the bachelor's degree, the minimum credits as required by the student's degree program at the time of admission with a grade-point average of 2.50 overall, 2.50 in education classes, and 2.50 in the student's major must be completed.

The specific subjects required for degrees in certain fields are set forth in subsequent pages. In all cases, the requirements include courses in general education, professional education and content areas.

The Bachelor of Arts in Education degree is granted to those whose major is in one of the academic fields. The Bachelor of Science in Education is granted to those whose major is in the other special fields or in early childhood inclusive or middle childhood education.

## Professional Education Programs

The conceptual framework theme, "Educator as Decision Maker," is central to The University of Akron's Professional Education Program. This was chosen because the complexity of teaching is increasing and the professional knowledge base is growing. Decision-making is

stressed in the standards-based programs that prepare teachers and other school personnel for professional practice. Initial professional education programs are aligned with the Ohio Standards for the Teaching Profession, and Specialized Professional Association Standards. Advanced Programs for practicing teachers are aligned with the Ohio Standards for the Teaching Profession. For more complete information about the professional education program, consult the School of Education at (330)972-7750.

Students must complete appropriate professional education courses with grades of 'C' or better before progressing through the program.

## Professional Preparation

Throughout their program, teacher candidates take a combination of core courses, field experiences, and courses in their program studies area. Students should note the sequence of core and program courses. The core courses cover the knowledge base that is common for all teachers, regardless of their teaching field. The field experiences provide teacher candidates with experience in schools from the beginning of their program. Additionally during their field and clinical experiences, teacher candidates learn to apply what they are learning in courses.

Program content area courses are related to teacher candidates' intended area of licensure. In addition, teacher candidates have a faculty advisor to help plan what to study and to review what has been accomplished.

The culminating experience for teacher candidates is student teaching. Under the supervision of a team of college faculty and a classroom teacher, each student teacher begins to put newly-developed competencies into practice.

For candidates seeking to graduate without licensure, substitute courses for this culminating experience of student teaching and colloquium will be determined with recommendation by the advisor and subject to approval by the Dean to assure that candidates meet an equivalent number of Education course hours for the program. Candidates must meet all other program requirements. If the student wishes to seek licensure after graduation, the student would need to apply to be admitted to the appropriate program. The student will be required to complete all necessary requirements for licensure in place at the time admission.

## Clinical and Field-Based Experiences

All teacher candidates are required to participate satisfactorily in clinical and field-based experiences prior to recommendation for licensure to teach in Ohio. These clinical and field-based experiences are designed to provide teacher candidates with the opportunity to apply theory and skills related to their areas of licensure in diverse clinical and field-based settings. Clinical experiences are those planned activities in which professional education students apply the principles of teaching.

## Student Teaching

Student teaching is an all-day, full-time, planned teaching experience for 16 weeks in an approved public or private school. Placements are made in schools selected and supervised by the School of Education in collaboration with school districts and faculty.

All teacher candidates must have an approved student teaching application on file to be considered for placement.

To qualify for student teaching, teacher candidates must have a 2.50 average overall, a "C" or better in professional education classes, a minimum of a 2.50 and/or a "C" or better in the teacher candidate's



major, and in methods courses as defined by departments. Satisfactory completion of field and pre-clinical experience is also required before student teaching.

## Licensure

Every teacher in Ohio public schools is required to have a teaching license covering the fields in which teaching is being done. This license is issued by the Ohio Department of Education upon recommendation of the School of Education. The teacher candidate must provide evidence of a current BCII/FBI Clearance, must pass appropriate examination(s) required in Ohio, complete the appropriate program requirements successfully, and be recommended for a teaching license.

## Endorsements

### TESOL Endorsement (Teaching English to Speakers of Other Languages)

This program introduces teacher candidates to the key issues in teaching English to non-native speakers through coursework in linguistics, second language theory and methods, and related disciplines.

Teacher candidates seeking this endorsement must have studied a foreign language at some time during their academic career.

Students who do not have English as a native language must demonstrate adequate proficiency in English with a valid TOEFL score of 580 or above and a score of 240 or above on the TSE (Test of Spoken English).

- AYA Chemistry Licensure, BA (p. 169)
- AYA Chemistry/Earth Licensure, BA (p. 171)
- AYA Chemistry/Physics Licensure, BA (p. 172)
- AYA Earth Science Licensure, BA (p. 174)
- AYA Earth Science/Physics Licensure, BA (p. 176)
- AYA Integrated Language Arts, BA (p. 178)
- AYA Integrated Mathematics, BA (p. 179)
- AYA Integrated Science Licensure, BA (p. 181)
- AYA Integrated Social Studies, BA (p. 183)
- AYA Life Science Licensure, BA (p. 185)
- AYA Life/Biology-Chemistry Licensure, BA (p. 186)
- AYA Life/Biology-Physics Licensure, BA (p. 188)
- AYA Physics Licensure, BA (p. 190)
- Early Childhood Inclusive Teacher Preparation, BS (p. 192)
- Early Childhood Intervention Specialist, BS (p. 193)
- Middle Level Education, BS (p. 195)
- Middle Level Education, Dual Licensure, BS (p. 198)
- Mild/Moderate Intervention Specialist, BS (p. 200)
- Moderate/Intensive Intervention Specialist, BS (p. 202)

## Cooperative Education (5000)

### 5000:301 Cooperative Education (0 Credits)

(May be repeated) For cooperative education students only. Work experience in business, industry or governmental agency. Comprehensive performance evaluation and written report required.

## Educational Foundations and Leadership (5100)

### 5100:150 Democracy & Education (3 Credits)

Based on an interdisciplinary inquiry, this course examines varied theories and practices of democratic education.

### 5100:200 Introduction to Education (3 Credits)

Prerequisite: 13-15 sem. hrs. of specific GenEd courses; FBI/BCI background checks. Introduction to the teaching profession designed to explore the purposes of schools in society and what is required to be an effective teacher today. This course will include 10 field hours of field observation in an urban setting.

### 5100:205 Fundamental Educational Computer Skills (1 Credit)

Elective Course: Computer skills for education majors with little or no computer experience. Includes word processing, databases, graphics and communications. Cannot substitute for any required course.

### 5100:210 Characteristics of Learners (3 Credits)

Prerequisite: Completion of all LBJFF School of Education program admission requirements; Corequisite: 5100:211. Describe cognitive, psychosocial, physical, language, and moral development of learners Pre-K through adult. Identifies learner needs, roles of teachers and schools in fostering optimal development. (10 hours of field experience included.)

### 5100:211 Teaching & Learning Strategies (3 Credits)

Prerequisite: Completion of all LBJFF School of Education admission requirements. Corequisite: 5100:210. From course content and activities, students will recognize, select, and practice various instructional models. Students will acquire and apply appropriate learning and motivational strategies. (10 hours of field experience included.)

### 5100:220 Educational Psychology (3 Credits)

Prerequisite: 13-15 sem. hrs. of specific GenEd courses; 5100:200 (may be taken as prerequisite or corequisite); FBI/BCI background checks. Focuses on the developmental influences and characteristics of learners, and psychological principles pertaining to teaching and learning processes, motivation and self-regulation in learners.

### 5100:300 Educational Equity and Excellence in a Culturally Pluralistic Society (3 Credits)

Prerequisites: 5100:200, 220, 5500:230, 5610:225. Corequisite with or prerequisite to 5500:360. Engages teacher candidates in inquiry-based seminars and service learning that facilitate their developing pedagogical competence implementing equity and excellence in education.

### 5100:330 Early Adolescent Learner (3 Credits)

Study of issues in adolescent development, particularly as it relates to educational settings. Physical, cognitive, language, emotional, social, and moral development in learners 8-14 years old.

### 5100:410 Professional Issues in Education (3 Credits)

Prerequisites: 5500:310, 5500:311, 5500:320, 5500:330, and admission to the LBJFF School of Education. Course work applies social and philosophical foundations of education to current and historical issues in education with attention to roles and responsibilities of contemporary teachers.

### 5100:420 Introduction to Instructional Computing (3 Credits)

Prepares the student in the use of instructional technologies in educational and business settings. Segments of the course are offered in an online format.

**5100:430 Senior Honors Project: Foundations (1-6 Credits)**

(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.

**5100:480 Special Topics: Educational Foundations (1-4 Credits)**

(May be repeated with a change in topic) Prerequisite: Permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

**5100:490 Workshop: Educational Foundations & Leadership (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

**5100:491 Workshop: Educational Foundations & Leadership (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

**5100:492 Workshop: Educational Foundations & Leadership (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

**5100:494 Educational Institutes in Educational Foundations & Leadership (1-4 Credits)**

Special course designed as in-service upgrading programs.

**5100:497 Independent Study (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: Permission of department head and instructor. Specific area of study determined in accordance with program and professional goals.

**5700:480 Special Topics: Educational Administration (1-4 Credits)**

(May be repeated with a change in topic) Prerequisite: Permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

**5700:492 Workshop: Educational Foundations & Leadership (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

**5700:493 Workshop: Educational Foundations & Leadership (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

**5700:494 Educational Institutes: Education Foundations & Leadership (1-4 Credits)**

Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.

## Early Childhood Education (5200)

**5200:100 Orientation to Early Childhood Specialist (0 Credits)**

Corequisite: 5100:200. Orientation to the information and strategies necessary for a student to be successful in the program, including portfolio development.

**5200:200 Pre-Kindergarten Participation I (1 Credit)**

Prerequisite: 3760:265, 2200:245. Planned field experience in a pre-kindergarten infant/toddler classroom where students work with children age birth to 3 years both individually and in small groups.

**5200:215 The Child, the Family, and the School (3 Credits)**

Prerequisites: 5100:220, 5610:225. The purpose of this course is to learn about why we create reciprocal working relationships with parents, and methods of creating these types of relationships. (10 field/clinical hours).

**5200:220 Visual Arts Culture in Early Childhood (1 Credit)**

Prerequisite: admission to Teacher Education Program. Art education concepts, structures, and knowledge base to provide curricular opportunities for education majors to develop as creative problem solvers in an elementary school setting. First offered Fall 1993.

**5200:250 Developing Processes of Investigation (3 Credits)**

Prerequisites: 5100:210, 5100:211, and admission to Teacher Education Program. This course will enable students to identify and acquire those investigative and discovery processes and skills that are common in mathematics, science, and social studies.

**5200:300 Pre-Kindergarten Participation II (1 Credit)**

Prerequisites: 5200:200, 5610:450 and admission to Teacher Education Program. Planned field experience in pre-kindergarten early intervention program where student works in both small and large group settings and with individual children.

**5200:319 Integrated Expressive Arts in Primary Grades (3 Credits)**

Prerequisites: 3760:265, [7500:201 or 7100:210 or 7800:301], and admission to teacher education program. This course focuses on creative expression and play as primary activities to support the physical, intellectual, social, emotional and aesthetic development of children from birth through fifth grade. Theory and practice of play, child study, environmental planning, creativity and arts-based expression are foundational in this course. Students learn how to teach with the arts, within and across the academic content curriculum.

**5200:320 Visual Arts Application in the Elementary School (3 Credits)**

Prerequisite: 5200:220. Exploration of materials, methods, processes and visual techniques relating two and three-dimensional art experiences for the teacher of elementary children.

**5200:321 Instructional Techniques: Modern Languages K-8 (3 Credits)**

Prerequisite: admission to the LBJFF School of Education. Focus on theories of language acquisition, models of instruction suited to teaching foreign languages and cultures in the elementary school (K-8), and strategies that promote appropriate levels of language proficiency and competency for young learners.

**5200:325 Early Childhood Inclusive Practicum (3 Credits)**

Prerequisite: 5500:240. Corequisite: 5500:241. Prerequisite or Corequisite: 5500:308. This field-based course emphasizes developmental domains of preschool children. Candidates design appropriate activities for culturally and linguistically diverse population of typically and atypically developing children.

**5200:331 Kindergarten Methods & Material (4 Credits)**

Prerequisites: 5200:330 and 3760:265. Scope and sequence of kindergarten curricula, with emphasis on developmentally appropriate methods and materials. This course is not part of the new teacher licensure program.

**5200:333 Science for Primary Teachers (3 Credits)**

Prerequisite: Admission to teacher education program. Teachers of children from Pre-K through Grade 5 must be well versed in the essential science content knowledge and they should demonstrate the understanding of central concepts, academic language, and the structure of science content areas needed to provide appropriate environments that support integrated and authentic learning for ALL children. Well prepared candidates use their knowledge, appropriate Ohio New Learning Science standards, and other resources to design, implement, and evaluate meaningful, challenging standards-based curriculum for each child.

**5200:334 Teaching Art in the Elementary School (3 Credits)**

Prerequisite: Admission to Teacher Education Program, Art K-12. Visual arts in elementary schools. Art education concepts with studio orientation including history of art education, developmental stages, curriculum and organization, methods, evaluation and research, and practical participation.

**5200:338 Social Studies for Primary Teachers (3 Credits)**

Prerequisite: Admission to the School of Education. This course equips primary grade teachers with content knowledge, skills, and dispositions necessary to teach grades Pk-5 students to be informed and active citizens in classrooms, their community, country, and world. Students will learn critical content related to the guidelines of the Ohio Department of Education and the National Council for the Social Studies standards in social studies education. They will make decisions about what to teach (standards and themes), how to teach (strategies), and which materials best serve the needs of their students (resources).

**5200:340 Developmental Writing and Digital Literacies in Inclusive Early (3 Credits)**

Prerequisite: 5500:240. Prerequisite or corequisite: 5500:241, 5500:308, and 5610:448. This course focuses on theoretically grounded developmental writing and communication using digital literacy in the information age specifically for children age 3 to third grade.

**5200:342 Teaching Math to Young Children (3 Credits)**

Prerequisites: 3450:140, 3450:240. Prerequisite or corequisite: 5500:370. Trends in mathematics instruction in early childhood/middle level classrooms. Procedures for the development of mathematics concepts and skills.

**5200:352 Teaching Mathematics in Inclusive Primary Settings (3 Credits)**

Prerequisite: 5500:308. To examine and know the standards-based mathematics curriculum and the instruction appropriate for inclusive primary setting. (10 hours of Field Work)

**5200:395 Field Experience (1-3 Credits)**

Prerequisites: Permission of advisor and department head. Independent field work in area selected by student's adviser, based on student's needs.

**5200:420 Integrated Primary Curriculum (4 Credits)**

Prerequisite or corequisite: 5500:370. Course models an inquiry-based format that integrates math, science, social studies, and technology standards where students learn how to create, implement, manage, and evaluate student-centered learning environments. (25 hours field and 35 clinical hours).

**5200:425 Advanced Integrated Primary Curriculum (4 Credits)**

Prerequisites: 5200:420 and admission to teacher education program. This course further explores an inquiry-based format that integrates math, science, social studies, and technology standards by having the students implement, manage, and evaluate their own and their students' learning. (25 field and 35 clinical hours).

**5200:430 Honors Research Project: Early Childhood (1-6 Credits)**

Prerequisite: Permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry. (May be repeated for a total of six credits).

**5200:453 Building Understanding in Early Childhood Settings (3 Credits)**

Prerequisite: 5500:240. Corequisite: 5500:241 and 5610:448. Prerequisite or corequisite: 5500:308. This course prepares teachers to work in inclusive programs, able to meet the needs of children; exceptional, cultural and linguistic diverse, and typically.

**5200:454 Inquiry Learning in Primary Inclusive Settings (3 Credits)**

Prerequisites: 5500:241 and 5500:308. Corequisite: 5610:450. Pre/ Corequisites: 5200:333 and 5200:338. Anchored in the authentic work of teacher and students, this field-based capstone methods class utilizes action research strategies in primary inclusive settings. By using inquiry-based methods that focus on reflective teaching and student learning, pre-service teachers learn to analyze and resolve their own teaching / learning challenges. They learn how to ask focusing questions, define terms, collect relevant data, analyze findings and communicate process that informs their professional practice. 35 field hours.

**5200:480 Special Topics: Elementary Education (1-4 Credits)**

(May be repeated with a change in topic) Prerequisite: Permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

**5200:490 Workshop: Elementary Education (1-3 Credits)**

Elective workshop for elementary education major who would pursue further refinement of teaching skills. Emphasizes demonstrations of teaching techniques and development of suitable teaching devices.

**5200:491 Workshop: Elementary Education (1-3 Credits)**

Elective workshop for elementary education major who would pursue further refinement of teaching skills. Emphasizes demonstrations of teaching techniques and development of suitable teaching devices.

**5200:492 Workshop: Elementary Education (1-3 Credits)**

Elective workshop for elementary education major who would pursue further refinement of teaching skills. Emphasizes demonstrations of teaching techniques and development of suitable teaching devices.

**5200:493 Workshop: Elementary Education (1-3 Credits)**

Elective workshop for elementary education major who would pursue further refinement of teaching skills. Emphasizes demonstrations of teaching techniques and development of suitable teaching devices.

**5200:495 Student Teaching (Pre K through K) (5 Credits)**

Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio. Corequisite: 5200:498. Planned teaching experience in schools selected and supervised by Office of Field Experience.

**5200:496 Student Teaching (Grades 1-3) (6 Credits)**

Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio. Corequisite: 5200:498. Planned teaching experience in schools selected and supervised by Office of Field Experience.

**5200:497 Independent Study: Elementary Education (1-3 Credits)**

Prerequisites: permission of adviser and department head. Specific area of curriculum investigation pertinent to elementary education as determined by student's academic needs.

**5200:498 Student Teaching Colloquium (1 Credit)**

Prepares students for the final phase of becoming decision makers. The colloquium will explore problems encountered in classrooms, initiate reflective practice and concepts of action research, and focus on preparation of unit outlines with emphasis on applied decision making.

**5200:499 Student Teaching in Inclusive Early Childhood Settings (9 Credits)**

Prerequisite: Approval of the Student Teaching Committee, based upon approved application to student teaching, passing at least one of Ohio Assessments for Educators subject-specific tests. Corequisite: 5610:470. Planned 16-week experience in schools selected and supervised by the Office of Field Experiences. 322 Clinical Hours.

**Middle Level Education (5250)****5250:100 Orientation to Middle Level Education (0 Credits)**

Prerequisite: Admission to Middle Level Education Program. Corequisite: 5100:200. Orientation to the information and strategies necessary for a student to be successful in the program, including portfolio development.

**5250:300 Middle Level Education (3 Credits)**

Prerequisite or corequisite: 5500:308. Reviews nature/needs of early adolescents; developmentally appropriate middle schooling; philosophy of school organizations; curriculum, pedagogy, and assessment; cultural and community contexts. 15 field hours.

**5250:333 Teaching Science to Middle Level Learners (4 Credits)**

Prerequisite: 5500:308. A methods course for the prospective teacher to develop a point of view toward science teaching and strategies for effective standards-based science teaching. (15 field hours)

**5250:338 Teaching Social Studies to Middle Childhood (3 Credits)**

Prerequisite: 5500:308. A methods course to examine the school social studies curriculum and strategies for effective teaching. (15 field hours)

**5250:342 Teaching Math to Middle Level Learners (3 Credits)**

Prerequisite: 5500:308. Modern strategies of psychology and methodology in middle childhood mathematics on exploratory, structural and mastery levels of learning. (15 field hours)

**5250:350 Teaching Language Arts & Media to Middle Level Learners (3 Credits)**

Prerequisites: 5500:240, 5500:241, and 5500:308. This course provides preservice middle grade teachers with strategies for integrating the language arts in the areas of reading, writing, speaking, listening, media and drama. (15 Field Hours)

**5250:351 Modes of Writing for the Middle Grades (3 Credits)**

Prerequisite: Admission to the Teacher Education Program. This course will provide middle school languages arts teachers the understandings and skills necessary to teach writing in varieties of forms and modes including newswriting.

**5250:430 Honors Research Project: Middle Level Education (1-6 Credits)**

(May be repeated for a total of six credits.) Prerequisites: Permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.

**5250:480 Special Topics: Middle School (1-3 Credits)**

Prerequisite: Permission of instructor. (May be repeated with change of topic) Group study of special topics in middle childhood of critical contemporary concern in professional education.

**5250:490 Workshop: Middle Level (1-3 Credits)**

Elective workshop for Middle Childhood majors who would like to pursue further refinement of teaching skills. Emphasis in demonstrations of teaching techniques and development.

**5250:495 Student Teaching: Grades 4-6 (5 Credits)**

Planned teaching experience in schools selected and supervised by the Office of Field Experience.

**5250:496 Student Teaching: Grades 7-9 (6 Credits)**

Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio; senior status. Corequisite: 498. Planned teaching experience in schools selected and supervised by the Office of Field Experiences.

**5250:497 Independent Study (1-3 Credits)**

Prerequisites: Permission of advisor and department head. Specific area of curriculum investigation pertinent to middle level education as determined by student's academic needs.

**5250:498 Student Teaching Colloquium: Middle Grades (1 Credit)**

Corequisite: 5250:499. Prepares learner for final phase of becoming a decision maker. Explores problems encountered in the classroom, initiates reflective practice and concepts of other research.

**5250:499 Student Teaching: Middle Level Education (11 Credits)**

Corequisite: 5250:498. 322 Field Hours. Planned teaching experience in schools selected and supervised by the Office of Field Experiences.

**Secondary Education (5300)****5300:100 Orientation to the AYA/P-12 Multi-Age Programs (0 Credits)**

Prerequisite: admission to the Teacher Education Program. Corequisite: 5100:200. Orientation to the information and strategies necessary for a student to be successful in the program, including portfolio development.

**5300:303 Global Education & Technology (3 Credits)**

This course focuses on theories, materials, and methods for teaching global education through e-learning and web-based tools.

**5300:316 Methods in Teaching Art (3 Credits)**

Prerequisites: Completion of required course for art teachers and grade-point average of 2.50 in the field. Study of trends and procedures in teaching and supervision; relation of art to home, school and community; observation in selected schools required.

**5300:317 Instructional Techniques: Modern Languages-Secondary (3 Credits)**

Focus on theories of language acquisition, models of instruction for teaching foreign languages/cultures and strategies that promote levels of proficiency/competency for adolescent learners.

**5300:320 Introduction to Teaching in the Content Area (3 Credits)**

Prerequisite: 5500:308. This course introduces secondary teacher candidates to trends, issues, and challenges as it relates specifically to curriculum and instruction in the content areas in secondary schools.

**5300:325 Content Reading in Secondary Schools (3 Credits)**

Instructional principles and practices for helping secondary school youth and adults learn subject matter through application of reading and study skills.

**5300:330 Teaching Adolescent/Middle Level Literature (3 Credits)**

Student develops skills for selection of literature that is well-suited for adolescent/middle level children. Student develops, uses, and experiences methods for teaching adolescent/middle level literature in the classroom. (30 clinical experience hours)

**5300:335 Language Learning in Secondary Schools (3 Credits)**

Prerequisite: Admission to the Teacher Education program. Introduces English teachers to the issues of language learning and techniques required to teach language skills.

**5300:395 Field Experience: Secondary Education (1-3 Credits)**

Supervised work with youngsters, individually and in groups in school and/or community settings.

**5300:420 Instructional Techniques in Secondary Education (3 Credits)**

Prerequisite: 5500:308. Corequisite: 5300:421. Open to student who has completed certification requirements in all content fields. Techniques of planning, instruction and evaluation in various secondary teaching fields.

**5300:421 Instructional Techniques in Secondary Education - II (3 Credits)**

Prerequisites: 5300:420 and 5500:430. Corequisite: 5500:431. Continuation of teaching strategy and assessment implementation based on research and theory.

**5300:430 Honors Research Project: Secondary Education (1-6 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.

**5300:480 Special Topics: Secondary Education (1-4 Credits)**

(May be repeated with a change in topic) Prerequisite: Permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

**5300:490 Workshop: Secondary Education (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

**5300:491 Workshop: Secondary Education (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

**5300:492 Workshop: Secondary Education (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

**5300:493 Workshop: Secondary Education (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

**5300:494 Educational Institutes: Secondary Education (1-4 Credits)**

Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.

**5300:495 Student Teaching: Secondary Education (6-11 Credits)**

Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, and passing state licensure exam(s). Planned teaching experience in schools selected and supervised by the Office of Field Experiences. Co-requisite: 5300:496.

**5300:496 Student Teaching Colloquium in Secondary Education (1 Credit)**

Concurrent with Student Teaching; emphasis on applied decision making, group problem solving, and commitment to life-long learning.

**5300:497 Independent Study (1-3 Credits)**

Specific area of curriculum investigation pertinent to secondary education as determined by student's academic needs.

## Technical Education (5400)

**5400:400 Adult Learning (3 Credits)**

Describes characteristics of the adult learner and examines issues, factors, and strategies pertinent to successful facilitation of learning in a variety of training environments.

**5400:401 Learning with Technology (3 Credits)**

Application of learning technologies to situations encountered by academic and professional learners. Addresses foundational concepts of computer literacy, ethics, security, collaboration, and learning design.

**5400:413 Instructional Design Profession (3 Credits)**

Examination of the Instructional Design profession, its history, trends, issues and impact on Instruction Design's future. Research on best practice in the field are explored.

**5400:415 Talent Development and Training (3 Credits)**

Prerequisites: 5400:401 or permission from instructor. Examine the training function within talent development from a global perspective. Explore best practices for today's workforce. Identify emerging trends and training solutions.

**5400:420 eLearning by Design (3 Credits)**

Experiences in using, developing and evaluating learning technologies and media used for instructional design and training.

**5400:430 Program Planning (3 Credits)**

Process of program planning and evaluation for instructional design and training for a variety of adult learning organizations.

**5400:435 Systematic Instructional Design in Postsecondary Education (3 Credits)**

Prerequisites or corequisites: 5400:401, 5400:420, 5400:430, admission to program, or permission of instructor. Examination of instructional design models with particular emphasis of the ADDIE model. Study of applications to Instructional Design Technology.

**5400:475 Instructional Delivery (3 Credits)**

Prerequisite: Permission of department. Implementation of instructional design principals in the proposal, design, development, implementation, assessment and evaluation (ADDIE) of eLearning and other delivery of training courses.

**5400:480 Globally Diverse Workforce (3 Credits)**

Study of cultural pluralism and disability in the workplace and the best practices, as related to training in adult learning organizations.

**5400:481 Special Topics: Technical Education (1-4 Credits)**

See department for course description.

**5400:490 Workshop: Technical Education (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units. Delivered in a totally on-line format and face to face format with web enhancements.

**5400:495 Postsecondary Education Practicum (3 Credits)**

Prerequisites: 5400:400, 5400:401, 5400:405, 5400:415, 5400:420, 5400:430, 5400:435, and admission to the Postsecondary Technical Education program with a "C" or better in each 5400 course and a 2.5 or better overall GPA in 5400 courses, and an overall GPA of 2.5 or better. Directed instruction under the supervision of directing instructor and university supervisor, and development of instructional portfolio.

**5400:497 Independent Study: Technical Education (1-3 Credits)**

Area of study determined by student's need.

## Curricular and Instructional Studies (5500)

**5500:223 Urban Youth Mentoring (3 Credits)**

Urban youth mentoring and mentorship theory and practice in school-based settings; including the completion of 30 hours of urban mentorship field experience.

**Gen Ed:** Tier 3 - Complex Systems

**5500:230 Educational Technology (3 Credits)**

Prerequisite: 13-15 sem. hrs. with a 'C' or better in specific GenEd courses; 5100:200 (may be taken as prerequisite or corequisite); FBI/BCI background checks. Effectively identifying, locating, evaluating, designing, preparing, and efficiently using educational technology as instructional resource in the classroom to support learning and teaching.

**5500:240 Foundations of Literacy (3 Credits)**

Focus on building blocks of teaching children how to read with an emphasis on literacy development and an emphasis on research-based components of reading instruction.

**5500:241 Word Study, Phonics & Spelling (3 Credits)**

Prerequisite: 5500:240. Candidates will explore a variety of genres, types of texts, resources, and instructional strategies to maximize students' comprehension, fluency, and vocabulary growth.

**5500:245 Understanding Literacy Development & Phonics (3 Credits)**

Prerequisite: admission to Teacher Preparation Program. Children's literacy development is explored through an integrated instructional model, with emphasis on the role of comprehension, phonics, and functional spelling in language learning. (10 hours of service learning)

**5500:251 Teaching Personal Finance in the PK-12 Classroom (3 Credits)**

Teacher candidates learn best practices in planning and implementing standards-based personal finance and economic instruction.

**5500:286 Teaching Multiple Texts (3 Credits)**

Prerequisite: 5500:240. Candidates will explore a variety of genres, types of texts, resources, and instructional strategies to maximize students' comprehension, fluency, and vocabulary growth. 10 field hours.

**5500:308 Instructional Design and Assessment (6 Credits)**

Prerequisites: 5100:220 and 5610:225. Theoretical and practical foundations for standards-based instruction and assessment; including instructional design, assessment development, and classroom practice for all learners in diverse and inclusive settings. 30 Field Hours.

**5500:310 Instructional Design (3 Credits)**

Prerequisites: 5100:210, 5100:211, and admission to LBJFF School of Education. Corequisite: 5500:311. Design and teach lessons using instructional models, strategies, and resources for students with different characteristics and design appropriate assessments to measure content mastery.

**5500:311 Instructional Resources (3 Credits)**

Prerequisites: 5100:210, 5100:211; Corequisite: 5500:310. Examines existing and developing media, technological, human and environmental resources as they relate to learning. Includes identifying, locating, evaluating, using, designing, and preparing educational resources.

**5500:320 Diversity in Learners (3 Credits)**

Prerequisites: 5100:210, 5100:211. Students learn to appreciate common core culture, the diversity in the student population and the democratic ideal of equal access to educational opportunity. (10 hours of field experience included.)

**5500:330 Classroom Management (3 Credits)**

Prerequisites: 5100:210, 5100:211. Content regarding effective organization of the classroom as well as procedures and models for mediation of student behaviors will be presented.

**5500:341 Laboratory Practicum in Reading (3 Credits)**

Prerequisite: 5500:445. Laboratory experience with classroom, small groups and individual situations. A student diagnoses, implements procedures and follows prescribed reading improvement practices. (25.5 field hours)

**5500:360 Educational Planning: Instruction, Assessment and Classroom Management (3 Credits)**

Prerequisites: 5500:230, 5100:200, 5100:220; 5610:225; prerequisite or corequisite: 5100:300. Theoretical foundations for standards-based thematic units and lesson plans, classroom assessment and organization, including procedures and models for mediating student behavior and classroom management.

**5500:370 Educational Implementation: Instruction, Assessment and Classroom Management (3 Credits)**

Prerequisites: 5500:360, 5100:300. Interpretation and application of standards-based thematic units and lesson plans; classroom assessment and organization, including mediation of student behaviors and classroom management.

**5500:430 Clinical Teaching I (3 Credits)**

Prerequisite: 5500:308. Corequisite: 5300:420. Observe and apply education methodologies and theories in a school/classroom field-based environment. (50 clinical hours)

**5500:431 Clinical Teaching II (3 Credits)**

Prerequisites: 5300:420 and 5500:430. Corequisite: 5300:421. Course following Clinical Teaching I - Apply education methodologies and theories in a classroom environment in a full-time school environment. (640 clinical hours)

**5500:439 Engineering for Educators (3 Credits)**

Prerequisite: 5500:308. Engineering design concepts and their applications course for teachers/teacher candidates. Students will engage in engineering problem solving activities and design lesson plans that address science and engineering practices. (Next Generation Science Standards)

**5500:440 Literacy in the Content Areas (3 Credits)**

Prerequisite: 5500:308. Prepare candidates to understand issues and use methods and materials to promote disciplinary literacy in middle and secondary classrooms (20 hours clinical).

**5500:442 Teaching Reading to Culturally Diverse Learners (3 Credits)**

Prerequisites: 5500:245, 5500:286. The course is designed to provide students with knowledge, skills, and attitudes that will enable employment of effective methods of teaching reading to culturally different learners and/or learners whose language patterns are nonstandard.

**5500:445 Assessment and Instruction in Literacy (3 Credits)**

Prerequisites: 5500:240, 5500:241, and 5500:286. This course explores the assessment of students' progress in language literacy. Formal and informal instruments identifying progress in reading, writing, speaking, and listening are examined implemented. There are 30 hours of field experience included in this course.

**5500:450 Nature, History, and Philosophy of Science (3 Credits)**

(May be repeated with a change in topic). Provides opportunities to examine the historical and philosophical perspectives of science in an online medium and the impact of science and technology on society.

**5500:455 Literacy for Multiage Licensure (3 Credits)**

Prerequisite: Admission to Teacher Education Program. Organizing instruction, use of oral language development protocols, strategies for word skill development, comprehension and assessment as they relate to content areas.

**5500:456 Scaffolding Language and Content Learning for English Learners (3 Credits)**

Prerequisite: 3300:473. This course prepares students to use quality, research-based sheltered instruction for improving teaching effectiveness and accelerating academic achievement for English learners.

**5500:458 Inclusive Field Experience (1 Credit)**

Corequisite: 5610:457. In this inclusive field experience, teacher candidates explore the challenges and best practices in providing quality educational services for all learners. (20 field hours)

**5500:475 Instructional Technology Applications (3 Credits)**

Prerequisite: 5500:230 and 5500:360. Focus on developing learner competencies in the use of instructional technologies to enhance both the instructor's personal and professional productivity.

**5500:480 Special Topics: Curriculum & Instruction (1-6 Credits)**

Group study of special topics of critical, contemporary concern in professional education. (May be repeated with a change in topic)

**5500:484 Principles of Bilingual/Multicultural Education (3 Credits)**

An introduction to the theoretic, cultural, sociolinguistic bases of bilingual/multicultural education. Legislation, court decisions, program implementation included.

**5500:485 Teaching Literacy to English Learners (3 Credits)**

Prerequisite: Admission to the LBJFF School of Education. Course applies methodologies for teaching literacy to English learners, assessment of literacy skills and development of materials. 12 field hours of field experience are required.

**5500:486 Teaching Mathematics, Social Studies & Science to Bilingual Students (3 Credits)**

Prerequisites: Completion of all age-appropriate methods courses. Course applies methodologies for teaching mathematics, science, social studies in the bilingual/multicultural classroom. The bilingual student's native language stressed.

**5500:487 Techniques of Teaching English as a Second Language (3 Credits)**

Course includes teaching language skills to Limited English Proficient students in grades K-12, administration of language assessment tests, selection and evaluation of materials. (10 field hours)

**5500:488 Practicum: Teaching English as a Second Language (2 Credits)**

Prerequisites: 5500:485 and 5500:487. A practical experience in which teacher candidates observe, participate, and practice teaching in an ESL classroom under the supervision of an experienced, certified/licensed teacher.

**5500:490 Workshop: Curriculum & Instruction (1-3 Credits)**

Emphasizes development of teaching devices and/or curriculum units, demonstration of teaching techniques.

**5500:491 Workshop: Curriculum & Instruction (1-3 Credits)**

Emphasizes development of teaching devices and/or curriculum units, demonstration of teaching techniques.

**5500:492 Workshop: Curriculum & Instruction (1-3 Credits)**

Emphasizes development of teaching devices and/or curriculum units, demonstration of teaching techniques.

**5500:497 Independent Study (1-3 Credits)**

Prerequisite: Permission of advisor and department chair. Specific area of curriculum investigation pertinent to the general curriculum and instruction area as determined by student's academic needs.

## Special Education (5610)

**5610:100 Orientation to Intervention Specialist (0 Credits)**

Prerequisite: admission to Intervention Specialist teacher education program; corequisite: 5100:200. Orientation to the information and strategies necessary for a student to be successful in the program, including portfolio development.

**5610:206 Special Problems: Gifted (1 Credit)****5610:225 Introduction to Exceptionalities (3 Credits)**

Prerequisite: 13-15 sem. hrs. with a 'C' or better in specific GenEd courses; 5100:200 (may be taken as prerequisite or corequisite); FBI/BCI background checks. Survey course covering the identification, developmental characteristics and intervention strategies for children and youth with exceptionalities across educational and community settings.

**5610:380 Math Methods: Special Education (3 Credits)**

Prerequisite: Admission to the Teacher Education Program. Ensure the understanding of mathematics and to promote the prospective special education teacher's confidence in his/her own ability to teach mathematics.

**5610:395 Field Experience: Special Education (1-3 Credits)**

Supervised work with youngsters, individually and in groups in school and/or community settings.

**5610:403 Student Teaching Colloquium: Special Education (1 Credit)**

An examination of problems, issues, and practices encountered during the student teaching experience.

**5610:430 Honors Research Project: Special Education (1-6 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.

**5610:439 Collaboration with Families and Professionals in Early Childhood (3 Credits)**

This course prepares early childhood professionals for engaging in collaborative home/school consultation and teamwork in serving the educational needs of young children.

**5610:440 Developmental Characteristics of Exceptional Individuals (3 Credits)**

Prerequisite: Admission to a School of Education Teacher Preparation Program or permission of the instructor. A survey course covering the identification, developmental characteristics, and intervention strategies for exceptional children and youth across education and community settings. (1 field hour)

**5610:444 Developmental Characteristics of Intellectually Gifted Individuals (3 Credits)**

See department for course description.

**5610:447 Individuals with Mild/Moderate Educational Needs: Characteristics and Implications (4 Credits)**

Prerequisite: 5610:225. Survey of the etiology, identification, classification, developmental characteristics of, and intervention strategies for individuals with mild/moderate educational needs.

**5610:448 Individuals with Moderate/Intensive Educational Needs: Characteristics and Implications (3 Credits)**

Prerequisites: 5610:225 and admission to a teaching education program. Survey of the etiology, identification, classification, and developmental characteristics of individuals with moderate/intensive educational needs. 10 Field Hours.

**5610:450 Special Education Programming for Primary Teachers (3 Credits)**

Prerequisites: 5610:225 and admission to Teacher Preparation Program. Corequisite: 5200:454. The focus of this course is on students with disabilities from preschool through grade 5. The course combines detailed information about specific disability categories with evidenced-based practices for instruction and behavioral support. The course prepares teacher candidates with the knowledge, skills and dispositions to incorporate best practices to create and maintain productive PK-5 learning environments for diverse populations of students including those with special education needs (40 hours field).

**5610:451 Special Education Programming: Mild/Moderate I (3 Credits)**

Prerequisites: 5610:225, 5610:447. Educational implications regarding assessment, teaching strategies, and adaptive materials necessary to meet the needs of school age students with mild/moderate educational needs. (20 field hours)

**5610:452 Special Education Programming: Secondary/Transition (3 Credits)**

Study of diagnostic prescriptive service delivery systems designed to accommodate developmental patterns of secondary-level students with exceptionalities. (20 field hours)

**5610:453 Special Education Programming: Moderate/Intensive I (3 Credits)**

Prerequisite: 5610:448. Development of the programming strategies including assessment, inter/transdisciplinary models, family involvement, IFSP/IEP/IP development, instructional practices based upon legal/ethical principles for individuals with moderate/intensive educational needs.

**5610:454 Special Education Programming: Moderate/Intensive II (3 Credits)**

Prerequisites: 5610:448 and 5610:453. Advanced program for providing educational planning and intervention for individuals with moderate to intensive educational needs. Focus is on developing a comprehensive educational program which will facilitate optimum functioning and independence. (20 field hours)

**5610:456 Inclusive Field Experience: Moderate/Intensive (1 Credit)**

Corequisite: 5610:454. In this 50-hour inclusive field experience, teacher candidates explore the challenges and best practices in providing quality educational services for all learners.

**5610:457 Special Education Programming: Mild/Moderate II (4 Credits)**

Corequisite: 5500:458. Special educational implications regarding assessment, teaching strategies, and adaptive materials necessary to meet the needs of school age students with mild/moderate educational needs.

**5610:459 Collaboration & Consultation in Schools & Community (3 Credits)**

Prerequisite: 5610:225. Provides professional educators/intervention specialists with skills in collaboration and consultation for working with parents of exceptional individuals and other professionals within school/community settings.

**5610:460 Family Dynamics & Communication in the Educational Process (3 Credits)**

Prerequisite: 5610:225. A study of family theory and structure along with beginning techniques for working with families of students with exceptionalities, in educational and community settings.

**5610:461 Special Education Programming: Early Childhood Moderate/Intensive (3 Credits)**

Prerequisites: 5610:440, 5610:448. Developmental patterns of young children with moderate/intensive needs (ages 3-8) and developmentally appropriate practices in programming and adaptations. (20 field hours)

**5610:462 Collaboration with Families and Professionals (3 Credits)**

Prerequisite: 5610:225. This course provides pre-service teacher candidates with the knowledge, skills, and dispositions in communication, collaboration and team processes that facilitate a collaborative culture in schools.

**5610:463 Assessment in Special Education (3 Credits)**

Prerequisite: 5610:225. Prepares student to select, administer and interpret formal and informal assessment procedures and use resulting data in planning educational programs for exceptional individuals.

**5610:464 Assessment & Evaluation in Early Childhood Special Education (3 Credits)**

Prerequisites: 5610:225, 5610:448. The assessment of children three to eight and their environment who are at risk for disabilities or currently in special education.

**5610:467 Management Strategies in Special Education (3 Credits)**

Prerequisite: 5610:225. Content emphasizing the development of application strategies with a variety of behavior management models to mediation of behaviors with exceptional individuals.

**5610:469 Inclusive Education for English Learners (2 Credits)**

This class prepares teachers to use evidence based strategies, accommodations, and instruction to enhance the curriculum for the English Learners with special education needs.

**5610:470 Clinical Practicum in Special Education (3 Credits)**

Prerequisite: Permission; Corequisites: 5610:403 and [5610:486 or 5610:487]. Provides a pre-student teaching experience for students in the areas of assessment, program planning, instructional planning and presentation, classroom management, adaptations, and collaboration with parents and other educational professionals.

**5610:479 Seminar: Invitational Studies in Special Education (1-2 Credits)**

(May be repeated for a total of four credits) Topical study with a varied array of disciplinary input. Staffing will be invited members of allied and contributing professions active in management of exceptional children.

**5610:485 Student Teaching: Early Childhood Intervention Specialist (11 Credits)**

Prerequisites: Approval of the Student Teaching Committee, based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio. Corequisite: 5610:403. Planned teaching experience in schools selected and supervised by the Office of Field Experience.

**5610:486 Student Teaching: Mild/Moderate Educational Needs (9 Credits)**

Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing Ohio Assessment For Educators (OAE) subject test, and approved portfolio. Corequisite: 5610:403. Planned teaching experience in schools selected and supervised by the Office of Field Experience.

**5610:487 Student Teaching: Moderate/Intensive Educational Needs (11 Credits)**

Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio. Corequisites: 5610:403 and 5610:470. Planning teaching experience in schools selected and supervised by the office of Field Experience.



**5610:488 Student Teaching: Early Child/Early Child Interven. Spec (6 Credits)**

Approval of the Student Teaching Committee, based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio. Corequisites: 5200:495, 5610:403, 5610:470. Planned teaching experience in schools selected and supervised by the Office of Field Experience.

**5610:490 Workshop: Special Education (1-3 Credits)**

(May be repeated for a total of six credits) Designed to explore special topics in in-service or preservice education on a needs basis.

**5610:491 Workshop: Special Education (1-3 Credits)**

(May be repeated for a total of six credits) Designed to explore special topics in in-service or preservice education on a needs basis.

**5610:492 Workshop: Special Education (1-3 Credits)**

(May be repeated for a total of six credits) Designed to explore special topics in in-service or preservice education on a needs basis.

**5610:493 Workshop: Special Education (1-3 Credits)**

(May be repeated for a total of six credits) Designed to explore special topics in in-service or preservice education on a needs basis.

**5610:497 Independent Study: Special Education (1-3 Credits)**

Specific area of investigation determined in accordance with student's needs.

## Special Educational Programs (5800)

**5800:492 Workshop in Reading (1-3 Credits)**

Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.

**5800:493 Workshop on Exceptional Children (1-3 Credits)**

Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.

**5800:494 International School Study (3-6 Credits)**

On-the-scene study of education in foreign countries, usually by concentrating on the study of schools in one restricted geographical area.

## AYA Chemistry Licensure, BA Bachelor of Arts in Education, Adolescent to Young Adult Chemistry Licensure (Grades 7-12) (530613BA)

More on the Adolescent to Young Adult Chemistry Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

## School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- 1. School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.

- 2. Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- 3. Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- 4. Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - a. A composite ACT score of 21 or higher, or
  - b. A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - c. A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
- 5. Evidence of competency in mathematics as shown by one of the following:**
  - a. A composite ACT score of 21 or higher, or
  - b. A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - c. A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.
- 6. Signed Criminal Background Check Acknowledgment Form**

The LeBron James Family Foundation School of Education  
Zook Hall, Room 002  
Akron, Ohio 44325-4201  
(330) 972-7750

The following information has official approval of **The LeBron James Family Foundation School of Education** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Undergraduate Science Students	39-44
	Content Requirements for Chemistry Licensure Students	64
	Additional Major Electives *	6-1
	<b>Total Hours</b>	<b>143</b>

\* This major requires a minimum of 143 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
<p>Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.</p> <p>Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.</p>		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking	
or 7600:106 Effective Oral Communication		
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	
3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## Professional Education Requirements for Undergraduate Science Students <sup>1</sup>

Code	Title	Hours
<b>Phase One:</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5300:100	Orientation to the AYA/P-12 Multi-Age Programs	0
5300:320	Introduction to Teaching in the Content Area	3
5300:420	Instructional Techniques in Secondary Education	3
5300:421	Instructional Techniques in Secondary Education - II	3
5500:308	Instructional Design and Assessment	6
5500:430	Clinical Teaching I	3
5500:431	Clinical Teaching II	3
5500:440	Literacy in the Content Areas	3
5610:225	Introduction to Exceptionalities	3
<b>Phase Two:</b>		

5300:495	Student Teaching: Secondary Education <sup>2</sup>	6-11
Total Hours		39-44

- <sup>1</sup> At least 39 credit hours with a grade of C or better and a GPA of 2.5 or better.
- <sup>2</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE Content and Reading tests. Planned teaching experience in schools selected and supervised by the Office of Teacher Education and Licensure experiences. Co-requisite 5300:496 Student Teaching Colloquium in Secondary Education. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Chemistry Licensure Students <sup>1</sup>

Code	Title	Hours
<b>Science Core</b>		
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3370:101	Introductory Physical Geology	4
3370:102	Introductory Historical Geology	4
3650:130	Descriptive Astronomy	4
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
<b>Chemistry</b>		
3150:154	Qualitative Analysis	2
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:313	Physical Chemistry Lecture I	3
3150:314	Physical Chemistry Lecture II	3
3150:401	Biochemistry Lecture I	3
3150:423	Analytical Chemistry I	3
<b>Mathematics</b>		
3450:221	Analytic Geometry-Calculus I	4
3470:260	Basic Statistics	3
Total Hours		64

- <sup>1</sup> 64 credit hours with a GPA of 2.5 or better.

## AYA Chemistry/Earth Licensure, BA Bachelor of Arts in Education, Adolescent to Young Adult Chemistry/Earth Licensure (Grades 7-12) (530508BA)

More on the Adolescent to Young Adult Chemistry/Earth Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

### School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
- Evidence of competency in mathematics as shown by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.
- Signed Criminal Background Check Acknowledgment Form**

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*many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Undergraduate Science Students	39-44
	Content Requirements for Chemistry/Earth Licensure Students	81
	Additional Major Electives *	9-4
	<b>Total Hours</b>	<b>163</b>

\* This major requires a minimum of 163 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking or 7600:106 Effective Oral Communication	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	
3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
<b>Total Hours</b>		<b>34</b>

## Professional Education Requirements for Undergraduate Science Students <sup>1</sup>

Code	Title	Hours
<b>Phase One:</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5300:100	Orientation to the AYA/P-12 Multi-Age Programs	0
5300:320	Introduction to Teaching in the Content Area	3
5300:420	Instructional Techniques in Secondary Education	3
5300:421	Instructional Techniques in Secondary Education - II	3
5500:308	Instructional Design and Assessment	6
5500:430	Clinical Teaching I	3
5500:431	Clinical Teaching II	3
5500:440	Literacy in the Content Areas	3
5610:225	Introduction to Exceptionalities	3
<b>Phase Two:</b>		
5300:495	Student Teaching: Secondary Education <sup>2</sup>	6-11
Total Hours		39-44

<sup>1</sup> At least 39 credit hours with a grade of C or better and a GPA of 2.5 or better.

<sup>2</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE Content and Reading tests. Planned teaching experience in schools selected and supervised by the Office of Teacher Education and Licensure experiences. Co-requisite 5300:496 Student Teaching Colloquium in Secondary Education. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Chemistry/Earth Licensure Students <sup>1</sup>

Code	Title	Hours
<b>Science Core</b>		
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3370:101	Introductory Physical Geology	4
3370:102	Introductory Historical Geology	4
<i>Select one of the following physics options:</i>		8
3650:261 & 3650:262	Physics for Life Sciences I and Physics for Life Sciences II	
3650:291 & 3650:292	Elementary Classical Physics I and Elementary Classical Physics II	
<b>Earth Science</b>		
3370:137	Earth's Atmosphere & Weather	1
3370:200	Environmental Geology	3

3370:201	Exercises in Environmental Geology I	1
3370:203	Exercises in Environmental Geology II	1
3370:371	Oceanography	4
3370:455	Field Studies in Geology	3
or 3370:499	Research Problems in Geology	
3650:130	Descriptive Astronomy	4
<b>Chemistry</b>		
3150:154	Qualitative Analysis	2
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:305	Physical Chemistry for the Biological Sciences	4
3150:380	Advanced Chemistry Laboratory I	2
3150:401	Biochemistry Lecture I	3
3150:423	Analytical Chemistry I	3
<b>Mathematics</b>		
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3470:260	Basic Statistics	3
Total Hours		81

<sup>1</sup> 81 credit hours with a GPA of 2.5 or better.

## Additional Requirements to Add Integrated Science Licensure

These courses are not required for the Chemistry/Earth Licensure

Code	Title	Hours
3100:217	General Ecology	
3100:265	Introductory Human Physiology	
3650:133	Music, Sound & Physics	
or 3650:137	Light	

## AYA Chemistry/Physics Licensure, BA Bachelor of Arts in Education, Adolescent to Young Adult Chemistry/Physics Licensure (Grades 7-12) (530509BA)

More on the Adolescent to Young Adult Chemistry/Physics Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

## School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds

and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.

2. **Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
3. **Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
4. **Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - a. A composite ACT score of 21 or higher, or
  - b. A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - c. A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
5. **Evidence of competency in mathematics as shown by one of the following:**
  - a. A composite ACT score of 21 or higher, or
  - b. A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - c. A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.
6. **Signed Criminal Background Check Acknowledgment Form**

The LeBron James Family Foundation School of Education  
Zook Hall, Room 002  
Akron, Ohio 44325-4201  
(330) 972-7750

The following information has official approval of **The LeBron James Family Foundation School of Education** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Undergraduate Science Students	39-44
	Content Requirements for Chemistry/Earth Licensure Students	81
	Additional Major Electives *	10-5
	<b>Total Hours</b>	<b>164</b>

\* This major requires a minimum of 164 completed credit hours.

Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking	
	or 7600:106 Effective Oral Communication	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	
3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
<b>Total Hours</b>		<b>34</b>

## Professional Education Requirements for Undergraduate Science Students <sup>1</sup>

Code	Title	Hours
<b>Phase One:</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5300:100	Orientation to the AYA/P-12 Multi-Age Programs	0
5300:320	Introduction to Teaching in the Content Area	3
5300:420	Instructional Techniques in Secondary Education	3
5300:421	Instructional Techniques in Secondary Education - II	3
5500:308	Instructional Design and Assessment	6
5500:430	Clinical Teaching I	3
5500:431	Clinical Teaching II	3
5500:440	Literacy in the Content Areas	3
5610:225	Introduction to Exceptionalities	3
<b>Phase Two:</b>		
5300:495	Student Teaching: Secondary Education <sup>2</sup>	6-11
<b>Total Hours</b>		<b>39-44</b>

<sup>1</sup> At least 39 credit hours with a grade of C or better and a GPA of 2.5 or better.

<sup>2</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE Content and Reading tests. Planned teaching experience in schools selected and supervised by the Office of Teacher Education and Licensure experiences. Corequisite 5300:496 Student Teaching Colloquium in Secondary Education. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Chemistry/Physics Licensure Students

Code	Title	Hours
<b>Science Core</b>		
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4
3150:151	Principles of Chemistry I	3
or 3150:152	Principles of Chemistry I Laboratory	
3150:153	Principles of Chemistry II	3
3370:101	Introductory Physical Geology	4
3370:102	Introductory Historical Geology	4
<b>Elementary Classical Physics</b>		
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
<b>Physics</b>		
3650:130	Descriptive Astronomy	4
3650:133	Music, Sound & Physics	4
or 3650:137	Light	
3650:267	Life Science Physics Computations I	1
or 3650:293	Physics Computations I	
3650:301	Elementary Modern Physics	3
3650:322	Intermediate Laboratory I	3
3650:323	Intermediate Laboratory II	3
<b>Chemistry</b>		
3150:154	Qualitative Analysis	2
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:305	Physical Chemistry for the Biological Sciences	4
3150:380	Advanced Chemistry Laboratory I	2
3150:401	Biochemistry Lecture I	3
3150:423	Analytical Chemistry I	3
<b>Mathematics</b>		
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3470:260	Basic Statistics	3
Total Hours		81

## Additional Requirements to Add Integrated Science Licensure

### These courses are not required for the Chemistry/Physics Licensure

Code	Title	Hours
3100:217	General Ecology	
3100:265	Introductory Human Physiology	
3370:128	Geology of Ohio	
3370:137	Earth's Atmosphere & Weather	
3370:171	Introduction to the Oceans	
3370:200	Environmental Geology	

## AYA Earth Science Licensure, BA

### Bachelor of Arts in Education, Adolescent to Young Adult Earth Science Licensure (Grades 7-12) (530611BA)

More on the Adolescent to Young Adult Earth Science Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

## School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
- Evidence of competency in mathematics as shown by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or

- c. A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.

**6. Signed Criminal Background Check Acknowledgment Form**

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 Akron, Ohio 44325-4201  
 (330) 972-7750

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Undergraduate Science Students	39-44
	Content Requirements for Earth Science Licensure Students	54
	Additional Major Electives *	1-0
	<b>Total Hours</b>	<b>128-132</b>

\* This major requires a minimum of 128 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking	
	or 7600:106 Effective Oral Communication	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	
3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

**Tier III: Tagged Courses**

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## Professional Education Requirements for Undergraduate Science Students <sup>1</sup>

Code	Title	Hours
<b>Phase One:</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5300:100	Orientation to the AYA/P-12 Multi-Age Programs	0
5300:320	Introduction to Teaching in the Content Area	3
5300:420	Instructional Techniques in Secondary Education	3
5300:421	Instructional Techniques in Secondary Education - II	3
5500:308	Instructional Design and Assessment	6
5500:430	Clinical Teaching I	3
5500:431	Clinical Teaching II	3
5500:440	Literacy in the Content Areas	3
5610:225	Introduction to Exceptionalities	3
<b>Phase Two:</b>		
5300:495	Student Teaching: Secondary Education <sup>2</sup>	6-11
<b>Total Hours</b>		<b>39-44</b>

<sup>1</sup> At least 40 credit hours with a grade of C or better and a GPA of 2.5 or better.

<sup>2</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE Content and Reading tests. Planned teaching experience in schools selected and supervised by the Office of Teacher Education and Licensure experiences. Corequisite 5300:496 Student Teaching Colloquium in Secondary Education. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Earth Science Licensure Students <sup>1</sup>

Code	Title	Hours
<b>Science Core</b>		
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4

3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3370:101	Introductory Physical Geology	4
3370:102	Introductory Historical Geology	4
3650:130	Descriptive Astronomy	4
3650:261	Physics for Life Sciences I	4
3650:262	Physics for Life Sciences II	4
<b>Earth Science</b>		
3370:137	Earth's Atmosphere & Weather	1
3370:200	Environmental Geology	3
3370:203	Exercises in Environmental Geology II	1
3370:371	Oceanography	4
3370:455	Field Studies in Geology	3
<b>Mathematics</b>		
3450:221	Analytic Geometry-Calculus I	4
3470:260	Basic Statistics	3
Total Hours		54

<sup>1</sup> 54 credit hours with a GPA of 2.5 or better.

## AYA Earth Science/Physics Licensure, BA

### Bachelor of Arts in Education, Adolescent to Young Adult Earth Science/Physics Licensure (Grades 7-12) (530600BA)

More on the Adolescent to Young Adult Earth Science/Physics Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

### School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**

- A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
5. **Evidence of competency in mathematics as shown by one of the following:**
- A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Undergraduate Science Students	39-44
	Content Requirements for Earth Science/Physics Licensure Students	73
	Additional Major Electives *	9-4
	Total Hours	155

\* This major requires a minimum of 155 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		

**Tier I: Academic Foundations**

12



<i>Quantitative Reasoning: 3 credit hours</i>	
<i>Speaking: 3 credit hours</i>	
7600:105	Introduction to Public Speaking or 7600:106 Effective Oral Communication
<i>Writing: 6 credit hours</i>	
3300:111	English Composition I
3300:112	English Composition II
<b>Tier II: Disciplinary Areas</b>	<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>	
<i>Natural Sciences: 7 credit hours</i>	
<i>Social Sciences: 6 credit hours</i>	
<b>Tier III: Tagged Courses</b>	
<i>Select one class from each of the following subcategories:</i>	
Complex Systems	
Critical Thinking	
Domestic Diversity	
Global Diversity	
<i>Review the General Education Requirements page for detailed course listings.</i>	
Total Hours	34

## Professional Education Requirements for Undergraduate Science Students <sup>1</sup>

Code	Title	Hours
<b>Phase One:</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5300:100	Orientation to the AYA/P-12 Multi-Age Programs	0
5300:320	Introduction to Teaching in the Content Area	3
5300:420	Instructional Techniques in Secondary Education	3
5300:421	Instructional Techniques in Secondary Education - II	3
5500:308	Instructional Design and Assessment	6
5500:430	Clinical Teaching I	3
5500:431	Clinical Teaching II	3
5500:440	Literacy in the Content Areas	3
5610:225	Introduction to Exceptionalities	3
<b>Phase Two:</b>		
5300:495	Student Teaching: Secondary Education <sup>2</sup>	6-11
Total Hours		39-44

<sup>1</sup> At least 39 credit hours with a grade of C or better and a GPA of 2.5 or better.

<sup>2</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE Content and Reading tests. Planned teaching experience in schools selected and supervised by the Office of Teacher Education and Licensure experiences. Corequisite 5300:496 Student Teaching Colloquium in Secondary Education. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Earth Science/Physics Licensure Students <sup>1</sup>

Code	Title	Hours
<b>Science Core</b>		
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3370:101	Introductory Physical Geology	4
3370:102	Introductory Historical Geology	4
<b>Elementary Classical Physics</b>		
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
<b>Earth Science</b>		
3370:137	Earth's Atmosphere & Weather	1
3370:200	Environmental Geology	3
3370:201	Exercises in Environmental Geology I	1
3370:203	Exercises in Environmental Geology II	1
3370:371	Oceanography	4
3370:455	Field Studies in Geology	3
or 3370:499	Research Problems in Geology	
<b>Mathematics</b>		
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3470:260	Basic Statistics	3
<b>Physics and Earth Science</b>		
3650:130	Descriptive Astronomy	4
<b>Physics</b>		
3650:133	Music, Sound & Physics	4
or 3650:137	Light	
3650:267	Life Science Physics Computations I	1
or 3650:293	Physics Computations I	
3650:301	Elementary Modern Physics	3
3650:322	Intermediate Laboratory I	3
3650:323	Intermediate Laboratory II	3
Total Hours		73

<sup>1</sup> 73 credit hours with a GPA of 2.5 or better.

## Additional Requirements to Add Integrated Science Licensure

These courses are not required for the Earth Science/Physics Licensure

Code	Title	Hours
3100:217	General Ecology	
3100:265	Introductory Human Physiology	
3150:263	Organic Chemistry Lecture I	
3150:264	Organic Chemistry Lecture II	
3150:265	Organic Chemistry Laboratory I	

## AYA Integrated Language Arts, BA Bachelor of Arts in Education, Adolescent to Young Adult Integrated Language Arts (Grades 7-12) (530701BA)

More on the Adolescent to Young Adult Integrated Language Arts major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

## School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
- Evidence of competency in mathematics as shown by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or

- A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.

### 6. Signed Criminal Background Check Acknowledgment Form

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Undergraduate Integrated Language Arts Students	36-41
	Content Requirements for Undergraduate Integrated Language Arts Students	40-43
	Additional Credits for Graduation *	10-2
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking	
	or 7600:106 Effective Oral Communication	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	

3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		<b>34</b>

## Professional Education Requirements for Undergraduate Integrated Language Arts Students <sup>1</sup>

Code	Title	Hours
<b>Phase One: Learning about Learners</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5300:100	Orientation to the AYA/P-12 Multi-Age Programs	0
5500:308	Instructional Design and Assessment	6
5500:440	Literacy in the Content Areas	3
5610:225	Introduction to Exceptionalities	3
<b>Phase Two: Learning about Teaching</b>		
5300:420	Instructional Techniques in Secondary Education	3
5300:421	Instructional Techniques in Secondary Education - II	3
<b>Phase Three: Learning to Apply the Principles of Teaching</b>		
5500:430	Clinical Teaching I	3
5500:431	Clinical Teaching II	3
<b>Phase Four: Learning to Teach</b>		
5300:495	Student Teaching: Secondary Education <sup>2</sup>	6-11
Total Hours		<b>36-41</b>

<sup>1</sup> 36 credit hours with a grade of C or better and a GPA of 2.5 or better.

<sup>2</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE Content and Reading tests. Planned teaching experience in schools selected and supervised by the Office of Teacher Education and Licensure experiences. Corequisite 5300:496 Student Teaching Colloquium in Secondary Education. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Undergraduate Integrated Language Arts Students <sup>1</sup>

Code	Title	Hours
<b>Literature</b>		
3300:301	English Literature I	3
3300:315	Shakespeare: The Early Plays	3
or 3300:316	Shakespeare: The Mature Plays	
3300:341	American Literature I	3
3300:362	World Literatures	3
or 3300:389	Special Topics: Literature & Language.	
5300:330	Teaching Adolescent/Middle Level Literature	3
<i>Complete one elective at the 300/400 level in each area:</i>		
Multicultural Literature		3
Women's Literature		3
Literature		3
<b>Writing/Composition-Journalism</b>		
3300:300	Critical Reading & Writing	3
5250:351	Modes of Writing for the Middle Grades	3
7600:300	Newswriting Across the Media	3
<b>Language</b>		
3300:371	Introduction to Linguistics	3
5300:335	Language Learning in Secondary Schools	1-4
or 5300:480	Special Topics: Secondary Education	
<b>Communication</b>		
<i>Select one of the following:</i>		
7600:235	Interpersonal Communication	3
7600:245	Argumentation	
7600:252	Persuasion	
7600:305	Communication Theory	
7600:344	Small Group Communication	
Total Hours		<b>40-43</b>

<sup>1</sup> 42 credit hours with a GPA of 2.5 or better.

## AYA Integrated Mathematics, BA Bachelor of Arts in Education, Adolescent to Young Adult Integrated Mathematics Licensure (Grades 7-12) (530702BA)

More on the Adolescent to Young Adult Integrated Mathematics Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

The LeBron James Family Foundation School of Education includes the areas of early childhood inclusive, middle childhood, secondary (adolescent to young adult), preschool to grades 12 (P-12) education and the areas of special education as an intervention specialist for early childhood (P-3 mild/moderate/ intensive), mild to moderate (K-12) or moderate to intensive (K-12). Initial Professional Education programs are available at the undergraduate, post-baccalaureate and master's degree levels. The secondary program prepares teachers of grades seven to twelve to teach language arts, mathematics, science, or social studies.

## School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
- Evidence of competency in mathematics as shown by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.
- Signed Criminal Background Check Acknowledgment Form**

The LeBron James Family Foundation School of Education  
Zook Hall, Room 002  
Akron, Ohio 44325-4201  
(330) 972-7750

The following information has official approval of **The LeBron James Family Foundation School of Education** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Undergraduate Mathematics Students	39
	Content Requirements for Undergraduate Integrated Mathematics Students	39-44
	Additional Credits for Graduation *	8-3
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking	
	or 7600:106 Effective Oral Communication	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	
3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
<b>Total Hours</b>		<b>34</b>

## Professional Education Requirements for Undergraduate Mathematics Students <sup>1</sup>

Code	Title	Hours
<b>Professional Education</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5300:100	Orientation to the AYA/P-12 Multi-Age Programs	0
5300:320	Introduction to Teaching in the Content Area	3
5300:420	Instructional Techniques in Secondary Education	3
5300:421	Instructional Techniques in Secondary Education - II	3
5500:308	Instructional Design and Assessment	6
5500:430	Clinical Teaching I	3
5500:431	Clinical Teaching II	3
5500:440	Literacy in the Content Areas	3
5610:225	Introduction to Exceptionalities	3
<b>Phase II:</b>		
5300:495	Student Teaching: Secondary Education <sup>2</sup>	6-11
Total Hours		39-44

<sup>1</sup> 39 credit hours with a grade of C or better and a GPA of 2.5 or better.

<sup>2</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE content test. Planned teaching experience in schools selected and supervised by the Office of Field experiences. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching fields. Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Undergraduate Integrated Mathematics Students

### Theoretical Math Option <sup>1</sup>

Code	Title	Hours
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:307	Fundamentals of Advanced Mathematics	3
3450:312	Linear Algebra	3
3450:335	Introduction to Ordinary Differential Equations	3
or 3450:412	Abstract Algebra II	
or 3450:421	Advanced Calculus I	
3450:401	History of Mathematics	3
3450:411	Abstract Algebra I	3
3450:441	Concepts in Geometry	4
3460:209	Computer Science I	4
3470:461	Applied Statistics	4
Total Hours		39

<sup>1</sup> Students must have a GPA of 2.5 or higher in the mathematics content area prior to student teaching.

## STEM-Based Option

Code	Title	Hours
3450:208	Introduction to Discrete Mathematics	4
or 3450:209	Discrete Mathematics for Educators	
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:312	Linear Algebra	3
3450:401	History of Mathematics	3
3450:441	Concepts in Geometry	4
3460:101	Essentials of Computer Science	3
3470:461	Applied Statistics	4
3650:291	Elementary Classical Physics I	4
5500:439	Engineering for Educators	3
Total Hours		40

## AYA Integrated Science Licensure, BA Bachelor of Arts in Education, Adolescent to Young Adult Integrated Science Licensure (Grades 7-12) (530506BA)

More on the Adolescent to Young Adult Life/Biology-Earth Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

## School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
- Evidence of competency in mathematics as shown by one of the following:**

- a. A composite ACT score of 21 or higher, or
- b. A composite SAT-R score of 1060 (Math and Verbal) or higher, or
- c. A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.

#### 6. Signed Criminal Background Check Acknowledgment Form

The LeBron James Family Foundation School of Education  
Zook Hall, Room 002  
Akron, Ohio 44325-4201  
(330) 972-7750

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Undergraduate Science Students	39-44
	Content Requirements for Integrated Science Students	46
	Content Option	15-17
	<b>Total Hours</b>	<b>134-141</b>

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

#### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

7600:105 Introduction to Public Speaking  
or 7600:106 Effective Oral Communication

*Writing: 6 credit hours*

3300:111 English Composition I

3300:112 English Composition II

#### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

#### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## Professional Education Requirements for Undergraduate Science Students <sup>1</sup>

Code	Title	Hours
<b>Phase One:</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5300:100	Orientation to the AYA/P-12 Multi-Age Programs	0
5300:320	Introduction to Teaching in the Content Area	3
5300:420	Instructional Techniques in Secondary Education	3
5300:421	Instructional Techniques in Secondary Education - II	3
5500:308	Instructional Design and Assessment	6
5500:430	Clinical Teaching I	3
5500:431	Clinical Teaching II	3
5500:440	Literacy in the Content Areas	3
5610:225	Introduction to Exceptionalities	3
<b>Phase Two:</b>		
5300:495	Student Teaching: Secondary Education <sup>2</sup>	6-11
<b>Total Hours</b>		<b>39-44</b>

<sup>1</sup> At least 39 credit hours with a grade of C or better and a GPA of 2.5 or better.

<sup>2</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE Content and Reading tests. Planned teaching experience in schools selected and supervised by the Office of Teacher Education and Licensure experiences. Corequisite 5300:496 Student Teaching Colloquium in Secondary Education. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Integrated Science Licensure Students <sup>1</sup>

Code	Title	Hours
<b>Science Core</b>		
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4

3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3370:101	Introductory Physical Geology	4
3370:200	Environmental Geology	3
3450:149	Precalculus Mathematics	4
3470:260	Basic Statistics	3
3650:130	Descriptive Astronomy	4
3650:261	Physics for Life Sciences I	4
or 3650:291	Elementary Classical Physics I	
3650:262	Physics for Life Sciences II	4
or 3650:292	Elementary Classical Physics II	
5500:439	Engineering for Educators	3
Total Hours		46

<sup>1</sup> 46 credit hours with a GPA of 2.5 or better.

## Content Option

Code	Title	Hours	
<i>Complete one content option area</i>			
<b>Biology</b>			
3100:130	Principles of Microbiology	15-17	
or 3100:331	Microbiology		
3100:211	General Genetics		
3100:217	General Ecology		
3100:316	Evolutionary Biology		
3100:3xx/4xx	Elective (three credits)		
<b>Chemistry</b>			
3150:263	Organic Chemistry Lecture I	15-17	
3150:264	Organic Chemistry Lecture II		
or 3150:305	Physical Chemistry for the Biological Sciences		
or 3150:380	Advanced Chemistry Laboratory I		
or 3150:381	Advanced Chemistry Laboratory II		
3150:265	Organic Chemistry Laboratory I		
3150:401	Biochemistry Lecture I		
3150:423	Analytical Chemistry I		
<b>Physics</b>			
3450:221	Analytic Geometry-Calculus I		15-17
3650:133	Music, Sound & Physics		
or 3650:137	Light		
3650:301	Elementary Modern Physics		
3650:322	Intermediate Laboratory I		
3650:323	Intermediate Laboratory II		
<b>Earth Science</b>			
3370:171	Introduction to the Oceans	15-17	
or 3370:371	Oceanography		
3370:128	Geology of Ohio		
3370:130	Geologic Record of Climate Change		
3370:137	Earth's Atmosphere & Weather		
3370:451	Field/Lab Studies in Environmental Science		
Total Hours			15-17

## Additional Requirements to Add Integrated Science Licensure

These courses are not required for the Integrated Science Licensure

Code	Title	Hours
3650:133	Music, Sound & Physics	4
or 3650:137	Light	

## AYA Integrated Social Studies, BA Bachelor of Arts in Education, Adolescent to Young Adult Integrated Social Studies Licensure (Grades 7-12) (530700BA)

More on the Adolescent to Young Adult Integrated Social Science Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

## School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
- Evidence of competency in mathematics as shown by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.
- Signed Criminal Background Check Acknowledgment Form**

The LeBron James Family Foundation School of Education  
Zook Hall, Room 002

Akron, Ohio 44325-4201  
(330) 972-7750

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Undergraduate Social Studies Students	39-44
	Content Requirements for Undergraduate Integrated Social Studies Students	48
	Additional Major Electives *	7-2
	<b>Total Hours</b>	<b>128</b>

\* This major requires a minimum of 128 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

3400:200 Empires of the Ancient World

3400:250 U.S. History to 1877

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

3350:100 Introduction to Geography

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

5500:223 Urban Youth Mentoring

Critical Thinking

Domestic Diversity

3400:250 U.S. History to 1877

Global Diversity

3400:200 Empires of the Ancient World

*Review the General Education Requirements page for detailed course listings.*

**Total Hours** 34

## Professional Education Requirements for Undergraduate Social Studies Students <sup>1</sup>

Code	Title	Hours
<b>Phase One:</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5300:100	Orientation to the AYA/P-12 Multi-Age Programs	0
5300:320	Introduction to Teaching in the Content Area	3
5300:420	Instructional Techniques in Secondary Education	3
5300:421	Instructional Techniques in Secondary Education - II	3
5500:308	Instructional Design and Assessment	6
5500:430	Clinical Teaching I	3
5500:431	Clinical Teaching II	3
5500:440	Literacy in the Content Areas	3
5610:225	Introduction to Exceptionalities	3
<b>Phase Two:</b>		
5300:495	Student Teaching: Secondary Education <sup>2</sup>	6-11
<b>Total Hours</b>		<b>39-44</b>

<sup>1</sup> 39 credit hours with a grade of C or better and a GPA of 2.5 or better.

<sup>2</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE content test. Planned teaching experience in schools selected and supervised by the Office of Field experiences. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching fields. Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Undergraduate Integrated Social Studies Students <sup>1</sup>

Code	Title	Hours
3250:200	Principles of Microeconomics	3
3250:201	Principles of Macroeconomics	3
3350:275	Geography of Cultural Diversity	2
3400:251	U.S. History since 1877	3
3400:310	Historical Methods	3
3400:319	Medieval Europe, 500-1200	3
or 3400:320	Medieval Europe, 1200-1500	
or 3400:321	Europe: Renaissance to Religious Wars, 1350-1610	
or 3400:322	Europe: Absolutism to Revolution, 1610-1789	



3400:323	Europe from Revolution to World War, 1789-1914	3
or 3400:324	Europe from World War I to the Present	
3400:351	Global History: Encounters and Conflicts	4
3400:470	Ohio History	3
3400:487	Science and Technology in World History	3
3700:100	Government & Politics in the United States	3
3700:310	International Politics & Institutions	3
3750:100	Introduction to Psychology	3
3850:100	Introduction to Sociology	3
5300:303	Global Education & Technology	3
5500:251	Teaching Personal Finance in the PK-12 Classroom	3
Total Hours		48

<sup>1</sup> 48 credit hours with a GPA of 2.5 or better.

## AYA Life Science Licensure, BA Bachelor of Arts in Education, Adolescent to Young Adult Life Science Licensure (Grades 7-12) (530610BA)

More on the Adolescent to Young Adult Life Science Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

### School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
- Evidence of competency in mathematics as shown by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or

c. A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.

#### 6. Signed Criminal Background Check Acknowledgment Form

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### Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Undergraduate Science Students	39-44
	Content Requirements for Life Science Licensure Students	60
	Additional Major Electives *	9-4
Total Hours		142

\* This major requires a minimum of 142 completed credit hours.

### Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking	
	or 7600:106 Effective Oral Communication	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	
3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>

Arts/Humanities: 9 credit hours

Natural Sciences: 7 credit hours

Social Sciences: 6 credit hours

### Tier III: Tagged Courses

Select one class from each of the following subcategories:

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

Review the General Education Requirements page for detailed course listings.

Total Hours 34

## Professional Education Requirements for Undergraduate Science Students <sup>1</sup>

Code	Title	Hours
<b>Phase One:</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5300:100	Orientation to the AYA/P-12 Multi-Age Programs	0
5300:320	Introduction to Teaching in the Content Area	3
5300:420	Instructional Techniques in Secondary Education	3
5300:421	Instructional Techniques in Secondary Education - II	3
5500:308	Instructional Design and Assessment	6
5500:430	Clinical Teaching I	3
5500:431	Clinical Teaching II	3
5500:440	Literacy in the Content Areas	3
5610:225	Introduction to Exceptionalities	3
<b>Phase Two:</b>		
5300:495	Student Teaching: Secondary Education <sup>2</sup>	6-11
Total Hours		39-44

<sup>1</sup> At least 39 credit hours with a grade of C or better and a GPA of 2.5 or better.

<sup>2</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE Content and Reading tests. Planned teaching experience in schools selected and supervised by the Office of Teacher Education and Licensure experiences. Corequisite 5300:496 Student Teaching Colloquium in Secondary Education. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Life Science Licensure Students <sup>1</sup>

Code	Title	Hours
<b>Science Core</b>		
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4

3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3370:101	Introductory Physical Geology	4
3370:102	Introductory Historical Geology	4
3650:130	Descriptive Astronomy	4
3650:261	Physics for Life Sciences I	4
3650:262	Physics for Life Sciences II	4
<b>Biology</b>		
3100:130	Principles of Microbiology	3-4
or 3100:331	Microbiology	
3100:211	General Genetics	3
3100:212	Genetics Laboratory	1
3100:217	General Ecology	3
3100:265	Introductory Human Physiology	4
3100:316	Evolutionary Biology	3
<b>Mathematics</b>		
3450:221	Analytic Geometry-Calculus I	4
3470:260	Basic Statistics	3
Total Hours		59-60

<sup>1</sup> 60 credit hours with a GPA of 2.5 or better.

## AYA Life/Biology-Chemistry Licensure, BA

### Bachelor of Arts in Education, Adolescent to Young Adult Life/Biology-Chemistry Licensure (Grades 7-12) (530505BA)

More on the Adolescent to Young Adult Life/Biology-Chemistry Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

## School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**

4. **Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - a. A composite ACT score of 21 or higher, or
  - b. A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - c. A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
5. **Evidence of competency in mathematics as shown by one of the following:**
  - a. A composite ACT score of 21 or higher, or
  - b. A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - c. A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.
6. **Signed Criminal Background Check Acknowledgment Form**

The LeBron James Family Foundation School of Education  
 Zook Hall, Room 002  
 Akron, Ohio 44325-4201  
 (330) 972-7750

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Undergraduate Science Students	39-44
	Content Requirements for Life/Biology-Chemistry Licensure Students	18-85
	Additional Major Electives *	9-4
	<b>Total Hours</b>	<b>166-167</b>

\* This major requires a minimum of 166-167 completed credit hours.

## Recommended General Education Courses

**Code Title Hours**

Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking	
	or 7600:106 Effective Oral Communication	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	
3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
<b>Total Hours</b>		<b>34</b>

## Professional Education Requirements for Undergraduate Science Students <sup>1</sup>

Code	Title	Hours
<b>Phase One:</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5300:100	Orientation to the AYA/P-12 Multi-Age Programs	0
5300:320	Introduction to Teaching in the Content Area	3
5300:420	Instructional Techniques in Secondary Education	3
5300:421	Instructional Techniques in Secondary Education - II	3
5500:308	Instructional Design and Assessment	6
5500:430	Clinical Teaching I	3
5500:431	Clinical Teaching II	3
5500:440	Literacy in the Content Areas	3
5610:225	Introduction to Exceptionalities	3
<b>Phase Two:</b>		
5300:495	Student Teaching: Secondary Education <sup>2</sup>	6-11
<b>Total Hours</b>		<b>39-44</b>

<sup>1</sup> At least 39 credit hours with a grade of C or better and a GPA of 2.5 or better.

<sup>2</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE Content and Reading tests. Planned teaching experience in schools selected and supervised by the Office of Teacher Education and Licensure experiences. Corequisite 5300:496 Student Teaching Colloquium in Secondary Education. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Life/Biology-Chemistry Licensure Students <sup>1</sup>

Code	Title	Hours
<b>Science Core</b>		
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3370:101	Introductory Physical Geology	4
3370:102	Introductory Historical Geology	4
<i>Select one of the following:</i>		8
3650:261 & 3650:262	Physics for Life Sciences I and Physics for Life Sciences II	
3650:291 & 3650:292	Elementary Classical Physics I and Elementary Classical Physics II	
<b>Biology</b>		
3100:211	General Genetics	3
3100:217	General Ecology	3
3100:265	Introductory Human Physiology	4
3100:316	Evolutionary Biology	3
3100:130 or 3100:331	Principles of Microbiology Microbiology	3-4
<b>Astronomy</b>		
3650:130	Descriptive Astronomy	4
<b>Chemistry</b>		
3150:154	Qualitative Analysis	2
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:305	Physical Chemistry for the Biological Sciences	4
3150:380	Advanced Chemistry Laboratory I	2
3150:401	Biochemistry Lecture I	3
3150:423	Analytical Chemistry I	3
<b>Mathematics</b>		
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3470:260	Basic Statistics	3
Total Hours		84-85

<sup>1</sup> 84-85 credit hours with a GPA of 2.5 or better.

## Additional Requirements to Add Integrated Science Licensure

These courses are not required for the Life/Biology-Chemistry Licensure

Code	Title	Hours
3370:128	Geology of Ohio	
3370:137	Earth's Atmosphere & Weather	
3370:171	Introduction to the Oceans	
3370:200	Environmental Geology	
3650:133 or 3650:137	Music, Sound & Physics Light	

## AYA Life/Biology-Physics Licensure, BA

### Bachelor of Arts in Education, Adolescent to Young Adult Life/Biology-Physics Licensure (Grades 7-12) (530507BA)

More on the Adolescent to Young Adult Life/Biology-Physics Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

## School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
- Evidence of competency in mathematics as shown by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or

- c. A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.

**6. Signed Criminal Background Check Acknowledgment Form**

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Undergraduate Science Students	39-44
	Content Requirements for Life/Biology-Physics Licensure Students	84-85
	Additional Major Electives *	9-4
	<b>Total Hours</b>	<b>166-167</b>

\* This major requires a minimum of 166-167 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking	
	or 7600:106 Effective Oral Communication	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	
3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

**Tier III: Tagged Courses**

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## Professional Education Requirements for Undergraduate Science Students <sup>1</sup>

Code	Title	Hours
<b>Phase One:</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5300:100	Orientation to the AYA/P-12 Multi-Age Programs	0
5300:320	Introduction to Teaching in the Content Area	3
5300:420	Instructional Techniques in Secondary Education	3
5300:421	Instructional Techniques in Secondary Education - II	3
5500:308	Instructional Design and Assessment	6
5500:430	Clinical Teaching I	3
5500:431	Clinical Teaching II	3
5500:440	Literacy in the Content Areas	3
5610:225	Introduction to Exceptionalities	3
<b>Phase Two:</b>		
5300:495	Student Teaching: Secondary Education <sup>2</sup>	6-11
<b>Total Hours</b>		<b>39-44</b>

<sup>1</sup> At least 39 credit hours with a grade of C or better and a GPA of 2.5 or better.

<sup>2</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE Content and Reading tests. Planned teaching experience in schools selected and supervised by the Office of Teacher Education and Licensure experiences. Corequisite 5300:496 Student Teaching Colloquium in Secondary Education. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Life Science and Physics Licensure Students <sup>1</sup>

Code	Title	Hours
<b>Science Core</b>		
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4

3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3370:101	Introductory Physical Geology	4
3370:102	Introductory Historical Geology	4
<b>Elementary Classical Physics</b>		
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
<b>Biology</b>		
3100:130	Principles of Microbiology	3-4
or 3100:331	Microbiology	
3100:211	General Genetics	3
3100:212	Genetics Laboratory	1
3100:217	General Ecology	3
3100:265	Introductory Human Physiology	4
3100:316	Evolutionary Biology	3
<b>Mathematics</b>		
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3470:260	Basic Statistics	3
<b>Physics</b>		
3650:130	Descriptive Astronomy	4
3650:133	Music, Sound & Physics	4
or 3650:137	Light	
3650:267	Life Science Physics Computations I	1
or 3650:293	Physics Computations I	
3650:301	Elementary Modern Physics	3
3650:322	Intermediate Laboratory I	3
3650:323	Intermediate Laboratory II	3
<b>Chemistry</b>		
3150:154	Qualitative Analysis	2
3150:263	Organic Chemistry Lecture I	3
3150:265	Organic Chemistry Laboratory I	2
Total Hours		84-85

<sup>1</sup> 84-85 credit hours with a GPA of 2.5 or better.

## Additional Requirements to Add Integrated Science Licensure

These courses are not required for the Life/Biology-Physics Licensure

Code	Title	Hours
3370:128	Geology of Ohio	
3370:137	Earth's Atmosphere & Weather	
3370:171	Introduction to the Oceans	
3370:200	Environmental Geology	

## AYA Physics Licensure, BA

### Bachelor of Arts in Education, Adolescent to Young Adult Physics Licensure (Grades 7-12) (530612BA)

More on the Adolescent to Young Adult Physics Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

## School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
- Evidence of competency in mathematics as shown by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.
- Signed Criminal Background Check Acknowledgment Form**

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many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others. The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Undergraduate Science Students	39-44
	Content Requirements for Physics Licensure Students	55
	Additional Major Electives *	9-4
	<b>Total Hours</b>	<b>137</b>

\* This major requires a minimum of 137 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

7600:105 Introduction to Public Speaking  
or 7600:106 Effective Oral Communication

*Writing: 6 credit hours*

3300:111 English Composition I

3300:112 English Composition II

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

**Total Hours** 34

## Professional Education Requirements for Undergraduate Science Students <sup>1</sup>

Code	Title	Hours
<b>Phase One:</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5300:100	Orientation to the AYA/P-12 Multi-Age Programs	0
5300:320	Introduction to Teaching in the Content Area	3
5300:420	Instructional Techniques in Secondary Education	3
5300:421	Instructional Techniques in Secondary Education - II	3
5500:308	Instructional Design and Assessment	6
5500:430	Clinical Teaching I	3
5500:431	Clinical Teaching II	3
5500:440	Literacy in the Content Areas	3
5610:225	Introduction to Exceptionalities	3
<b>Phase Two:</b>		
5300:495	Student Teaching: Secondary Education <sup>2</sup>	6-11
<b>Total Hours</b>		<b>39-44</b>

<sup>1</sup> At least 39 credit hours with a grade of C or better and a GPA of 2.5 or better.

<sup>2</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE Content and Reading tests. Planned teaching experience in schools selected and supervised by the Office of Teacher Education and Licensure experiences. Corequisite 5300:496 Student Teaching Colloquium in Secondary Education. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Physics Licensure Students <sup>1</sup>

Code	Title	Hours
<b>Science Core</b>		
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3370:101	Introductory Physical Geology	4
3370:102	Introductory Historical Geology	4
3650:130	Descriptive Astronomy	4
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
<b>Physics</b>		
3650:133	Music, Sound & Physics	4
or 3650:137	Light	
3650:301	Elementary Modern Physics	3
3650:322	Intermediate Laboratory I	3

3650:323	Intermediate Laboratory II	3
<b>Mathematics</b>		
3450:221	Analytic Geometry-Calculus I	4
3470:260	Basic Statistics	3
Total Hours		55

<sup>1</sup> 55 credit hours with a GPA of 2.5 or better.

## Early Childhood Inclusive Teacher Preparation, BS

### Bachelor of Science in Primary Inclusive Teacher Preparation Program (Age 3 thru Grade 5) (561207BS)

More on the Inclusive Teacher Preparation major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

The Primary Inclusive Teacher Preparation Program prepares teachers to effectively work in inclusive educational settings, serving needs of children from preschool through grade 5, typically developing children and/or with mild/moderate/intensive educational needs.

### School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 2.5 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
- Evidence of competency in mathematics as shown by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or

- A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.

#### 6. Signed Criminal Background Check Acknowledgment Form

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## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Professional Education Core		15
Literacy Core		12
Early Childhood Inclusion Core		45
Student Teaching		12
Additional Major Electives *		3
Total Hours		121

\* This major requires a minimum of 121 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

#### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

- 3450:145 Algebra for Calculus  
or 3470:250 Statistics for Everyday Life  
or 3470:260 Basic Statistics

*Speaking: 3 credit hours*

- 7600:105 Introduction to Public Speaking  
or 7600:106 Effective Oral Communication



or 2420:263 Professional Communications and Presentations

*Writing: 6 credit hours*

3300:111 English Composition I

3300:112 English Composition II

**Tier II: Disciplinary Areas 22**

*Arts/Humanities: 9 credit hours*

7100:210 Visual Arts Awareness

or 7500:201 Exploring Music: Bach to Rock

or 7900:200 Viewing Dance

3400:210 Humanities in the Western Tradition from Ancient Times to 1500

or 3400:221 Humanities in the World since 1300

*Natural Sciences: 7 credit hours*

3100:103 Natural Science: Biology

or 3100:106 Exploring Biology

or 3150:101 Chemistry for Everyone

or 3370:100 Earth Science

or 3370:135 Geology of Energy Resources

or 3650:130 Descriptive Astronomy

or 3650:133 Music, Sound & Physics

or 3650:137 Light

or 3650:163 Technical Physics: Electricity & Magnetism

or 3650:164 Technical Physics: Heat & Light

or 7760:133 Nutrition Fundamentals

*Social Sciences: 6 credit hours*

2040:243 Contemporary Global Issues

or 3230:251 Human Diversity

3002:256 Diversity in American Society

or 3002:258 The Black Experience 1954 - Present

**Tier III: Tagged Courses**

*Select one class from each of the following subcategories:*

**Complex Systems**

5500:223 Urban Youth Mentoring

**Critical Thinking**

3400:210 Humanities in the Western Tradition from Ancient Times to 1500

or 3400:221 Humanities in the World since 1300

**Domestic Diversity**

3002:256 Diversity in American Society

or 3002:258 The Black Experience 1954 - Present

**Global Diversity**

2040:243 Contemporary Global Issues

or 3230:251 Human Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## Professional Education Core

Code	Title	Hours
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5500:308	Instructional Design and Assessment	6

5610:225	Introduction to Exceptionalities	3
Total Hours		15

## Literacy Core

Code	Title	Hours
5500:240	Foundations of Literacy	3
5500:241	Word Study, Phonics & Spelling	3
5500:286	Teaching Multiple Texts	3
5500:445	Assessment and Instruction in Literacy	3
Total Hours		12

## Early Childhood Inclusion Core

Code	Title	Hours
3760:265	Child Development	3
5200:215	The Child, the Family, and the School	3
5200:319	Integrated Expressive Arts in Primary Grades	3
5200:325	Early Childhood Inclusive Practicum	3
5200:340	Multiple Literacies for Primary Teachers	3
5200:453	Building Understanding in Early Childhood Settings	3
5200:454	Inquiry Learning in Primary Inclusive Settings	3
5500:352		3
5500:456	Scaffolding Language and Content Learning for English Learners	3
5610:439	Collaboration with Families and Professionals in Early Childhood	3
5610:448	Individuals with Moderate/Intensive Educational Needs: Characteristics and Implications	3
5610:450	Special Education Programming for Primary Teachers	3
5610:453	Special Education Programming: Moderate/Intensive I	3
5610:464	Assessment & Evaluation in Early Childhood Special Education	3
5610:467	Management Strategies in Special Education	3
Total Hours		45

## Student Teaching

Code	Title	Hours
5200:499	Student Teaching in Inclusive Primary Settings	9
5610:470	Clinical Practicum in Special Education	3
Total Hours		12

## Early Childhood Intervention Specialist, BS

### Bachelor of Science in Early Childhood, Intervention Specialist Licensure (Age 3 thru Grade 3) (561206BS)

More on the Intervention Specialist Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

## School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot> (<http://www.uakron.edu/education/academic-programs/CIS/how-to-apply.dot>).
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
- Evidence of competency in mathematics as shown by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.
- Signed Criminal Background Check Acknowledgment Form**

The LeBron James Family Foundation School of Education  
Zook Hall, Room 002  
Akron, Ohio 44325-4201  
(330)972-7750

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Early Childhood Intervention Specialist Students	57
	Content Requirements for Early Childhood Intervention Specialist Students	30
	Additional Major Electives *	9
	<b>Total Hours</b>	<b>130</b>

\* This major requires a minimum of 130 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

3450:145 Algebra for Calculus

*Speaking: 3 credit hours*

7600:105 Introduction to Public Speaking  
or 7600:106 Effective Oral Communication

*Writing: 6 credit hours*

3300:111 English Composition I

3300:112 English Composition II

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

3150:101 Chemistry for Everyone  
or 3150:110 Introduction to General, Organic & Biochemistry I (Lecture)

3100:265 Introductory Human Physiology

*Social Sciences: 6 credit hours*

3750:100 Introduction to Psychology

3850:100 Introduction to Sociology

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

Review the General Education Requirements page for detailed course listings.

Total Hours 34

## Professional Education Requirements for Early Childhood Intervention Specialist Students <sup>1</sup>

Code	Title	Hours
<b>Phase One: Learning about Learners</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5500:230	Educational Technology	3
5500:245	Understanding Literacy Development & Phonics <sup>2</sup>	3
5610:100	Orientation to Intervention Specialist	0
5610:225	Introduction to Exceptionalities	3
<b>Phase Two: Learning about Teaching</b>		
5100:300	Educational Equity and Excellence in a Culturally Pluralistic Society	3
5500:286	Teaching Multiple Texts	3
5500:360	Educational Planning: Instruction, Assessment and Classroom Management	3
5500:440	Literacy in the Content Areas	3
<b>Phase Three: Learning to Apply the Principles of Teaching</b>		
5500:370	Educational Implementation: Instruction, Assessment and Classroom Management	3
5500:445	Assessment and Instruction in Literacy	3
5610:450	Special Education Programming for Primary Teachers	3
5610:453	Special Education Programming: Moderate/Intensive I	3
5610:461	Special Education Programming: Early Childhood Moderate/Intensive	3
<b>Phase Four: Learning to Teach</b>		
5610:403	Student Teaching Colloquium: Special Education	1
5610:470	Clinical Practicum in Special Education	3
5610:485	Student Teaching: Early Childhood Intervention Specialist <sup>3</sup>	11
Total Hours		57

<sup>1</sup> 57 credit hours with a grade of C or better and a GPA of 2.5 or better.

<sup>2</sup> Service Learning required – minimum of 10 hours outside of class.

<sup>3</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE Content and Reading tests. Planned teaching experience in schools selected and supervised by the Office of Teacher Education and Licensure experiences. Co-requisite 5300:496 Student Teaching Colloquium in Secondary Education. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student’s major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Early Childhood Intervention Specialist Students

Code	Title	Hours
3760:265	Child Development	3
3760:270	Theory & Guidance of Play	3
5610:380	Math Methods: Special Education	3
or 5200:480	Special Topics: Elementary Education	
5610:448	Individuals with Moderate/Intensive Educational Needs: Characteristics and Implications	3
5610:459	Collaboration & Consultation in Schools & Community	3
5610:460	Family Dynamics & Communication in the Educational Process	3
5610:464	Assessment & Evaluation in Early Childhood Special Education	3
5610:467	Management Strategies in Special Education	3
7700:101	American Sign Language I	3
7700:430	Aspects of Normal Language Development	3
Total Hours		30

## Middle Level Education, BS Bachelor of Science in Middle Level Education

- Language Arts and Science (520300BS)
- Language Arts and Mathematics (520301BS)
- Language Arts and Social Studies (520302BS)
- Science and Mathematics (520303BS)
- Science and Social Studies (520304BS)
- Mathematics and Social Studies (520305BS)

More on the Middle Level Education major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

### Program Description

This program prepares middle level teacher candidates for inclusive educational settings. Students will complete two of four focus areas (Language Arts, Science, Mathematics, Social Studies) when completing this program.

## School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

1. **School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot> (<http://www.uakron.edu/education/academic-programs/CIS/how-to-apply.dot>).

2. **Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
3. **Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
4. **Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - a. A composite ACT score of 21 or higher, or
  - b. A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - c. A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
5. **Evidence of competency in mathematics as shown by one of the following:**
  - a. A composite ACT score of 21 or higher, or
  - b. A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - c. A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.
6. **Signed Criminal Background Check Acknowledgment Form**

The LeBron James Family Foundation School of Education  
Zook Hall, Room 002  
Akron, Ohio 44325-4201  
(330)972-7750

The following information has official approval of **The LeBron James Family Foundation School of Education** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Middle Level Education Students	59
	Areas of Concentration *	36-64
	<b>Total Hours</b>	<b>129-157</b>

\* Total number of required credit hours vary depending on chosen concentration areas.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
3470:260	Basic Statistics	
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking	
	or 7600:106 Effective Oral Communication	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	
3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
3400:250	U.S. History to 1877	
	or 3400:251 U.S. History since 1877	
	or 3700:100 Government & Politics in the United States	
<i>Natural Sciences: 7 credit hours</i>		
3100:103	Natural Science: Biology	
3150:101	Chemistry for Everyone	
	or 3150:110 Introduction to General, Organic & Biochemistry I (Lecture)	
<i>Social Sciences: 6 credit hours</i>		
3350:100	Introduction to Geography <sup>1</sup>	
	or 3750:100 Introduction to Psychology	
	or 3850:100 Introduction to Sociology	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
3400:250	U.S. History to 1877	
3400:251	U.S. History since 1877	
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
<b>Total Hours</b>		<b>34</b>

<sup>1</sup> If Social Studies is one of the chosen concentration areas, substitute 3750:100 Introduction to Psychology or 3850:100 Introduction to Sociology in lieu of 3350:100 Introduction to Geography.

## Professional Education Requirements for Middle Level Education Students

Code	Title	Hours
<b>Phase I</b> <sup>1</sup>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5250:100	Orientation to Middle Level Education	0
5500:230	Educational Technology	3
5500:245	Understanding Literacy Development & Phonics	3
5610:225	Introduction to Exceptionalities	3
<b>Phase II</b> <sup>1</sup>		
5100:300	Educational Equity and Excellence in a Culturally Pluralistic Society	3
5250:300	Middle Level Education	3
5500:286	Teaching Multiple Texts	3
5500:360	Educational Planning: Instruction, Assessment and Classroom Management	3
5500:440	Literacy in the Content Areas	3
<b>Phase III</b> <sup>1</sup>		
5500:370	Educational Implementation: Instruction, Assessment and Classroom Management	3
5500:445	Assessment and Instruction in Literacy	3
5500:475	Instructional Technology Applications	3
<i>Complete two courses:</i> <sup>2</sup>		8
5250:333	Teaching Science to Middle Level Learners	
5250:338	Teaching Social Studies to Middle Childhood	
5250:342	Teaching Math to Middle Level Learners	
5250:350	Teaching Language Arts & Media to Middle Level Learners	
<b>Phase IV</b> <sup>1</sup>		
5250:498	Student Teaching Colloquium: Middle Grades	1
5250:499	Student Teaching: Middle Level Education	11
Total Hours		59

<sup>1</sup> A grade of C or better must be earned in all courses in this area.

<sup>2</sup> Course should align with chosen concentration areas.

## Areas of Concentration<sup>1</sup>

### Language Arts

Code	Title	Hours
3300:350	Black American Literature	3
3300:362	World Literatures	3
or 3300:389	Special Topics: Literature & Language.	
5250:351	Modes of Writing for the Middle Grades	3
5300:330	Teaching Adolescent/Middle Level Literature	3
5500:442	Teaching Reading to Culturally Diverse Learners	3
or 5500:485	Teaching Literacy to English Learners	
Total Hours		15

### Science

Code	Title	Hours
3100:103	Natural Science: Biology	4
or 3100:111	Principles of Biology I	
or 3100:112	Principles of Biology II	
3150:101	Chemistry for Everyone	4
3370:101	Introductory Physical Geology	4
or 3370:102	Introductory Historical Geology	
3370:137	Earth's Atmosphere & Weather	1
3650:130	Descriptive Astronomy	4
3650:261	Physics for Life Sciences I	4
or 3650:401	Everyday Physics	
3370:451	Field/Lab Studies in Environmental Science	3
Total Hours		24

### Mathematics

Code	Title	Hours
3450:140	Fundamentals of Mathematics for Primary Educators	3
3450:209	Discrete Mathematics for Educators	4
3450:231	Modeling with Algebraic and Transcendental Functions	4
3450:331	Modeling with Calculus	4
3450:341	Geometry and Measurement	3
3470:250	Statistics for Everyday Life	3-4
or 3470:260	Basic Statistics	
Total Hours		21-22

### Social Studies

Code	Title	Hours
3250:200	Principles of Microeconomics	3
3350:250	World Regional Geography	3
3400:210	Humanities in the Western Tradition from Ancient Times to 1500	4
3400:250	U.S. History to 1877	4
3400:251	U.S. History since 1877	4
3400:323	Europe from Revolution to World War, 1789-1914	3
or 3400:324	Europe from World War I to the Present	
3400:470	Ohio History	3
3700:100	Government & Politics in the United States	3
3700:210	State & Local Government & Politics	3
3750:100	Introduction to Psychology	3
3850:100	Introduction to Sociology	3
<i>Select two of the following:</i>		4
3400:285	World Civilizations: China	
3400:286	World Civilizations: Japan	
3400:287	World Civilizations: Southeast Asia	
3400:288	World Civilizations: India	
3400:289	World Civilizations: Middle East	
3400:290	World Civilizations: Africa	
3400:291	World Civilizations: Latin America	
Total Hours		40

<sup>1</sup> Two areas of concentration are required to be completed. Students must maintain a 2.50 GPA overall in the area of concentration.

## Middle Level Education, Dual Licensure, BS

### Bachelor of Science in Middle Level Education

- Language Arts and Science (520310BS)
- Language Arts and Mathematics (520311BS)
- Language Arts and Social Studies (520312BS)
- Science and Mathematics (520313BS)
- Science and Social Studies (520314BS)
- Mathematics and Social Studies (520315BS)

More on the Middle Level Education major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

### Program Description

This program prepares middle level teacher candidates for inclusive educational settings, serving needs of diverse learners including those with mild/moderate education needs. Students will complete two of four focus areas (Language Arts, Science, Mathematics, Social Studies) when completing this program.

### School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

1. **School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
2. **Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
3. **Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
4. **Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - a. A composite ACT score of 21 or higher, or
  - b. A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - c. A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
5. **Evidence of competency in mathematics as shown by one of the following:**
  - a. A composite ACT score of 21 or higher, or
  - b. A composite SAT-R score of 1060 (Math and Verbal) or higher, or

- c. A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.

#### 6. Signed Criminal Background Check Acknowledgment Form

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### Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Middle Level Education Students	65-66
	Areas of Concentration	28-34
	Additional Major Electives *	6-10
	<b>Total Hours</b>	<b>133-144</b>

\* Total number of required credit hours vary depending on chosen concentration areas.

### Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

Tier I: Academic Foundations		12
<i>Quantitative Reasoning: 3 credit hours</i>		
3470:260	Basic Statistics	
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking	
	or 7600:106 Effective Oral Communication	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	

3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
3400:250	U.S. History to 1877	
	or 3400:251 U.S. History since 1877	
	or 3700:100 Government & Politics in the United States	
<i>Natural Sciences: 7 credit hours</i>		
3100:103	Natural Science: Biology	
3150:101	Chemistry for Everyone	
	or 3150:110 Introduction to General, Organic & Biochemistry I (Lecture)	
<i>Social Sciences: 6 credit hours</i>		
3350:100	Introduction to Geography <sup>1</sup>	
	or 3750:100 Introduction to Psychology	
	or 3850:100 Introduction to Sociology	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
5500:223	Urban Youth Mentoring	
Critical Thinking		
Domestic Diversity		
3400:250	U.S. History to 1877	
3400:251	U.S. History since 1877	
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

<sup>1</sup> If Social Studies is one of the chosen concentration areas, substitute 3750:100 Introduction to Psychology or 3850:100 Introduction to Sociology in lieu of 3350:100 Introduction to Geography.

## Professional Education Requirements for Middle Level Education Students <sup>1</sup>

Code	Title	Hours
<b>Professional Education Core</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5500:308	Instructional Design and Assessment	6
5610:225	Introduction to Exceptionalities	3
<b>Professional Education Literacy</b>		
5500:240	Foundations of Literacy	3
5500:241	Word Study, Phonics & Spelling	3
5500:440	Literacy in the Content Areas	3
5500:445	Assessment and Instruction in Literacy	3
<b>Special Education Courses</b>		
5500:458	Inclusive Field Experience	1
5610:457	Special Education Programming: Mild/Moderate II	4
5610:462	Collaboration with Families and Professionals	3
5610:463	Assessment in Special Education	3
5610:467	Management Strategies in Special Education	3
<b>Middle Childhood Requirement</b>		
5250:100	Orientation to Middle Level Education	0

5250:300	Middle Level Education	3
5500:223	Urban Youth Mentoring	3
<i>Select two courses which align with chosen teaching fields:</i>		6-7
5250:333	Teaching Science to Middle Level Learners	
5250:338	Teaching Social Studies to Middle Childhood	
5250:342	Teaching Math to Middle Level Learners	
5250:350	Teaching Language Arts & Media to Middle Level Learners	
<b>Student Teaching</b>		
5250:498	Student Teaching Colloquium: Middle Grades	1
5250:499	Student Teaching: Middle Level Education	11
Total Hours		65-66

- <sup>1</sup> 62 credit hours with a grade of C or better and a GPA of 2.5 or better.
- <sup>2</sup> Service Learning required – minimum of 10 hours outside of class.
- <sup>3</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE Content and Reading tests. Planned teaching experience in schools selected and supervised by the Office of Teacher Education and Licensure experiences. Co-requisite 5300:496 Student Teaching Colloquium in Secondary Education. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Areas of Concentration <sup>1</sup>

### Language Arts

Code	Title	Hours
3300:350	Black American Literature	3
3300:362	World Literatures	3
3300:470	History of English Language	3
	or 3300:478 Grammatical Structures of Modern English	
5300:330	Teaching Adolescent/Middle Level Literature	3
Total Hours		12

### Science

Code	Title	Hours
3100:103	Natural Science: Biology	4
3150:101	Chemistry for Everyone	4
3370:101	Introductory Physical Geology	4
3370:137	Earth's Atmosphere & Weather	1
3370:451	Field/Lab Studies in Environmental Science	3
3650:130	Descriptive Astronomy	4
3650:261	Physics for Life Sciences I	4
	or 3650:401 Everyday Physics	
Total Hours		24

### Mathematics

Code	Title	Hours
3450:140	Fundamentals of Mathematics for Primary Educators	3
3450:209	Discrete Mathematics for Educators	4

3450:331	Modeling with Calculus	4
3450:341	Geometry and Measurement	3
3450:xxx		3
Total Hours		17

## Social Studies

Code	Title	Hours
3350:250	World Regional Geography	3
3400:250	U.S. History to 1877	4
3400:251	U.S. History since 1877	4
3400:323 or 3400:324	Europe from Revolution to World War, 1789-1914 Europe from World War I to the Present	3
5500:251	Teaching Personal Finance in the PK-12 Classroom	3
Total Hours		17

<sup>1</sup> Two areas of concentration are required to be completed. Students must maintain a 2.50 GPA overall in the area of concentration.

<sup>2</sup> Professional Education Literacy courses

## Mild/Moderate Intervention Specialist, BS

### Bachelor of Science in Education, Mild/Moderate Intervention Specialist Licensure (Grades K thru 12) (561204BS)

More on the Mild/Moderate Intervention Specialist Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

## School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or

c. A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.

#### 5. Evidence of competency in mathematics as shown by one of the following:

- A composite ACT score of 21 or higher, or
- A composite SAT-R score of 1060 (Math and Verbal) or higher, or
- A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.

#### 6. Signed Criminal Background Check Acknowledgment Form

The LeBron James Family Foundation School of Education  
Zook Hall, Room 002  
Akron, Ohio 44325-4201  
(330)972-7750

The following information has official approval of **The LeBron James Family Foundation School of Education** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Professional Education Requirements for Mild/Moderate Intervention Specialist Students		59
Highly Qualified Teacher (HQT)		20-27
Additional Major Electives *		9-2
Total Hours		122

\* This major requires a minimum of 122 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

Tier I: Academic Foundations		12
<i>Quantitative Reasoning: 3 credit hours</i>		
3470:260	Basic Statistics	



<i>Speaking: 3 credit hours</i>	
7600:105	Introduction to Public Speaking or 7600:106 Effective Oral Communication or 2420:263 Professional Communications and Presentations
<i>Writing: 6 credit hours</i>	
3300:111	English Composition I
3300:112	English Composition II
<b>Tier II: Disciplinary Areas</b>	<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>	
3400:210	Humanities in the Western Tradition from Ancient Times to 1500
<i>Natural Sciences: 7 credit hours</i>	
3150:101	Chemistry for Everyone or 3150:110 Introduction to General, Organic & Biochemistry I (Lecture)
3100:103	Natural Science: Biology
<i>Social Sciences: 6 credit hours</i>	
3750:100	Introduction to Psychology
3850:100	Introduction to Sociology
<b>Tier III: Tagged Courses</b>	
<i>Select one class from each of the following subcategories:</i>	
Complex Systems	
Critical Thinking	
3400:210	Humanities in the Western Tradition from Ancient Times to 1500
Domestic Diversity	
3850:100	Introduction to Sociology
Global Diversity	
<i>Review the General Education Requirements page for detailed course listings.</i>	
Total Hours	34

## Professional Education Requirements for Mild/Moderate Intervention Specialist Students <sup>1</sup>

Code	Title	Hours
<b>Professional Education Core</b>		
5100:200	Introduction to Education <sup>2</sup>	3
5100:220	Educational Psychology <sup>2</sup>	3
5610:225	Introduction to Exceptionalities	3
5500:308	Instructional Design and Assessment <sup>2</sup>	6
<b>Professional Education Literacy</b>		
5500:240	Foundations of Literacy	3
5500:241	Word Study, Phonics & Spelling	3
5500:440	Literacy in the Content Areas	3
5500:445	Assessment and Instruction in Literacy	3
<b>Special Education Courses</b>		
5500:458	Inclusive Field Experience	1
5610:457	Special Education Programming: Mild/Moderate II <sup>2</sup>	4
5610:380	Math Methods: Special Education	3

5610:452	Special Education Programming: Secondary/Transition	3
5610:462	Collaboration with Families and Professionals	3
5610:463	Assessment in Special Education	3
5610:467	Management Strategies in Special Education	3
<b>Student Teaching</b>		
5610:470	Clinical Practicum in Special Education	3
5610:486	Student Teaching: Mild/Moderate Educational Needs <sup>3</sup>	9
Total Hours		59

- <sup>1</sup> 59 credit hours with a grade of C or better and a GPA of 2.5 or better.
- <sup>2</sup> Service Learning required – minimum of 10 hours outside of class.
- <sup>3</sup> Approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE content test. Planned teaching experience in schools selected and supervised by the Office of Field Experiences. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student's major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Highly Qualified Teacher (HQT)

Students are required to select one area from the available three HQT options (Science/Social Studies/Mathematics)

Code	Title	Hours
<b>Select one option:</b>		
<b>Option 1 Highly Qualified Teacher in Science</b>		
3370:100	Earth Science	
3370:101	Introductory Physical Geology	
3370:137	Earth's Atmosphere & Weather	
3370:211	Introduction to Environmental Science	
3370:451	Field/Lab Studies in Environmental Science <sup>2</sup>	
3650:130	Descriptive Astronomy	
3650:261	Physics for Life Sciences I	
	or 3650:401 Everyday Physics	
3650:401	Everyday Physics	
<b>Option 2 Highly Qualified Teacher in Social Studies</b>		
3250:200	Principles of Microeconomics	
	or 5500:251 Teaching Personal Finance in the PK-12 Classroom	
3350:250	World Regional Geography	
3400:250	U.S. History to 1877	
3400:470	Ohio History	
3700:100	Government & Politics in the United States	
3700:210	State & Local Government & Politics	
5500:251	Teaching Personal Finance in the PK-12 Classroom	
<b>Option 3 Highly Qualified Teacher in Mathematics</b>		
3450:135	Mathematics for Everyday Life	
3450:140	Fundamentals of Mathematics for Primary Educators	
3450:145	Algebra for Calculus	
3450:209	Discrete Mathematics for Educators	

3450:231	Modeling with Algebraic and Transcendental Functions
3450:331	Modeling with Calculus
3450:341	Geometry and Measurement
3470:261	Introductory Statistics I
<hr/>	
Total Hours	20-27

## Moderate/Intensive Intervention Specialist, BS

### Bachelor of Science in Education, Moderate/Intensive Intervention Specialist Licensure (Grades K thru 12) (561205BS)

More on the Moderate/Intensive Intervention Specialist Licensure major (<https://www.uakron.edu/education/academic-programs/undergraduate-programs.dot>)

This program is designed to meet the standards for the State of Ohio teaching license for Intervention Specialist for Moderate/Intensive Educational Needs. Teacher candidates completing this program will be prepared to work as an Intervention Specialist with students who have moderate/intensive educational needs.

## School of Education Admission Requirements For Those Persons Seeking State of Ohio Licensure

All students must complete the following requirements for admission:

- School of Education Application for Admission.** Responses to the questions on the application will help School of Education advisors offer the most effective and efficient advisement. It will also help advisors know students as individuals with unique backgrounds and experiences. Applications are available online at: <http://www.uakron.edu/education/academic-programs/how-to-apply.dot>.
- Intercollege Transfer (Undergraduate students only).** Those students enrolled in another college wishing to complete degree requirements in the School of Education should see their advisor to initiate an intercollege transfer to the School of Education. Those students may not access School of Education core courses prior to admission. Students planning to complete teacher education as part of their degree requirements in another college need not complete an ICT.
- Grade Point Average of 3.0 or better overall and 2.5 or better overall in prerequisite credit hours from specific courses identified by the School.**
- Evidence of competency in reading comprehension and writing as demonstrated by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or
  - A grade of "B" or higher in a course that meets the University's General Education English Composition I requirement.
- Evidence of competency in mathematics as shown by one of the following:**
  - A composite ACT score of 21 or higher, or
  - A composite SAT-R score of 1060 (Math and Verbal) or higher, or

- A grade of "B" or better in a minimum of 3 credits of mathematics that meets the University's General Education mathematics requirement.

#### 6. Signed Criminal Background Check Acknowledgment Form

The LeBron James Family Foundation School of Education  
Zook Hall, Room 002  
Akron, Ohio 44325-4201  
(330)972-7750

The following information has official approval of **The LeBron James Family Foundation School of Education** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Professional Education Requirements for Moderate/Intensive Intervention Specialist Students	54
	Content Requirements for Mild/Moderate Intervention Specialist Students	24
	Additional Credits for Graduation *	8
<hr/>		
	Total Hours	120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
3450:145	Algebra for Calculus	
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking	
	or 7600:106 Effective Oral Communication	
<i>Writing: 6 credit hours</i>		

3300:111	English Composition I	
3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
3150:101	Chemistry for Everyone	
or 3150:110	Introduction to General, Organic & Biochemistry I (Lecture)	
<i>Social Sciences: 6 credit hours</i>		
3750:100	Introduction to Psychology	
3850:100	Introduction to Sociology	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
3850:100	Introduction to Sociology	
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## Professional Education Requirements for Moderate/Intensive Intervention Specialist Students <sup>1</sup>

Code	Title	Hours
<b>Phase One: Learning about Learners</b>		
5100:200	Introduction to Education	3
5100:220	Educational Psychology	3
5500:240	Foundations of Literacy	3
5500:241	Word Study, Phonics & Spelling	3
5610:100	Orientation to Intervention Specialist	0
5610:225	Introduction to Exceptionalities	3
<b>Phase Two: Learning about Teaching</b>		
5500:286	Teaching Multiple Texts	3
or 5500:440	Literacy in the Content Areas	
<b>Phase Three: Learning to Apply the Principles of Teaching</b>		
5500:308	Instructional Design and Assessment	6
5500:445	Assessment and Instruction in Literacy	3
5610:440	Developmental Characteristics of Exceptional Individuals	3
5610:452	Special Education Programming: Secondary/Transition	3
5610:453	Special Education Programming: Moderate/Intensive I	3
5610:454	Special Education Programming: Moderate/Intensive II	3
<b>Phase Four: Learning to Teach</b>		
5610:403	Student Teaching Colloquium: Special Education	1
5610:470	Clinical Practicum in Special Education	3

5610:487	Student Teaching: Moderate/Intensive Educational Needs <sup>3</sup>	11
Total Hours		54

- <sup>1</sup> 60 credit hours with a grade of C or better and a GPA of 2.5 or better.
- <sup>2</sup> Service Learning required – minimum of 10 hours outside of class.
- <sup>3</sup> All students must have the approval of the Student Teaching Committee, based upon approved application to student teaching, and passing OAE Content and Reading tests. Planned teaching experience in schools selected and supervised by the Office of Teacher Education and Licensure experiences. Co-requisite 5300:496 Student Teaching Colloquium in Secondary Education. To qualify for student teaching, students must have a 2.5 GPA overall, 2.5 in education classes, and 2.5 in the student’s major, in methods courses, core courses, and in their teaching field(s). Satisfactory completion of a minimum of 100 hours of field experience is also required before student teaching.

## Content Requirements for Mild/Moderate Intervention Specialist Students

Code	Title	Hours
3760:265	Child Development	3
3760:270	Theory & Guidance of Play	3
5610:380	Math Methods: Special Education	3
5610:448	Individuals with Moderate/Intensive Educational Needs: Characteristics and Implications	3
5610:459	Collaboration & Consultation in Schools & Community	3
5610:460	Family Dynamics & Communication in the Educational Process	3
5610:463	Assessment in Special Education	3
5610:467	Management Strategies in Special Education	3
Total Hours		24

## Mathematics

### BS/MS Program in Applied Mathematics

This is an accelerated five-year BS/MS program. After successfully completing this program, a student will receive a bachelor’s degree in either mathematics or applied mathematics, as well as a master’s degree in applied mathematics. Under the supervision of a faculty adviser, a student in the program will finish the core course requirements and most of the electives for the bachelor’s degree in the first three years. During the third year of the baccalaureate degree, a student will formally apply to the program through the Graduate School (<https://www.uakron.edu/gradsch/>). Upon acceptance, a student will be cleared to complete the remaining electives of the bachelor’s degree and 30 credits of graduate work for the master’s degree in the last two years. A student will be eligible for a graduate assistantship only in these last two years and must be registered for at least nine credits in each of those semesters.

### Cooperative Education Program: Mathematics or Applied Mathematics

The work-study schedule for a student participating in the Cooperative Education Program is as follows:

Fall	Spring	Summer
School	School	Vacation/School
School	School	Vacation/School/Work
School	Work	School
Work	School	Work
School	School	

## Admission

Arrangements for student entry into the program are on an individual basis, and must be initiated by the student during the second year of undergraduate study. The Cooperative Education Program is an optional program available only to all full-time mathematics or applied mathematics students at The University of Akron who have satisfactorily met the following requirements:

- Sixty credits with a grade-point average of at least 2.00 out of a possible 4.00 in the program curriculum and be on schedule in the curriculum
- Acceptance by a cooperative education coordinator or director following interviews
- A transfer student must complete 16 credits of academic work at The University of Akron with a grade-point average of at least 2.00 out of a possible 4.00 and be on schedule in the program curriculum.

A student who desires to participate in the program will fill out a Personal Data form and submit it to the department chair. The student will then meet with a member of the cooperative education staff to discuss the availability of prospective employers. During this interview, the student will be asked to sign a Cooperative Educational Agreement and a grade release form which will become effective upon employment. Employment must be coordinated or have approval of the department and the cooperative education director. The University does not guarantee employment for the student. The student will be expected to remain with the employer for all cooperative work periods in order to provide a progression of experience and responsibility.

## Registration

While no academic credits are assigned, each student must register for 3000:301 Cooperative Education in the same manner that a student registers for any other University course. See department adviser before enrolling for this course.

A cooperative program fee for each work period is charged. Upon completion of a work period, a statement will appear on each student's official transcript listing the course number, title and name of the employer. In the place of a grade "credit" or "no credit" will be given, depending upon the student's satisfactory or unsatisfactory completion of the following:

- Work performance as evaluated by the employer
- Written work report as approved by department chair and cooperative education staff
- Cooperative Work Period Summary form

Usually, work progresses satisfactorily on the job and a grade of "credit" is assigned at the end of the semester. If all the above conditions are not met, a grade of "no credit" will be submitted.

- Applied Mathematics, BS (p. 207)
- Applied Mathematics, Minor (p. 208)

- Mathematics, Minor (p. 208)
- Technical Mathematics, Certificate (p. 209)

## Mathematics (2030)

### 2030:130 Mathematics for Allied Health (3 Credits)

Prerequisite: placement test, 2010:52, 2010:54, 2010:57, or 2010:84 with a grade of C or better. The real number system, systems of measurement, conversions, linear equations, factoring, quadratic equations, graphing, linear systems, organizing data, averages, standard deviation, the normal distribution.

### 2030:151 Technical Mathematics I (2 Credits)

Prerequisite: placement test, 2010:52, 2010:54, 2010:57, or 2010:84 with a grade of C or better. Fundamental concepts and operations, functions, graphs, factoring and algebraic fractions, and quadratic equations.

### 2030:152 Technical Mathematics II (2 Credits)

Prerequisite: 2030:151 with a grade of C- or better or placement test. Variation, equations of lines, Cramer's rule, right triangle trigonometry, oblique triangles, radian measure, and complex numbers.

**Gen Ed:** Tier 1 - Quantitative Reasoning

### 2030:153 Technical Mathematics III (2 Credits)

Prerequisite: 2030:152 with a grade of C- or better or placement test. Factoring, algebraic fractions, exponents and radicals, equations with radicals, equations in quadratic form, functions, their properties and graphs, exponential and logarithmic functions.

**Gen Ed:** Tier 1 - Quantitative Reasoning

### 2030:154 Technical Mathematics IV (3 Credits)

Prerequisite: 2030:153 with a grade of C- or better or placement test. Functions and their graphs, polynomial and rational functions, polynomial equations, graphs of trigonometric functions, trigonometric identities and equations, analytic geometry, complex numbers in polar form.

**Gen Ed:** Tier 1 - Quantitative Reasoning

### 2030:161 Mathematics for Modern Technology (4 Credits)

Prerequisite: Placement test or completion of 2010:052, 2010:054, 2010:057, or 2010:084 with a grade of C or better. Lines, linear regression, sets, counting, basic probability, basic statistics, binomial and normal distributions, mathematics of finance, symbolic logic, arguments, logic circuits.

**Gen Ed:** Tier 1 - Quantitative Reasoning

### 2030:216 Applied Finite Mathematics (3 Credits)

Prerequisite: 2030:153 with a grade of C- or better, or placement test. Number systems, integer rings, finite fields, number theory algorithms, prime numbers and primality tests, factoring, and random number.

### 2030:255 Technical Calculus I (3 Credits)

Prerequisite: 2030:154 with a grade of C- or better or placement test. The derivative, applications of the derivative, derivatives of the trigonometric, logarithmic and exponential functions. Integration by antidifferentiation.

**Gen Ed:** Tier 1 - Quantitative Reasoning; Tier 3 - Critical Thinking

### 2030:260 Advanced Trigonometry (2 Credits)

Prerequisite: 2030:153 or equivalent with a grade of C- or better, or placement test. Horizontal circular curves, vertical curves, and spherical triangles.

### 2030:290 Special Topics: Associate Studies Mathematics (1-4 Credits)

(May be repeated with a change in topic) Prerequisite: Permission. Selected topics on subject areas of interest in associate studies.

**2030:345 Technical Data Analysis (2 Credits)**

Prerequisite: [2030:154 or 2030:216] with a grade of C- or better. Data summarization including graphic representation, numerical measures, introduction to probability, confidence intervals and hypothesis testing.

**2030:356 Technical Calculus II (3 Credits)**

Prerequisite: 2030:255 or equivalent with a grade of C- or better, or placement test. Methods and applications of integration, first and second order differential equations and applications, series expansion, Laplace transform, partial derivatives, and double integrals.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**2030:361 Applied Cryptography (3 Credits)**

Prerequisite: A grade of C or better in 2030:216. Symmetric cryptography, modular arithmetic, stream and block ciphers, random numbers, Advanced Encryption Standard, public-key cryptography, key exchange, digital signatures, hash functions, message authentication.

**2030:461 Applied Cryptanalysis (3 Credits)**

Prerequisite: 2030:361 with a grade of C or better. Cryptanalysis concepts; cryptanalysis of symmetric and public key cryptosystems, key exchange systems, and digital signatures; hash function collision resistance; cryptanalysis with quantum computer.

**2030:480 Advanced Topics in Technical Mathematics (2 Credits)**

Prerequisite: 2030:255 or equivalent with a grade of C- or better, or placement test. Matrices, introduction to series, partial derivatives, least squares adjustments, topics in astronomy, and coordinate systems.

## Mathematics (3450)

**3450:135 Mathematics for Everyday Life (3 Credits)**

Prerequisite: 2010:52, 2010:57, or 2010:84 with a grade of C- or better or placement test. Contemporary applications of mathematics for the non-science major to develop skills in logical thinking and reading technical material. Topics include voting, apportionment, scheduling, patterns, networks.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:140 Fundamentals of Mathematics for Primary Educators (3 Credits)**

Prerequisite: placement test or 3470:250 with a grade of C- or better. Corequisite: 5100:200. A problem-solving and inquiry-based approach to number systems; bases; operations, properties, relationships, algorithms of Real Numbers; patterns and algebra.

**3450:145 Algebra for Calculus (4 Credits)**

Prerequisite: 2010:85 with a grade of C or better or placement test. Real numbers, equations and inequalities, linear and quadratic functions. Exponential and logarithmic functions. Systems of equations, matrices, determinants. Permutations and combinations.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:149 Precalculus Mathematics (4 Credits)**

Prerequisite: 3450:145 with a grade of C- or better or placement. Functions, polynomial functions, complex numbers, exponential and logarithmic functions, systems of equations, trigonometric functions, mathematical inductions, sequences, and binomial theorem.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:208 Introduction to Discrete Mathematics (4 Credits)**

Prerequisite: Completion of 3450:145 or 3450:149 with a grade of C- or better or placement. A foundation course in discrete mathematics with applications. Topics include sets, number systems, Boolean Algebra, logic, relations, functions, recursion, matrices, induction, graphs, and trees.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:209 Discrete Mathematics for Educators (4 Credits)**

Prerequisite: Completion of 3450:140 with a grade of C- or better or placement. Corequisite: 3450:231. Introduction to discrete mathematics topics for middle school instruction: sets, counting, probability, recurrence relations, graph theory, logic and elementary proof techniques.

**3450:210 Calculus with Business Applications (3 Credits)**

Prerequisite: Mathematics Placement Test or completion of 3450:145 with a grade of C- or better. Review of functions, derivatives of functions, extrema and concavity, optimization, logarithmic and exponential functions, extrema for multivariate functions. Graphing calculator required. For business or economics majors only.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:215 Concepts of Calculus (4 Credits)**

Prerequisite: Completion of 145 or 149 with a grade of C- or better or placement. Functions; limits and continuity; differentiation and applications of differentiation; logarithmic and exponential functions; integration and applications of integration; partial differentiation.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:221 Analytic Geometry-Calculus I (4 Credits)**

Prerequisite: 3450:149 with a grade of C- or better or placement test. Limits; continuity; rates of change; derivatives and applications algebraic, trigonometric, transcendental functions; curve sketching, antiderivatives and integration, areas.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:222 Analytic Geometry-Calculus II (4 Credits)**

Prerequisite: Completion of 3450:221 with a grade of C- or better. Methods and applications of integration; sequences, series and power series; Taylor polynomials and Taylor series; parametric and polar coordinates.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:223 Analytic Geometry-Calculus III (4 Credits)**

Prerequisite: Completion of 3450:222 with a grade of C- or better. Vector algebra, cylindrical, spherical coordinates, vector-valued functions, curvature; functions of several variables, limit, continuity, partial derivatives, differentials, directional derivatives, maxima and minima, multiple integrals, Divergence Theorem.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:231 Modeling with Algebraic and Transcendental Functions (4 Credits)**

Prerequisites: Completion of 3450:140 with a grade of C- or better or placement test or permission. Modeling and regression with algebraic, exponential, logarithmic, and trigonometric functions; systems of equations and matrices. These topics will be enhanced by the use of CAS.

**3450:240 Mathematical Foundations for Early Childhood Educators (3 Credits)**

Prerequisite: Completion of 3450:140 with a grade of C- or better. A problem-solving and inquiry-based approach to functions and algebra, coordinate and Euclidean geometry, and elementary data analysis.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:289 Selected Topics in Mathematics (1-3 Credits)**

Prerequisite: Permission. Selected topics of interest in mathematics.

**3450:307 Fundamentals of Advanced Mathematics (3 Credits)**

Prerequisite: Completion of 3450:222 with a grade of C- or better. Logic, solving problems, and doing proofs in mathematics. Sets, extended set operations, and indexed family sets, induction. Binary relations. Functions, cardinality. Introductory concepts of algebra and analysis.

**3450:312 Linear Algebra (3 Credits)**

Prerequisite: Completion of 3450:223 with a grade of C- or better. Study of vector spaces, linear transformations, matrices, determinants, inner products, the eigenvalue problem, quadratic forms and canonical forms.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:331 Modeling with Calculus (4 Credits)**

Prerequisite: Completion of 3450:231 with a grade of C- or better. Introduction to limits, continuity, differentiation with applications, integration with applications, sequences and series. These topics will be enhanced by the use of CAS.

**3450:335 Introduction to Ordinary Differential Equations (3 Credits)**

Prerequisite: Completion of 3450:223 with a grade of C- or better or permission of instructor. Basic techniques for solving ODEs and systems of ODEs. Analysis of models involving differential equations of first order and simple equations of second order.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:341 Geometry and Measurement (3 Credits)**

Prerequisites: Completion of 3450:209 with a grade of C- or better, or 3450:307 with a grade of C- or better and be admitted to the College of Education. Basic Constructions, Polygons, Similarity, Pythagorean Theorem, Circles, Congruence, Perimeters and Areas of Plane Figures, Surface and Volume of Solids, Rigid Motions and Symmetry, Coordinate geometry.

**3450:401 History of Mathematics (3 Credits)**

Prerequisite: Completion of 3450:307 with a grade of "C-" or better. Origin and development of mathematical ideas.

**3450:410 Advanced Linear Algebra (3 Credits)**

Prerequisite: Completion of 3450:312 with a grade of C- or better. Study of vector spaces, linear transformation, canonical and quadratic forms, inner product spaces.

**3450:411 Abstract Algebra I (3 Credits)**

Prerequisite: Completion of 3450:307 with a grade of C- or better or permission of instructor. Study of groups, rings, fields, integral domains.

**3450:412 Abstract Algebra II (3 Credits)**

Prerequisite: Completion of 3450:411 with a grade of C- or better or permission of instructor. Study of groups, rings, fields, integral domains, vector spaces, field extensions, Galois theory.

**3450:413 Theory of Numbers (3 Credits)**

Prerequisite: Completion of 3450:222 with a grade of C- or better or permission. Euclidean algorithm, unique factorization theorem, congruences, primitive roots, indices, quadratic residues, number-theoretic functions, Gaussian integers and continued fractions.

**3450:415 Combinatorics & Graph Theory (3 Credits)**

Prerequisite: Completion of 3450:222 with a grade of C- or better or permission. Introduction to basic ideas and techniques of mathematical counting; properties of structure of systems.

**3450:420 Mathematical Technology and Communication (3 Credits)**

Prerequisites: Completion of 3450:222 and 3450:312 with grades of C- or better, or permission. Graphical, numerical, and algebraic computation with applications using a variety of mathematical hardware and software: symbolic manipulators, dynamic geometry software, programs, scripts and web-browsers.

**3450:421 Advanced Calculus I (3 Credits)**

Sequential. Prerequisite: Completion of 3450:223 with a grade of C- or better; 3450:307 is highly recommended. Real number system, sequences, series, set theory, continuity, differentiation, integration, partial derivatives, multiple integration, maxima and minima, convergence and uniform convergence, power series, improper integrals, transformations, line and surface integrals.

**3450:422 Advanced Calculus II (3 Credits)**

Sequential. Prerequisite: Completion of 3450:421 with a grade of C- or better or permission of instructor. Real number system, sequences, series, set theory, continuity, differentiation, integration, partial derivatives, multiple integration, maxima and minima, convergence and uniform convergence, power series, improper integrals, transformations, line and surface integrals.

**3450:425 Complex Variables (3 Credits)**

Prerequisite: Completion of 3450:223 with a grade of C- or better. Complex variables; elementary functions, differentiation and analytic functions; integration and Cauchy's theorem; power series and Laurent series; residue theorem; applications such as conformal mappings, inversion of integral transform.

**3450:427 Applied Numerical Methods I (3 Credits)**

Prerequisites: Completion of 3450:222 and 3460:209 with grades of C- or better or permission. Numerical methods in polynomial interpolation, rootfinding, numerical integration, and numerical linear algebra.

**3450:428 Applied Numerical Methods II (3 Credits)**

Prerequisites: Completion of 3450:335 and 3450:427 with grades of C- or better or permission. Numerical methods in the solution of ordinary and partial differential equations. Numerical differentiation, Runge-Kutta methods, and iterative methods for ODEs, finite differences for PDEs.

**3450:430 Numerical Solutions for Partial Differential Equations (3 Credits)**

Prerequisite: Completion of 3450:428 with a grade of C- or better or equivalent. For advanced undergraduate and graduate students. The study of finite difference and finite element methods for partial differential equations consistency, stability, convergence and computer implementation.

**3450:432 Partial Differential Equations (3 Credits)**

Prerequisite: Completion of 3450:335 with a grade of C- or better. The classical initial value and boundary value problems of mathematical physics developed and solved using Fourier series and integral transforms.

**3450:435 Systems of Ordinary Differential Equations (3 Credits)**

Prerequisites: Completion of 3450:335 and either 3450:312 or 3450:428 with grades of C- or better or permission. Analysis, solution of systems of equations, linear, nonlinear. Topics: stability theory, perturbation methods, asymptotic methods, applications from physical, social sciences.

**3450:436 Mathematical Models (3 Credits)**

Prerequisite: Completion of 3450:335 with a grade of C- or better, and a six-hour sequence in an approved applied area, or permission. Formulation and analysis of mathematical models in social and physical sciences. Analysis of deterministic and stochastic models. Topics may include stochastic processes, linear programming, graph theory, theory of measurement.

**3450:438 Advanced Engineering Mathematics I (3 Credits)**

Prerequisites: Completion of 3450:335 and 3450:312 with grades of C- or better or permission. Matrices, eigenvalue problems, systems of ODEs, vector analysis, complex variables.

**3450:439 Advanced Engineering Mathematics II (3 Credits)**

Prerequisites: Completion of 3450:335 and 3450:312 with grades of C- or better or permission. Special functions, Fourier series and transforms, PDEs.

**3450:441 Concepts in Geometry (4 Credits)**

Prerequisite: 3450:307 with a grade of C- or better or permission of instructor. Axiomatic treatment of both Euclidean and non-Euclidean geometries. Other concepts included are finite geometry, transformations, constructions and inversions.

**3450:445 Introduction to Topology (3 Credits)**

Prerequisite: Completion of 3450:307 with a grade of C- or better or permission of instructor. Introduction to topological spaces and topologies, mappings, cardinality, homeomorphisms, connected spaces, metric spaces.

**3450:489 Topics in Mathematics (1-4 Credits)**

(May be repeated for a total of 12 credits) Prerequisite: Permission of instructor. Selected topics in mathematics and applied mathematics at an advanced level.

**3450:491 Workshop in Mathematics (1-4 Credits)**

(May be repeated) Group studies of special topics in mathematics and applied mathematics. May not be used to meet undergraduate or graduate major requirements. May be used for elective credit.

**3450:497 Individual Reading: Mathematics (1-2 Credits)**

Prerequisites: senior standing and permission. Mathematics or applied mathematics majors only. Directed studies designed as an introduction to research problems, under guidance of selected faculty member.

**3450:498 Senior Honors Project: Mathematics (1-3 Credits)**

Prerequisite: Permission of Instructor. Directed study for senior student in the Honors Program. An introduction to research problems in mathematics and applied mathematics under the guidance of selected faculty. May be repeated for up to six credits.

## Applied Mathematics, BS

### Bachelor of Science in Applied Mathematics (345001BS)

More on the Applied Mathematics major (<https://www.uakron.edu/math/academics/undergraduate/applied-mathematics-program.dot>)

### Applied Mathematics Fundamentals

- Core courses provide in-depth understanding of one or more areas in the mathematical sciences.
- Degree program can be tailored to an area of specialization, such as:
  - engineering
  - physics
  - chemistry
  - computer science
  - social science
  - economics
  - business

The following information has official approval of **The Department of Mathematics** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within*

*the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Applied Mathematics Core	44
	Applied Mathematics Electives	15
	Additional Credits for Graduation *	13
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.0 GPA in all 3450 courses is required for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	
	<i>Social Sciences: 6 credit hours</i>	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
	Complex Systems	
	Critical Thinking	
	Domestic Diversity	
	Global Diversity	
	<i>Review the General Education Requirements page for detailed course listings.</i>	
	<b>Total Hours</b>	<b>34</b>

## College of Arts & Sciences Requirements

Code	Title	Hours
<b>Degree requirements in Arts &amp; Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.</b>		
	<i>Foreign Language</i>	<b>14</b>

101 Beginning I

102 Beginning II

201 Intermediate I

202 Intermediate II

7700:222 Survey of Deaf Culture in America (American Sign Language option only)

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Applied Mathematics Core

Code	Title	Hours
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:307	Fundamentals of Advanced Mathematics	3
3450:312	Linear Algebra	3
3450:335	Introduction to Ordinary Differential Equations	3
3450:421	Advanced Calculus I	3
3450:422	Advanced Calculus II	3
or 3450:425	Complex Variables	
3450:427	Applied Numerical Methods I	3
3450:428	Applied Numerical Methods II	3
3450:436	Mathematical Models	3
3460:209	Computer Science I <sup>1</sup>	4
3470:461	Applied Statistics	4
Total Hours		44

<sup>1</sup> Counts as a College of Arts & Sciences upper level course.

## Applied Mathematics Electives

Code	Title	Hours
<b>Select 15 credits at the 300/400 level of which at least 6 credits are from some approved applied area such as Mathematics (3450), Statistics (3470), Computer Science (3460), Chemistry, Physics, Economics, Engineering, etc.</b>		<b>15</b>
Total Hours		15

**Note:**

- A minimum of 14 credits of 3450, 3460, & 3470 must be taken at The University of Akron.
- The courses 3450:135 Mathematics for Everyday Life, 3450:140 Fundamentals of Mathematics for Primary Educators, 3450:145 Algebra for Calculus, 3450:149 Precalculus Mathematics; 3470:250 Statistics for Everyday Life, 3470:260 Basic Statistics-3470:262 Introductory Statistics II, and most 3460 courses do not meet these degree requirements.
- Please see the Graduate Bulletin for BS/MS program information (<https://bulletin.uakron.edu/graduate/colleges-programs/arts-sciences/math/applied-mathematics-accelerated-bs-ms/>).

## Applied Mathematics, Minor Minor in Applied Mathematics (345001M)

**Program Contact**

Dr. Kevin Kreider  
Professor Mathematics  
330-972-6121  
kreider@uakron.edu

The following information has official approval of the **Department of Mathematics** and the **Buchtel College of Arts & Sciences** but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Applied Mathematics" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		15
Electives		9
Total Hours		24

## Required Courses

Code	Title	Hours
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:312	Linear Algebra	3
or 3450:438	Advanced Engineering Mathematics I	
Total Hours		15

## Electives

Code	Title	Hours
<b>Select 9 credits of approved 300/400 level mathematical sciences electives <sup>1</sup></b>		<b>9</b>
Total Hours		9

<sup>1</sup> At least six credits must be in 3450 courses.

## Mathematics, Minor Minor in Mathematics (345000M)

**Program Contact**

Dr. Kevin Kreider  
Professor, Mathematics  
330-972-6121  
kreider@uakron.edu

The following information has official approval of the **Department of Mathematics** and the **Buchtel College of Arts & Sciences** but is intended only as a guide. Completion of this minor is contingent upon many



factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Mathematics" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		15
Electives		9
Total Hours		24

## Required Courses

Code	Title	Hours
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:312	Linear Algebra	3
or 3450:438	Advanced Engineering Mathematics I	
Total Hours		15

## Electives

Code	Title	Hours
Select 9 credits of approved 300/400 level mathematical sciences electives <sup>1</sup>		9
Total Hours		9

<sup>1</sup> At least six credits must be in 3450 courses.

## Technical Mathematics, Certificate Certificate in Technical Mathematics (203001C)

This certificate is aimed at developing technical mathematics knowledge and the ability to apply this knowledge in an industrial setting.

### Program Contact

Dr. Katie Cerrone  
Professor, Department of Applied General & Technical Studies  
330-972-8809  
kc24@uakron.edu

The following information has official approval of **The Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Technical Mathematics" and must be completed with a minimum grade point average of 2.5 overall for the certificate to be noted on the student's record. The granting of this certificate does not require the completion of a degree. However,

coursework can be applied to an A.A.S. degree or to B.S. degrees in Engineering Technology, CIS-Digital Forensics, or CIS-Cybersecurity. At least 6 of the 11 credit hours must be taken through the College of Applied Science and Technology.

## Summary

Code	Title	Hours
Core Courses		8-9
Electives		3-2
Total Hours		11

## Core Courses

Code	Title	Hours
<b>Complete 8-9 credits from the following:</b>		<b>8-9</b>
2030:154	Technical Mathematics IV	
2030:216	Applied Finite Mathematics	
2030:255	Technical Calculus I	
2030:356	Technical Calculus II	
2030:361	Applied Cryptography	
2030:461	Applied Cryptanalysis	
2030:480	Advanced Topics in Technical Mathematics	
Total Hours		8-9

## Electives

Code	Title	Hours
<b>Complete 2-3 credit hours of the following:</b> <sup>1</sup>		<b>3-2</b>
2030:216	Applied Finite Mathematics	
2030:260	Advanced Trigonometry	
2030:345	Technical Data Analysis	
2030:361	Applied Cryptography	
2030:461	Applied Cryptanalysis	
2030:480	Advanced Topics in Technical Mathematics	
2030:290	Special Topics: Associate Studies Mathematics	
3450:xxx	200/300/400 Level mathematics courses approved by the Technical Mathematics faculty of the Dept. of Applied General and Technical Studies	
Total Hours		3-2

<sup>1</sup> If only 8 credits are taken from the core course list, then 3 credits must be taken from the electives in order to meet the minimum 11 credit requirement for the certificate.

## Modern Languages

The Department of Modern Languages is committed to preparing all University of Akron students to succeed in the global economy and to become productive and engaged global citizens. Our students achieve linguistic competencies and multicultural literacies, develop critical-thinking and problem-solving skills and connect with diverse local, national, and international communities.

- Spanish
  - The Spanish Major is designed for those students who are interested in developing their skills in the Spanish language and in gaining a broader perspective on and a deeper understanding of Spanish-speaking countries in Europe and Latin America.

Spanish is the second-most commonly spoken language after English within the United States, and in today's economy, getting a good job within any customer service-related industry is greatly enhanced by the ability to speak Spanish.

- Advanced Spanish for Health Professions and First Responders, Certificate (p. 216)
- Arabic, Minor (p. 217)
- Beginning Medical Spanish, Certificate (p. 217)
- French, Minor (p. 218)
- Spanish, BA (p. 218)
- Spanish, Minor (p. 219)

## Modern Languages (3500)

### 3500:101 Beginning Modern Language I (4 Credits)

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

### 3500:102 Beginning Modern Language II (4 Credits)

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

### 3500:201 Intermediate Modern Language I (3 Credits)

Sequential. Prerequisite: 3500:102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

### 3500:202 Intermediate Modern Language II (3 Credits)

Sequential. Prerequisite: 102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

### 3500:422 Modern Languages: Special Topics in Advanced Language Skills, or Culture, or Literature (1-4 Credits)

Prerequisite: Modern Languages 3500:202 or equivalent. Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

### 3500:490 Workshop in Modern Languages (1-4 Credits)

Prerequisite: Permission of instructor. (May be repeated for a total of 8 credits) Group studies of special topics in modern languages.

### 3500:497 Individual Readings in Modern Languages (1-3 Credits)

Prerequisites: 3500:202 and permission of department chair.

### 3500:498 Senior Honors Project (1-3 Credits)

(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission. Open only to language major enrolled in Honors Program. Independent study leading to completion of senior honors thesis or other original work.

### 3500:522 Modern Languages: Special Topics in Advanced Language Skills or Culture, or Literature (1-4 Credits)

See department for course description.

### 3500:590 Workshop in Modern Language (1-4 Credits)

Prerequisite: graduate status or permission of department. (May be repeated for a maximum of eight credits) Group studies of special topics in modern languages.

### 3500:597 Individual Reading in Modern Languages (1-4 Credits)

Prerequisite: Graduate status and permission of the instructor and department chair. Individual study under the guidance of professor who directs and coordinates student's reading and research. The general designation of 3500 is used for languages that do not have a specific department number (i.e., Arabic, Chinese, Portuguese, etc.). May be repeated with departmental permission.

## Arabic (3501)

### 3501:101 Beginning Arabic I (4 Credits)

Sequential. Acquisition of basic speaking, listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

### 3501:102 Beginning Arabic II (4 Credits)

Sequential. Prerequisite: 3501:101 or equivalent. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

### 3501:201 Intermediate Arabic I (4 Credits)

Sequential. Prerequisite: 3501:102 or equivalent. Continuing acquisition of competence in speaking, listening comprehension, reading and writing through use of culturally authentic materials, with emphasis on developing accuracy and self-expression. (Conducted in Arabic).

### 3501:202 Intermediate Arabic II (4 Credits)

Sequential. Prerequisite: 3501:201 or equivalent. Continuing acquisition of competence in speaking, listening comprehension, reading and writing through use of culturally authentic materials, with emphasis on developing accuracy and self-expression. (Conducted in Arabic).

### 3501:210 Arabic Culture through Film (3 Credits)

Prerequisites: 32 credit hours including English Composition I and II [3300:111 and 3300:112] or equivalent. Exploration of Arabic culture through viewing of films subtitled in English. Readings and discussions in English. Does not count toward minor in Arabic.

Gen Ed: Tier 2 - Humanities

### 3501:301 Composition and Conversation (4 Credits)

Prerequisite: 3501:202 or equivalent. Further development of language skills acquired at the intermediate level: Writing, Speaking, Listening Comprehension and Reading. (Conducted in Arabic).

### 3501:302 Arabic Media (4 Credits)

Prerequisite: 3501:202 or equivalent. Further development of practical language skills with a focus on Arabic media. The course also will enrich students' understanding of Arabic culture. (Conducted in Arabic).

### 3501:303 Introduction to Modern Arabic Literature (4 Credits)

Prerequisite: 3501:202 or equivalent. Enhancement of students' communicative skills with emphasis on development of the ability to read, appreciate and discuss Modern Arabic Literature. (Conducted in Arabic).

### 3501:304 Cultural Readings in Arabic (4 Credits)

Prerequisite: 3501:202 or equivalent. Enhancement of communicative skills in Arabic with a focus on development of the ability to read, appreciate and discuss Arabic writing. (Conducted in Arabic).

### 3501:311 Arabic Cultural Experience Abroad (1-8 Credits)

Prerequisite: Permission of Department Chair. Residence and study abroad in an Arabic-speaking country. May be repeated once with different content. Only 8 credits allowable for minor in Arabic.

**3501:422 Special Topics in Arabic (1-4 Credits)**

Prerequisite: Two of the group of [3501:301, 3501:302, 3501:303, 3501:304] or permission of instructor. Development of specialized language skills or reading of significant works of literature or culture not studied in other courses. (Conducted in Arabic.) (May be repeated once with different topic for a maximum total of 8 credits.)

**3501:497 Individual Reading in Arabic (1-4 Credits)**

Prerequisite: 3501:202 and permission of the instructor and department chair. Individual study under the guidance of professor. May be repeated once with departmental permission for a total of 8 credits.

## Chinese (3502)

**3502:101 Beginning Chinese I (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing, and listening comprehension skills, with emphasis on development of self-expression in everyday situations through culturally authentic media and texts.

**3502:102 Beginning Chinese II (4 Credits)**

Sequential. Prerequisite: 3502:101 or equivalent. Acquisition of basic reading, speaking, writing, and listening comprehension skills, with emphasis on development of self-expression in everyday situations through culturally authentic media and texts.

**3502:201 Intermediate Chinese I (4 Credits)**

Sequential. Prerequisite: 3502:102 or equivalent. Continuing acquisition of speaking, listening, comprehension, reading, and writing competency through use of culturally authentic materials; emphasis on developing accuracy of self-expression. (Conducted in Chinese.)

**3502:202 Intermediate Chinese II (4 Credits)**

Sequential. Prerequisite: 3502:201 or equivalent. Continuing acquisition of speaking, listening, comprehension, reading, and writing competency through use of culturally authentic materials; emphasis on developing accuracy of self-expression. (Conducted in Chinese.)

**3502:210 Chinese Culture Through Film (3 Credits)**

Prerequisites: 32 credit hours including 3300:111 and 3300:112 or equivalent. Exploration of Chinese culture through viewing of films subtitled in English. Readings and discussions in English. Does not count toward minor in Chinese.

**Gen Ed:** Tier 2 - Humanities

**3502:301 Chinese Conversation (4 Credits)**

Prerequisite: 3502:202 or equivalent. Continuing development of oral expression, listening comprehension and conversational ability, with emphasis on expressing and supporting opinions. (Conducted in Chinese.)

**3502:302 Chinese Composition (4 Credits)**

Prerequisite: 3502:202 or equivalent. Development of writing skills through intensive practice and study of written expression in Chinese. Emphasis on composing extensive descriptive narrations and personal letters. (Conducted in Chinese.)

**3502:303 Chinese Conversation Through Media (4 Credits)**

Sequential. Prerequisite: 3502:202 or equivalent. Development of oral expression and listening comprehension, with emphasis on discussing current topics and expressing and supporting opinions based on media clips. (Conducted in Chinese.)

**3502:304 Chinese Reading and Writing (4 Credits)**

Prerequisite: 3502:202 or equivalent. Continuing development of reading ability through study of Chinese publications, and writing summaries of the texts. (Conducted in Chinese.)

**3502:311 Chinese Cultural Experience Abroad (1-8 Credits)**

Prerequisite: Residence and study abroad in a Chinese-speaking country. May be repeated once with different content. Only 8 credits allowable for minor in Chinese.

**3502:422 Special Topics in Language Skills, or Culture or Literature (1-4 Credits)**

Prerequisite: Two of the group [3502:301, 3502:302, 3502:303, 3502:304]. Development of specialized language skills or reading of significant works of literature or culture not studied in other courses. (May be repeated once under different topic for a total of 8 credits.)

**3502:497 Individual Reading in Chinese (1-4 Credits)**

Prerequisite: 3502:202. Individual study under guidance of professor who directs and coordinates student's reading and research. May be repeated once for a total of 8 credits.

## Latin (3510)

**3510:101 Beginning Latin I (4 Credits)**

Sequential. Reading, writing and translation; oral and written drill; analysis of grammatical structure and English vocabulary building.

**3510:102 Beginning Latin II (4 Credits)**

Sequential. Prerequisite: 3510:101 or equivalent. Reading, writing and translation; oral and written drill; analysis of grammatical structure and English vocabulary building.

**3510:190 The Making of English Words from Latin and Greek Elements (3 Credits)**

The influence of Latin and Greek on English vocabulary with some attention to the use of these languages in the scientific and legal fields. No foreign language is necessary.

**3510:201 Intermediate Latin I (3 Credits)**

Prerequisite: 3510:102 or equivalent. A survey of readings of the less difficult authors such as Pliny, Caesar, Plautus, Cicero's Letters or equivalent material.

**3510:202 Intermediate Latin II (3 Credits)**

Prerequisite: 3510:201 or equivalent. A survey of readings of the less difficult authors such as Pliny, Caesar, Plautus, Cicero's Letters or equivalent material.

**3510:303 Advanced Latin I (3 Credits)**

Prerequisites: 3510:202 or equivalent. Satirists, dramatists, philosophical, religious writers, lyric and elegiac poets, medieval writers. (May be repeated for credit with change of subject)

**3510:304 Advanced Latin II (3 Credits)**

Prerequisites: 3510:202 or equivalent. Satirists, dramatists, philosophical, religious writers, lyric and elegiac poets, medieval writers. (May be repeated for credit with change of subject)

**3510:497 Latin Reading & Research (3 Credits)**

Generally Latin epigraphy, prose composition or philology; numismatics or certain other archaeological topics may be offered. (May be repeated for credit with change of subject)

**3510:498 Latin Reading & Research (3 Credits)**

Generally Latin epigraphy, prose composition or philology; numismatics or certain other archaeological topics may be offered. (May be repeated for credit with change of subject)

## French (3520)

### 3520:101 Beginning French I (4 Credits)

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

### 3520:102 Beginning French II (4 Credits)

Sequential. Prerequisite: 3520:101 or placement test. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

### 3520:201 Intermediate French I (3 Credits)

Sequential. Prerequisite: 3520:102 or placement test. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

### 3520:202 Intermediate French II (3 Credits)

Sequential. Prerequisite: 3520:201 or placement test. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

### 3520:210 French and Francophone Cultures Through Film (3 Credits)

Prerequisites: Sophomore or higher standing (30 credit hours including English 3300:111 and 3300:112) or equivalent. Exploration of French and Francophone cultures through viewing of films subtitled in English. Readings and discussions in English.

**Gen Ed:** Tier 3 - Global Diversity

### 3520:300 Contemporary French and Francophone Cultures (3 Credits)

Prerequisite: 3520: 202. Introduction to contemporary lives and cultures in France and other Francophone countries as portrayed in recent documents, literary works and films.

### 3520:301 French Conversation (3 Credits)

Sequential. Prerequisite: 3520:202 or placement test. Development of speaking skills beyond the intermediate level. Practice of listening comprehension, correct pronunciation, extended and grammatically sound discourse. May be repeated for a total of six credits.

### 3520:302 French Composition (3 Credits)

Sequential. Prerequisite: 3520:202. Development of writing skills beyond intermediate level.

### 3520:303 French Culture & Civilization I (3 Credits)

Prerequisite: 3520:202 or equivalent. History of France and French cultural heritage from its origins to mid-20th century.

### 3520:304 French Culture & Civilization II (3 Credits)

Prerequisite: 3520:202 or equivalent. Modern history of France. Focus on political and social trends since 1960.

### 3520:305 Introduction to French Literature I (3 Credits)

Prerequisite: 3520:202. Survey of French literature from its origins to present, with lectures, reading and class discussion of representative works.

### 3520:306 Introduction to French Literature II (3 Credits)

Prerequisite: 3520:202. Survey of French literature from its origins to present, with lectures, reading and class discussion of representative works.

### 3520:308 Internship in France (1-3 Credits)

Permission of the French section advisor. (May be taken for a total of six credits. No more than three credits may be applied toward a 3520 major.) Student's internship which results in portfolio on career applications of the discipline of French.

### 3520:311 Contemporary French Society (3 Credits)

Prerequisite: 3520:202. A study of contemporary French society, including customs and political and social issues. Conducted in France. Counts toward Culture and Civilization requirement for major.

### 3520:312 French/Francophone Cultural Experience Abroad (1-3 Credits)

Prerequisite: Permission of the French section advisor. May be taken for a total of six credits. No more than three credits may be applied toward a 3520 major. Student's residence and independent study/project in French-speaking country which results in demonstrable understanding of the country's culture.

### 3520:315 French Phonetics (3 Credits)

Prerequisite or corequisite: 3520:202 or equivalent. Intensive drill in pronunciation with correction and improvement of student's accent, emphasis on articulation, intonation and rhythm.

### 3520:350 Themes in French Literature in Translation (3 Credits)

Prerequisite: 3400:210 or 3400:221. (May not be taken for credit toward the French major) Readings, discussion of novels and plays relating to selected themes of French literature. Texts and discussion in English.

### 3520:351 Translation: French (3 Credits)

Prerequisite: 3520:202. Study of translation techniques, both French to English and English to French. Emphasis on stylistics and interpretation of idioms.

### 3520:352 Translation: Business French (3 Credits)

Prerequisite: 3520:351 or equivalent. Application of translation techniques with particular stress on business styles, formats, and vocabulary. Especially recommended for students interested in international business.

### 3520:402 Advanced French Grammar (3 Credits)

Prerequisite: 3520:302. Advanced study of normative French grammar with emphasis on syntax, morphology, grammatical structure and phonetic principles.

### 3520:403 Advanced French: Written and Oral Communication (3 Credits)

Prerequisite: [3520:301 & 3520:302] or permission. Development of writing and speaking skills beyond that achieved in 301 and 302 through intensive practice and grammar review.

### 3520:407 French Literature of the Middle Ages & the Renaissance (4 Credits)

Prerequisite: 3520:305 or 3520:306. Reading and discussion of selected Medieval and Renaissance literary works. Conducted in French.

### 3520:413 French Cinema (3 Credits)

Prerequisites: 3520:301 or 3520:302 or permission from instructor. Study and discussion of various aspects of French culture and civilization as characterized in movies.

### 3520:419 19th Century French Literature (4 Credits)

Prerequisite: 3520:305 or 3520:306. Reading and discussion of selected works pertaining to romantic, realistic and naturalistic movements. Conducted in French.

### 3520:422 French: Special Topics in Advanced Language Skills, Culture or Literature (1-4 Credits)

Prerequisite: 3520:202. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

**3520:427 20th Century French Literature (4 Credits)**

Prerequisite: 3520:305 or 3520:306 or equivalent. Reading and discussion of the most representative works of period. Conducted in French.

**3520:430 Contemporary Quebec (3 Credits)**

Prerequisite: 3520:301 or 3520:302 or permission. Historical, political, sociological and cultural overviews of Québec, offering an in-depth examination of questions of identity through the study of literature and popular culture.

**3520:431 Francophone Literature (3 Credits)**

Prerequisite: 3520:300 or 3520:301 or 3520:302 or permission. The problematics of identity (race, class) in postcolonial context, studied through literary texts by authors from Africa, Caribbean, and Québec.

**3520:460 Selected Themes in French Literature (3 Credits)**

(May be repeated.) Conducted in French. Prerequisite: 3520:305 and 3520:306. Reading and discussion of literary works selected according to an important theme.

**3520:497 Individual Reading in French (1-3 Credits)**

Prerequisite: 3520:202 and permission of department chair.

**3520:498 Individual Reading in French (1-3 Credits)**

Prerequisite: 3520:202 and permission of department chair.

## German (3530)

**3530:101 Beginning German I (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3530:102 Beginning German II (4 Credits)**

Sequential. Prerequisite: 3530:101 or equivalent. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3530:201 Intermediate German I (3 Credits)**

Sequential. Prerequisite: 3530:102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3530:202 Intermediate German II (3 Credits)**

Sequential. Prerequisite: 3530:201 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3530:301 German Conversation & Composition (3 Credits)**

Prerequisite: 3530:202 or equivalent. Advanced composition using German models, special attention to words and idioms, development of oral expression and conversational ability.

**3530:302 Special Topics in German Conversation & Composition (3 Credits)**

Prerequisite: 3530:202 or equivalent or permission of instructor. May be repeated for credit. Special attention to development of oral expression and conversational ability.

**3530:310 Sex, Violence, & Terror in German Fairy Tales (3 Credits)**

Exploration of historical context of German fairy tales and interpretation plus modern significance of texts according to Jungian archetypal psychology. Readings and discussions in English.

**3530:403 Advanced German Conversation & Composition (3 Credits)**

Prerequisite: 3530:302 or equivalent. Thorough analysis of syntax, morphology, phonetic principles and grammatical structure.

**3530:404 Advanced German Conversation & Composition (3 Credits)**

Prerequisite: 3530:302 or equivalent. Thorough analysis of syntax, morphology, phonetic principles and grammatical structure.

**3530:406 German Culture & Civilization (3 Credits)**

Prerequisite: 3530:302 or 3530:306 or equivalent. Particular emphasis on customs, traditions, literary trends and artistic tendencies that constitute German's contribution to Western civilization.

**3530:407 German Culture & Civilization (3 Credits)**

Prerequisite: 3530:302 or 3530:306 or equivalent. Particular emphasis on customs, traditions, literary trends and artistic tendencies that constitute German's contribution to Western civilization.

**3530:422 German: Special Topics in Advanced Language Skills or Culture or Literature (1-4 Credits)**

Prerequisite: 3530:202 or equivalent. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

**3530:497 Individual Reading in German (1-3 Credits)**

Prerequisite: 3530:202 and permission of department chair.

**3530:498 Individual Reading in German (1-3 Credits)**

Prerequisite: 3530:202 and permission of department chair.

## Italian (3550)

**3550:101 Beginning Italian I (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3550:102 Beginning Italian II (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3550:201 Intermediate Italian I (3 Credits)**

Sequential. Prerequisite: 3550:102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3550:202 Intermediate Italian II (3 Credits)**

Sequential. Prerequisite: 3550:102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3550:301 Italian Composition & Conversation (3 Credits)**

Prerequisite: 3550:202 or equivalent. Italian composition using Italian models, special attention to words and idioms and development of oral expression and conversational ability.

**3550:302 Italian Composition & Conversation (3 Credits)**

Prerequisite: 3550:202 or equivalent. Italian composition using Italian models, special attention to words and idioms and development of oral expression and conversational ability.

**3550:422 Italian: Special Topics in Advanced Language Skills, or Culture, or Literature (1-4 Credits)**

Prerequisite: 3550:202 or equivalent. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

**3550:497 Individual Reading in Italian (1-3 Credits)**

Prerequisite: 3550:202 and permission of the department chair.

**Japanese (3560)****3560:101 Beginning Japanese I (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing, and listening comprehension skills.

**3560:102 Beginning Japanese II (4 Credits)**

Sequential. Prerequisite: 3560:101 or equivalent. Acquisition of basic reading, speaking, writing, and listening comprehension skills.

**3560:201 Intermediate Japanese I (3 Credits)**

Sequential. Prerequisite: 3560:102 or equivalent. Continuing development of reading, writing, speaking, and listening comprehension skills.

**3560:202 Intermediate Japanese II (3 Credits)**

Sequential. Prerequisite: 3560:201 or equivalent. Continuing development of reading, writing, speaking, and listening comprehension skills.

**3560:210 Japanese Culture through Film (3 Credits)**

Prerequisites: A minimum of Sophomore standing or higher and completion of English Composition I and II (3300:111 and 3300:112) or equivalent. Exploration of various aspects of Japanese culture through viewing of films. Films are subtitled in English. Readings and discussions in English.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Global Diversity

**3560:301 Advanced Intermediate Japanese I (3 Credits)**

Prerequisite: 3560:202 or placement. Course focuses on intermediate-advanced speaking, listening, writing, and reading skills in Japanese, as well as cultural proficiency.

**3560:422 Special Topics in Language Skills, or Culture, or Literature (3 Credits)**

Prerequisite: 3560:202 or equivalent. (May be repeated). Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

**3560:497 Individual Reading in Japanese (1-3 Credits)**

Prerequisite: 3560:202 or permission of the department chair. Directed study in an area of individual interest chosen by the student in consultation with the instructor.

**Russian (3570)****3570:101 Beginning Russian I (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3570:102 Beginning Russian II (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3570:201 Intermediate Russian I (3 Credits)**

Sequential. Prerequisite: 102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3570:202 Intermediate Russian II (3 Credits)**

Sequential. Prerequisite: 3570:102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3570:497 Individual Reading in Russian (1-3 Credits)**

Prerequisite: 3570:202 and permission of the department chair.

**Spanish (3580)****3580:101 Beginning Spanish I (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3580:102 Beginning Spanish II (4 Credits)**

Sequential. Prerequisite: 3580:101. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3580:103 Intensive First Year Spanish-Hybrid (4 Credits)**

Prerequisites: Permission of Department of Modern Languages. First year elementary Spanish in hybrid format for those who have some experience learning Spanish.

**3580:104 Beginning Medical Spanish I (3 Credits)**

Development of basic Spanish medical oral expression by studying health terminology and practicing conversational skills. Development of an awareness of Hispanic cultures. Conducted in Spanish.

**3580:105 Beginning Medical Spanish II (3 Credits)**

Prerequisites: Completion of 3580:104 with a C+ or better. Development of basic Spanish medical written expression by studying health terminology and practicing writing. Development of an awareness of Hispanic cultures. Conducted in Spanish.

**3580:106 Beginning Medical Spanish III (3 Credits)**

Prerequisites: Completion of 3580:105 with a C+ or better. Development of Spanish medical written expression by studying health terminology and practicing writing. Development of an awareness of Hispanic cultures. Conducted in Spanish.

**3580:111 Intensive Beginning Spanish I (4 Credits)**

Sequential. Prerequisite: Minimum of two years of prior study of Spanish at the secondary level or the equivalent, or a satisfactory score on the UA Spanish Placement Examination, or permission of the instructor. Acquisition of basic reading, speaking, writing, and listening comprehension skills, with emphasis on development of self-expression. Sequence covers the entire first year in one semester.

**3580:112 Intensive Beginning Spanish II (4 Credits)**

Sequential. Prerequisite: 3580:101 with a grade of B or better, or 3580:111 with a grade of C or better, or a minimum of three years of prior study of Spanish at the secondary level and/or a satisfactory score on the UA Spanish Placement Examination, or permission of the instructor. Acquisition of basic reading, speaking, writing, and listening comprehension skills, with emphasis on development of self-expression. Sequence covers the entire first year in one semester.

**3580:201 Intermediate Spanish I (3 Credits)**

Sequential. Prerequisite: 3580:102 or placement test. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3580:202 Intermediate Spanish II (3 Credits)**

Sequential. Prerequisite: 3580:201 or placement test. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3580:211 Intensive Intermediate Spanish I (3 Credits)**

Prerequisites: 3580:102 with a grade of B or better, or 3580:112 with a grade of C or better, or minimum of three years of prior study of Spanish at the secondary level or the equivalent and/or a satisfactory score on the UA Spanish Placement Examination, or permission of the instructor. Continuing acquisition of reading, speaking, writing, and listening comprehension skills, with emphasis on development of self-expression. Sequence covers entire year in one semester.

**3580:212 Intensive Intermediate Spanish II (3 Credits)**

Prerequisites: 3580:201 with a grade of B or better, or completion of 3580:211 with a grade of C or better, or minimum of three years of prior study of Spanish at the secondary level or the equivalent and/or a satisfactory score on the UA Spanish Placement Examination, or permission of the instructor. Continuing acquisition of reading, speaking, writing, and listening comprehension skills, with emphasis on development of self-expression. Sequence covers entire second year in one semester.

**3580:250 Hispanic Literature in Translation (3 Credits)**

(May not be taken for credit toward the Spanish major or minor.) Reading, discussion of novels, short stories of major Hispanic authors. Texts and discussion in English.

**Gen Ed:** Tier 2 - Humanities

**3580:301 Spanish Conversation (3 Credits)**

Prerequisite: 3580:202, or 3580:212, or equivalent, or placement test. Development of oral expression, listening comprehension and conversational ability. May be repeated for a total of six credits.

**3580:302 Spanish Composition (3 Credits)**

Prerequisite: 3580:202, or 3580:212, or equivalent, or placement test. Development of writing skills through intensive practice and study of written expression in Spanish. Conducted in Spanish. May be repeated for a total of six credits.

**3580:303 Spanish Grammar (3 Credits)**

Prerequisite: 3580:202, or 3580:212, or equivalent, or placement test. Post-intermediate review and study of grammar and basic principles of grammatical analysis. Conducted in Spanish.

**3580:307 Spanish Conversation: Health Professions & First Responders (3 Credits)**

Prerequisites: 3580:202. Students will gain intermediate to advanced level oral competency in Spanish in order to conduct interviews and communicate in Spanish with Spanish-speakers.

**Gen Ed:** Tier 3 - Domestic Diversity

**3580:308 Spanish Composition: Health Professions & First Responders (3 Credits)**

Prerequisites: 3580:202. Students will gain intermediate to advanced level written competency in Spanish, write and translate documents so to communicate with Spanish-speaking patients in the medical setting.

**Gen Ed:** Tier 3 - Complex Systems

**3580:311 Spanish/Spanish-American Cultural Experience (1-6 Credits)**

Student's residence and study in a Spanish-speaking country. Repeatable once with different content, 12 credits maximum. Only 9 credits may be applied to Spanish minor.

**3580:322 Special Topics: Spanish (3 Credits)**

Prerequisite: 3580:202. Development of specialized language and/or cultural skills for special purposes. Repeatable for up to 9 credits.

**3580:330 Spanish Undergraduate Professional Internship (1-6 Credits)**

Prerequisites: Completion of 3580:202 or equivalent with a minimum 3.0 GPA in Spanish and students will need to notify a faculty advisor in the Spanish section to seek permission and approval for the enrollment in the internship course the semester prior to the experience. Students will participate in cooperating local, regional, national and international professions of community organizations to apply their proficiency in Spanish in a real-world setting.

**3580:340 Introduction to Spanish & Spanish-American Literature (3 Credits)**

Prerequisite: Two of the group 3580:301, 3580:302, and 3580:303. Reading and discussion of Spanish and Spanish-American literature of all genres. Introduction to the fundamentals of literary criticism and literary movements. Conducted in Spanish.

**3580:351 Spanish for Business (3 Credits)**

Prerequisite: 3580:202 or instructor permission. Study of business terminology as well as cultural factors affecting the conduct of business with Hispanic nations and populations. Conducted in Spanish.

**3580:360 Hispanic Culture through Film (3 Credits)**

Prerequisite: Completion of two of the following courses: [3580:301 or 3580:302 or 3580:303]. An articulation and analysis of important themes in contemporary Hispanic culture presented through film. An introduction to film criticism. Conducted in Spanish.

**Gen Ed:** Tier 3 - Global Diversity

**3580:401 Advanced Spanish Conversation (3 Credits)**

Prerequisites: 3580:301 and [3580:302 or 3580:303]. Development of speaking skills at a level beyond that achieved in 3580:301. Conducted in Spanish. Repeatable for up to 6 credits.

**3580:402 Advanced Spanish Composition (3 Credits)**

Prerequisite: 3580:302 and [3580:301 or 3580:303]. Development of writing skills at a level beyond that achieved in 3580:302. Conducted in Spanish. Repeatable for up to 6 credits.

**3580:403 Advanced Grammar (3 Credits)**

Prerequisites: 3580:303 and 3580:301 or 3580:302. Advanced study of Spanish syntax and grammatical analysis. Conducted in Spanish.

**3580:404 Introduction to Spanish Linguistics (4 Credits)**

Prerequisites: 3580:401, 3580:402, and 3580:403. This course provides a detailed overview of the structure of Spanish and areas of inquiry within linguistics: phonetics, phonology, morphology, syntax, semantics and applied fields.

**3580:405 Spanish Linguistics: Phonology (4 Credits)**

Prerequisite: 3580:401, 3580:402, and 3580:403. Descriptive study of Spanish phonetics and morphology, comparison of Spanish and English sounds, historical aspects, regional accents and sociolinguistic variation. Conducted in Spanish.

**3580:406 Spanish Linguistics: Syntax (4 Credits)**

Prerequisite: 3580:401, 3580:402, and 3580:403. Descriptive study of Spanish syntax; introduction to theories of grammar; overview of Spanish semantics and pragmatics. Conducted in Spanish.

**3580:407 Survey of Hispanic Literature: Spain (4 Credits)**

Prerequisites: 3580:340 and two of the group [3580:401, 3580:402, 3580:403]. Study of the most representative works and literary movements in Spain from the Middle Ages to the present. Conducted in Spanish.

**3580:408 Survey of Hispanic Literature: Spanish-America (4 Credits)**

Prerequisites: 3580:340 and two of the group [3580:401, 3580:402, 3580:403]. Study of the most representative works and literary movements in Spanish-America from the Discovery to the present. Conducted in Spanish.

**3580:409 Cultural Manifestations in Medieval & Renaissance Spain (4 Credits)**

Prerequisite: 3580:407 or 3580:408. Comparative study of representative artistic and literary works of the Medieval and Renaissance periods. Conducted in Spanish.

**3580:410 Spanish Applied Linguistics (4 Credits)**

Prerequisites: 3580:401, 3580:402, and 3580:403. This course discusses current theories of second language acquisition and their implications for the learning of problematic Spanish structures.

**3580:411 Spain During the Baroque Period (4 Credits)**

Prerequisite: 3580:407 or 3580:408. A comparative study of the different cultural manifestations during the 17th century in Spain. Conducted in Spanish.

**3580:412 Cervantes: Don Quijote (4 Credits)**

Prerequisite: 3580:407 or 3580:408. Reading and analysis of Don Quijote as the first modern novel in the historical context of Renaissance and Baroque esthetics. Conducted in Spanish.

**3580:413 Don Juan Myth in Spanish Culture (4 Credits)**

Prerequisite: 3580:407 or 3580:408. Study of the evolution of the Don Juan myth from its origins to its latest versions in the 20th century.

**3580:414 Cultural Politics in the River Plate (4 Credits)**

Prerequisite: [3580:407 or 3580:408] or permission of instructor. This course will examine the military dictatorships of the seventies and eighties in Argentina and Uruguay by looking at how these regimes affected culture.

**3580:416 Representing Reality in 19th Century Spain (4 Credits)**

Prerequisite: 3580:407 or 3580:408. A comparative study of the major literary and artistic movements in Spain from Realism to Modernism. Conducted in Spanish.

**3580:417 Spanish/Spanish American Study Abroad Experience (3-6 Credits)**

Credit for student's course work at an accredited university in Spain or Latin America.

**3580:418 20th Century Spain: The Avant-Garde in Literature & Art (4 Credits)**

Prerequisite: 3580:407 or 3580:408. A comparative study of the major literary and artistic movements in Spain which illustrate the primary cultural changes of the century. Conducted in Spanish.

**3580:419 Spanish Civil War & its Cultural Impact (4 Credits)**

Prerequisite: 3580:407 or 3580:408. Study the impact of the Civil War on Spanish culture.

**3580:422 Special Topics in Specialized Language Skills, Culture, Literature (1-4 Credits)**

Prerequisite: 3580:407 or 3580:408. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

**3580:425 20th Century Spanish-American Novel (4 Credits)**

Prerequisite: [3580:407 or 3580:408] or permission of instructor. Reading and discussion of representative contemporary Latin American novels. Conducted in Spanish.

**3580:427 Latino Cultures in the USA (4 Credits)**

Prerequisite: [3580:407 or 3580:408] or permission of instructor. Inquiry into the Latino experience of displacement and marginality through the analysis of cultural manifestations in the U.S.A. Conducted in Spanish.

**3580:430 Women in 20th Century Hispanic Literature (4 Credits)**

Prerequisite: 3580:407 or 3580:408. Reading and analysis of selected works from the 20th Century that depict women in Hispanic countries. Methodologies of feminist criticism will be studied. Conducted in Spanish.

**3580:431 Hispanic Culture: Spain (4 Credits)**

Prerequisite: Two of the group [3580:401, 3580:402, 3580:403]. Study of society, customs, history, art, music, etc. of Spain, from a Hispanic perspective. Conducted in Spanish.

**3580:432 Hispanic Culture: Spanish America (4 Credits)**

Prerequisite: Two from the group [3580:401, 3580:402, 3580:403]. Overview and historical survey of Spanish American civilization and culture. Taken as 532, does not count toward the M.A. in Spanish. Conducted in Spanish.

**3580:497 Individual Reading in Spanish (1-3 Credits)**

Prerequisite: 3580:407 or 3580:408 and departmental permission.

## Advanced Spanish for Health Professions and First Responders, Certificate

### Certificate in Advanced Spanish for the Health Professions and First Responders (358001C)

**Program Contact**

*Dr. Parizad Dejbord*

*Associate Professor, Modern Languages*

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The following information has official approval of the **Department of Modern Languages** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Advanced Spanish for the Health Professions and First Responders" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. Students entering the program must have completed course 3580:202 Intermediate Spanish II with a minimum grade point average of 3.0 in Spanish. Admission for all others seeking the certificate is contingent upon an Oral Proficiency Interview conducted by a member of the Spanish faculty.



## Summary

Code	Title	Hours
Core Requirements		9
Electives		6
Total Hours		15

## Core Requirements

Code	Title	Hours
3580:307	Spanish Conversation: Health Professions & First Responders	3
3580:308	Spanish Composition: Health Professions & First Responders	3
3580:360	Hispanic Culture through Film	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select 6 elective credits of the following:</b>		<b>6</b>
3580:301	Spanish Conversation	
3580:302	Spanish Composition	
3580:303	Spanish Grammar	
3580:311	Spanish/Spanish-American Cultural Experience	
3580:401	Advanced Spanish Conversation	
3580:402	Advanced Spanish Composition	
3580:417	Spanish/Spanish American Study Abroad Experience	
Total Hours		6

## Arabic, Minor

### Minor in Arabic (350100M)

#### Program Contact

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*Professor of Instruction, Modern Languages*

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The following information has official approval of the **Department of Modern Languages** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Arabic" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. 12 credits must be at the 300 level or higher. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Electives		20
Total Hours		20

## Electives

Code	Title	Hours
<b>Select 20 credits from the following:</b>		<b>20</b>
3501:101	Beginning Arabic I	
3501:102	Beginning Arabic II	
3501:201	Intermediate Arabic I	
3501:202	Intermediate Arabic II	
3501:210	Arabic Culture through Film	
3501:301	Composition and Conversation	
3501:302	Arabic Media	
3501:303	Introduction to Modern Arabic Literature	
3501:304	Cultural Readings in Arabic	
3501:311	Arabic Cultural Experience Abroad	
3501:422	Special Topics in Arabic	
3501:497	Individual Reading in Arabic	
Total Hours		20

## Beginning Medical Spanish, Certificate

### Certificate in Beginning Medical Spanish (358000C)

#### Program Contact

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The following courses constitute a "Certificate in Beginning Medical Spanish" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. This certificate is open to all health care professionals with no or very little background in Spanish.

## Summary

Code	Title	Hours
Required Courses		9
Total Hours		9

## Required Courses

Code	Title	Hours
3580:104	Beginning Medical Spanish I	3
3580:105	Beginning Medical Spanish II	3
3580:106	Beginning Medical Spanish III	3
Total Hours		9

## French, Minor

### Minor in French (352000M)

#### Program Contact

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The following information has official approval of the **Department of Modern Languages** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in French" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. No more than 9 transfer credits may be counted toward the minor. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Electives		18
Total Hours		18

## Electives

Code	Title	Hours
<b>Select 18 credits from the following:</b> <sup>1</sup>		<b>18</b>
3520:101	Beginning French I	
3520:102	Beginning French II	
3520:201	Intermediate French I	
3520:202	Intermediate French II	
3520:300	Contemporary French and Francophone Cultures	
3520:301	French Conversation	
3520:302	French Composition	
3520:303	French Culture & Civilization I	
3520:304	French Culture & Civilization II	
3520:305	Introduction to French Literature I	
3520:306	Introduction to French Literature II	
3520:308	Internship in France	
3520:311	Contemporary French Society	
3520:312	French/Francophone Cultural Experience Abroad	
3520:315	French Phonetics	
3520:350	Themes in French Literature in Translation	
3520:351	Translation: French	

3520:352	Translation: Business French	
3520:402	Advanced French Grammar	
3520:403	Advanced French: Written and Oral Communication	
3520:407	French Literature of the Middle Ages & the Renaissance	
3520:413	French Cinema	
3520:419	19th Century French Literature	
3520:422	French: Special Topics in Advanced Language Skills, Culture or Literature	
3520:427	20th Century French Literature	
3520:430	Contemporary Quebec	
3520:431	Francophone Literature	
3520:460	Selected Themes in French Literature	
3520:497	Individual Reading in French	
3520:498	Individual Reading in French	
Total Hours		18

<sup>1</sup> At least 12 credits must be at the 300 level or higher

## Spanish, BA

### Bachelor of Arts in Spanish (358000BA)

More on the Spanish major (<https://www.uakron.edu/modlang/academics/undergraduate/spanish-major-information.dot>)

## Departmental Requirements

Completion of 28 credits above the second year (200 level): including at least one 400-level language course and one 400-level culture course, which must be taken at The University of Akron. All courses taken toward completion of the requirements for the Spanish major must be passed with a grade of C or better in order to count toward fulfillment of the major requirements. Minimum Upper Division: Excluding workshops is 40 credits, Department credits is 28, Elective credits 36 and the minimum GPA/Major and Cumulative GPA is a 2.0.

#### Program Contact

*Dr. Thomas Neal*  
Associate Professor, Modern Languages  
Spanish Undergraduate Advisor  
330-972-7487  
tneal@uakron.edu (dfraise@uakron.edu)

The following information has official approval of **The Department of Modern Languages** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Spanish Core	28
	Additional Credits for Graduation*	44
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Code	Title	Hours
	Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.	

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

**Total Hours** 34

## College of Arts & Sciences Requirements

Code	Title	Hours
	<b>Degree requirements in Arts &amp; Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.</b>	
	<i>Foreign Language</i>	14
	101 Beginning I	
	102 Beginning II	
	201 Intermediate I	
	202 Intermediate II	
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Spanish Core

**Code Title Hours**  
**Complete a total of 28 credits at the 300/400 level, including at least 28 one 400-level Language and Culture course:**

### Language:

3580:401 Advanced Spanish Conversation  
 or 3580:402 Advanced Spanish Composition  
 or 3580:403 Advanced Grammar

### Culture:<sup>1</sup>

3580:431 Hispanic Culture: Spain  
 or 3580:432 Hispanic Culture: Spanish America

3580:3XX 300-level Spanish Electives

3580:4XX 400-level Spanish Electives

**Total Hours** 28

<sup>1</sup> Must be taken in residence at the main campus at The University of Akron.

## Spanish, Minor

### Minor in Spanish (358000M)

#### Program Contact

*Dr. Thomas Neal*

*Associate Professor, Modern Languages*

*Spanish Undergraduate Advisor*

330-972-7487

tneal@uakron.edu (dfrase@uakron.edu)

The following information has official approval of the **Department of Modern Languages** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Spanish" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. No more than 9 transfer credits may be counted toward the minor. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
	Electives	18
	<b>Total Hours</b>	<b>18</b>

## Electives

Code	Title	Hours
<b>Select 18 credits from the following:</b> <sup>1</sup>		<b>18</b>
3580:111	Intensive Beginning Spanish I	
3580:112	Intensive Beginning Spanish II	
3580:201	Intermediate Spanish I	
3580:202	Intermediate Spanish II	
3580:211	Intensive Intermediate Spanish I	
3580:212	Intensive Intermediate Spanish II	
3580:301	Spanish Conversation	
3580:302	Spanish Composition	
3580:303	Spanish Grammar	
3580:311	Spanish/Spanish-American Cultural Experience	
3580:340	Introduction to Spanish & Spanish-American Literature	
3580:351	Spanish for Business	
3580:401	Advanced Spanish Conversation	
3580:402	Advanced Spanish Composition	
3580:403	Advanced Grammar	
3580:404	Introduction to Spanish Linguistics	
3580:405	Spanish Linguistics: Phonology	
3580:406	Spanish Linguistics: Syntax	
3580:407	Survey of Hispanic Literature: Spain	
3580:408	Survey of Hispanic Literature: Spanish-America	
3580:409	Cultural Manifestations in Medieval & Renaissance Spain	
3580:410	Spanish Applied Linguistics	
3580:411	Spain During the Baroque Period	
3580:412	Cervantes: Don Quijote	
3580:413	Don Juan Myth in Spanish Culture	
3580:414	Cultural Politics in the River Plate	
3580:416	Representing Reality in 19th Century Spain	
3580:418	20th Century Spain: The Avant-Garde in Literature & Art	
3580:419	Spanish Civil War & its Cultural Impact	
3580:422	Special Topics in Specialized Language Skills, Culture, Literature	
3580:425	20th Century Spanish-American Novel	
3580:427	Latino Cultures in the USA	
3580:430	Women in 20th Century Hispanic Literature	
3580:431	Hispanic Culture: Spain	
3580:432	Hispanic Culture: Spanish America	
3580:497	Individual Reading in Spanish	
Total Hours		18

<sup>1</sup> At least 12 credits must be at the 300 level or higher

## Music

Students wishing to major in music must complete the standard undergraduate application for admission and return it to the Office of Admissions (<https://www.uakron.edu/admissions/>). A student cannot be formally admitted to the School of Music until admitted to the University.

To be accepted as a music major, both freshmen and transfer students must successfully complete an audition on their major applied instrument, complete The Undergraduate Placement Examination in Music Theory, and be evaluated in keyboard skills. Prospective students should contact the School of Music for information on specialized programs, as well as dates and times for The Undergraduate Placement Examination in Music Theory.

A student receiving a grade below C- in a required music course must repeat the course. Music Education majors receiving a grade below C in a required music course must repeat the course.

## Changing Major Instruments

A student may later change his declared major instrument after being admitted to the School of Music, but must then audition and satisfy all requirements for the new area as an entering student.

## Applied Music Requirements

**Studio Study (Private Lessons)** - Skill in at least one major area of performance must be progressively developed to the highest level appropriate to the student's major. All students majoring in music are required to enroll in applied music on their declared major instrument every semester. A performance major in the Bachelor of Music program must enroll for four credits in applied music each semester which equates to a one-hour lesson or two half-hour lessons each week. All other students enroll for two credits in applied music on their declared major instrument each semester which equates to a half-hour lesson each week.

Because of the tutorial nature of applied music study, there is an additional fee for applied music registration beyond the normal credit-hour tuition and general service fee.

The offering of applied music instruction is dependent upon the availability of instructors. Although students may request study with a given instructor, the audition does not guarantee study with a particular member of the faculty. The priority for assignment is as follows:

1. collegiate music majors;
2. music minors;
3. non-music majors who are members of University performing ensembles;
4. pre-college students in the high school/college program of the School of Music; and,
5. all others.

Students will not be eligible for applied music study if:

1. they fail to pass the entrance audition;
2. a particular instructor's studio is full;
3. the quality of work demonstrated is judged unacceptable by the applied instructor; or
4. faculty in the student's applied area conclude on the basis of a jury that a continuation of applied study is not merited.

Students in the studio are expected to exhibit a mature attitude and productive behavior.

## Levels of Applied Music Study

The study of applied music is divided into seven course levels. These conform to levels of proficiency and the requirements of the various

degree programs. Entrance to applied music is by audition. Advancement in level is by promotional jury examination only.

7520:000 Level for elective credit in non-music programs, pre-college adults, preparatory program enrollment, and for correcting deficiencies before permission is granted to enroll at the 100 level. Credits in applied music at this level cannot be counted toward any degree requirements in music.

Music majors may apply a maximum of eight credits from any of the following levels to their degree program. A maximum of 32 credits may be counted toward degree requirements.

7520:100 - Freshman level

7520:200 - Sophomore level

7520:300 - Junior level

7520:400 - Senior level

## Minimum Performance Levels Required by Degree Program

- **Bachelor of Arts** - Eight credits and completion of the 200 level in the primary applied performance area. No recital is required.
- **Bachelor of Music in Performance Major** — Thirty-two credits and completion of the 400 level in the primary applied performance area. A junior recital is required at the 300 level. A full senior recital is also required.
- **Bachelor of Music in Composition Major** — Sixteen credits and completion of the 200 level in the primary applied performance area. A full senior composition recital is required.
- **Bachelor of Music in Music Education** — Sixteen credits and completion of the 300 level in the primary applied performance area. A half senior recital is required.
- **Bachelor of Music in Jazz Studies** — Sixteen credits and completion of the 200 level in the primary applied performance area; additional completion of the 100 level in flute and clarinet for saxophone majors and the 200 level in classical guitar for electric guitar majors. A full senior recital is required.

## Jury System in Applied Music

A promotional jury is the only way in which a student may advance from one course level to another. Each music major may take a promotional jury in his/her primary applied performance area once each year, after two semesters of study, and/or after the minimum number of credits is attained. However, a faculty member may require a student to take additional semesters of study prior to a promotional jury.

Each applied area is empowered to terminate applied study, and applied study will be terminated after three attempts at the same promotional jury level. A promotional jury may be used by a student studying applied music at the 000 level as an audition to the 100 level.

## Applied Repertory of Study

Each applied music section (brass, composition, guitar, keyboard, percussion, piano, strings, voice, and woodwinds) has a published repertory of study requirements for each of the course levels. These requirements are available from the Applied Area Coordinator, individual applied instructors, and the School of Music (<https://www.uakron.edu/music/>) office.

## Studio Classes

Each music major is required to attend the weekly 50-minute class taught by his applied instructor. Attendance at studio class is part of the requirement for applied music study, and reflects in the student's grade in applied music. Performances in studio class are determined by the student's applied instructor.

## Sectional Recitals

Each applied section holds a sectional recital each week. Attendance by students studying in the section is required. Performances in sectionals are determined by the student's applied instructor and area coordinator.

## Applied Study for Non-music Majors

Non-music majors may enroll for applied music with the permission of the individual applied instructor or the area coordinator, whichever is appropriate to the area of study. Acceptance for studio study is based upon an audition, usually given the first week of classes. Only students who meet applied studio standards will be accepted for applied instruction.

## Recital Attendance Requirements

Bachelor of Music majors are required to enroll and receive credit for eight semesters of 7500:157 Student Recital. Bachelor of Arts music majors are required to enroll and receive credit for four semesters. 7500:157 Student Recital carries no academic credit and has no fee. Further information on the attendance requirement is available in the School of Music office.

## Ensemble Requirement

Enrollment in all ensembles requires permission of the instructor.

## Major Conducted Ensemble Requirement

Students who are music majors must enroll for eight semesters in a major conducted performance ensemble on their declared major instrument. Guitar and keyboard majors should refer to the Memo of Agreement for specific ensemble requirements. Auditions for membership are held each year and occasionally each semester. All music majors are required to enroll in the major conducted ensemble as assigned by faculty and appropriate to their primary performance area every fall and spring semester.

Students pursuing a Bachelor of Music major in Performance, Theory, Composition, and Music Education must complete a minimum of eight semesters. However, keyboard majors in Music Education may substitute one year of a major choral ensemble in place of a Keyboard Ensemble. Four semesters are required for Jazz Studies majors, music minors, and those pursuing the Bachelor of Arts degree in music. Students who do not complete degree requirements within eight semesters must continue to enroll in a major conducted ensemble each semester until all graduation requirements are met, except during the semester when student teaching.

Major conducted Ensembles include: Concert Choir, Guitar Ensemble, Keyboard Ensemble, Wind Symphony, Symphonic Band, Concert Band, and University Symphony Orchestra.

## Non-major Conducted Ensemble Requirement

Non-major conducted ensembles may be taken in addition to, but not instead of, major conducted ensembles. Jazz Studies majors are required to complete eight credits in jazz ensembles in addition to four semesters of major conducted ensembles. Non-major conducted Ensembles include: the Akron Symphony Chorus, Brass Choir, Chamber Orchestra, Instrumental Ensembles, Jazz Ensemble, Jazz Lab Band, Marching Band, New Music Ensemble, Steel Drum Band, Blue and Gold Brass (Basketball Band), and Opera/Lyric Theatre.

## Unconducted Ensembles

Unconducted ensembles may be taken in addition to, but not instead of, major conducted ensembles. Unconducted ensembles include: Brass Ensembles, Jazz Combos, Mixed Ensembles, Percussion Ensembles, String Ensembles, Vocal Ensembles, and Woodwind Ensembles.

Ensemble credit is repeatable.

## Minimum Proficiency Requirements in Keyboard and Voice

All music majors must meet minimum proficiencies in keyboard and voice. Keyboard proficiency is met by successfully completing keyboard Harmony I and II and passing a final keyboard examination. Vocal proficiency is met by successfully completing required Theory and Musicianship courses.

- Music Arts, Minor (p. 226)
- Music Education, Instrumental Band, BM (p. 226)
- Music Education, Instrumental String, BM (p. 228)
- Music Education, Vocal & Keyboard, BM (p. 229)
- Music Jazz, Minor (p. 230)
- Music Performance, Piano Accompanying, BM (p. 231)
- Music with Business Cognate, BA (p. 232)
- Music, BA (p. 233)
- Music, Brass Performance, BM (p. 235)
- Music, Composition, BM (p. 236)
- Music, Guitar Performance, BM (p. 237)
- Music, Jazz Studies, BM (p. 238)
- Music, Percussion Performance, BM (p. 240)
- Music, Piano Performance, BM (p. 241)
- Music, String Performance, BM (p. 242)
- Music, Voice Performance, BM (p. 243)
- Music, Woodwind Performance, BM (p. 245)
- Piano Pedagogy, Certificate (p. 246)

## Music - School of (7500)

### 7500:100 Fundamentals of Music (2 Credits)

Introduction of basic notation and development of functional music reading and keyboard skills. Conducted in electronic keyboard laboratory with computer-assisted instruction available. For non-music majors only, with little or no previous musical training.

### 7500:101 Introduction to Music Theory (2 Credits)

Prerequisite: Undergraduate Theory Placement Examination. Designed for prospective music major to correct deficiencies in theory background as determined through department placement testing. Includes classroom instruction and computer assisted instruction in basic notation, scales, meter, key signatures, ear training and basic familiarity with the keyboard. Credit not applicable toward music degree.

### 7500:102 Introduction to Music Education (2 Credits)

Prerequisites: 7500:121 and 7500:154. Overview of the music teaching profession and its processes. Screening of degree candidates is built into the course with clinical field experience.

### 7500:103 Trends in Jazz (2 Credits)

An overview of the first 100 years of jazz music with emphasis on major figures and styles central to the development of jazz. This course is specifically designed for the non-music major.

### 7500:104 Class Piano I (2 Credits)

Prerequisite: 7500:101. Designed for student with no previous keyboard experience to learn rudimentary keyboard skills such as playing scales, chords, arpeggios and melodic patterns as well as simple music.

### 7500:105 Class Piano II (2 Credits)

Prerequisite: 7500:104. Continuation of work begun in 104.

### 7500:106 Music Orientation (0 Credits)

Zero credit class designed to provide information and support for incoming music majors as they transition into the academic environment of the School of Music.

### 7500:107 Class Voice I (2 Credits)

Prerequisite: 7500:101. Minimum memorization and solo singing requirement: seven songs. Voice literature emphasis; folk songs, ballads, spirituals, sacred songs and easy art songs in English.

### 7500:108 Class Voice II (2 Credits)

Prerequisite: 7500:107. Minimum memorization and solo singing requirement: eight songs. Vocal literature emphasis: old Italian and English songs, art songs in English or foreign language if student is conversant with the language.

### 7500:110 Class Guitar (1 Credit)

Introduction to the guitar, its repertoire and techniques. Basic classical techniques and music reading, strums, finger-picking, accompaniment patterns, blues styles will be covered.

### 7500:121 Theory and Musicianship I (4 Credits)

Sequential, Prerequisite: Grade of C- or higher in 7500:101 or placement. Analysis, aural/oral skills; Diatonic pitch materials, three clefs; simple-compound meters, rhythmic divisions and subdivisions.

### 7500:122 Theory and Musicianship II (4 Credits)

Sequential, Prerequisite: Grade of C- or higher in 7500:121. Theory, analysis, aural/oral skills: Seventh chords, secondary function, four-part dictation; asymmetric meters, borrowed subdivision.

### 7500:141 Ear Training/Sight Reading I (1 Credit)

Prerequisite: Placement in Theory I. Corequisite: 7500:151. Major and minor keys; intervals, triads and inversions; diatonic progressions; three clefs; simple and compound meters; subdivision through sixteenth notes.

### 7500:142 Ear Training/Sight Reading II (1 Credit)

Prerequisites: 7500:141 and 7500:151. Corequisite: 7500:152. Seventh chords; melodic chromaticism; secondary function; four-part dictation; asymmetric meters; borrowed subdivision.

**7500:151 Theory I (3 Credits)**

Sequential, Prerequisite: Theory Placement Examination (with a score of 65% or higher) or the grade of C- or higher in 7500:101. Study/creative use of elements of music; investigation of music of major composers of classic/romantic eras; introduction to earlier musical practices and contemporary music.

**7500:152 Theory II (3 Credits)**

Sequential, Prerequisite: grade of C- or higher in 7500:151. Study/creative use of elements of music; investigation of music of major composers of classic/romantic eras; introduction to earlier musical practices and contemporary music.

**7500:154 Music Literature I (2 Credits)**

Sequential. Familiarization with large body of musical material from all branches of music writing; vocal, instrumental, symphonic and choral music literature. Special attention given to style, form and structural procedures of principal composers.

**Gen Ed:** Tier 2 - Arts

**7500:155 Music Literature II (2 Credits)**

Sequential. Familiarization with large body of musical material from all branches of music writing; vocal, instrumental, symphonic and choral music literature. Special attention given to style, form and structural procedures of principal composers.

**Gen Ed:** Tier 3 - Domestic Diversity

**7500:157 Student Recital (0 Credits)**

Required of all music majors until minimum requirement is met. Forum for student and faculty members providing lectures, recitals and opportunity for practice of various skills necessary for successful music performance.

**7500:200 Seminar in Music (1-3 Credits)**

Exploration of special topics in music for the non-music major (may be repeated for a total of 9 credits)

**7500:201 Exploring Music: Bach to Rock (3 Credits)**

This course provides non-music majors with the skills to evaluate a wide range of music.

**Gen Ed:** Tier 2 - Arts

**7500:210 Jazz Improvisation I (2 Credits)**

Prerequisites: 7500:262 and permission of instructor. Study and application of principles of jazz improvisation as they relate the chord-scale structures, motif development and style.

**7500:211 Jazz Improvisation II (2 Credits)**

Prerequisite: 7500:210. Advanced study in principles of jazz composition.

**7500:212 Music Industry: A Survey of Practices & Opportunities (2 Credits)**

A study of current practices affecting the professional musician and a survey of career opportunities relating to the music industry.

**7500:221 Theory and Musicianship III (4 Credits)**

Sequential, Prerequisite: 7500:122. Theory, analysis, and aural/oral skills: Chromatic harmony, dictation of mixed and irregular meters, syncopation, dotted rhythms, and ties.

**7500:222 Theory and Musicianship IV (4 Credits)**

Sequential, Prerequisite: 7500:221. Theory, analysis, and aural/oral skills: Advanced chromaticism and rhythm, extended tonality, form, serial and non-serial atonality.

**7500:241 Ear Training/Sight Reading III (1 Credit)**

Prerequisites: 7500:142 and 7500:152. Corequisite: 7500:251. Modulation; chromatic harmony; mixed meters.

**7500:242 Ear Training/Sight Reading IV (1 Credit)**

Prerequisites: 7500:241 and 7500:251. Corequisite: 7500:252. Twentieth-century materials: modes; whole-tone and octatonic scales; secundal and quartal/quintal harmony; classical, jazz, and non-western examples; polyrhythm; total and atonal contexts.

**7500:251 Theory III (3 Credits)**

Sequential, Prerequisite: The grade of C- or higher in 7500:152. Renaissance vocal counterpoint; Baroque instrumental counterpoint; form and analysis of music of all eras.

**7500:252 Theory IV (3 Credits)**

Sequential, Prerequisite: The grade of C- (70%) or higher in 7500:251. Renaissance vocal counterpoint; Baroque instrumental counterpoint; form and analysis of music of all eras.

**7500:254 String Methods I (1 Credit)**

Prerequisites: 7500:102, 7500:155, 7500:222, 7500:262, 7500:276, and 7500:277. Fundamentals of technique, tone production, methods, and materials pertaining to teaching violin, viola, cello and string bass in the public schools.

**7500:255 String Methods II (1 Credit)**

Prerequisites: 102, 155, 222, 254, 262, 276, 277. Continuation of the fundamentals of technique, tone production, methods, and materials pertaining to teaching violin, viola, cello and string bass in the public schools.

**7500:259 Fretboard Harmony (2 Credits)**

Prerequisite: 7500:261 or permission of instructor. Essentials of basic theory and harmony as applied to the guitar fretboard: accompaniment, improvisation, transposition, modulation, figures bass, sight reading.

**7500:261 Keyboard Harmony I (2 Credits)**

Sequential. Prerequisites: 7500:105 or equivalency and 7500:122. Essentials of basic theory and harmony practically applied at keyboard; accompaniment, improvisation, transposition, modulation and sight-reading.

**7500:262 Keyboard Harmony II (2 Credits)**

Sequential. Prerequisites: 7500:105 or equivalency and 7500:122. Essentials of basic theory and harmony practically applied at keyboard; accompaniment, improvisation, transposition, modulation and sight-reading.

**7500:265 Diction for Singers I (2 Credits)**

Sequential. Prerequisite: Permission. Study of diction of the four most used languages (Italian, German, French and English) in vocal performance and international phonetic alphabet. Designed for student who expects to function as vocal performers and/or choral and studio voice teachers.

**7500:266 Diction for Singers II (2 Credits)**

Sequential. Prerequisite: 7500:265. Study of diction of the four most used languages (Italian, German, French and English) in vocal performance and international phonetic alphabet. Designed for student who expects to function as vocal performers and/or choral and studio voice teachers.

**7500:268 Group Vocal Techniques for Choral Music Education (2 Credits)**

Prerequisites: [7510:120 or 7510:121], and 7520:124. Corequisite: 7500:265. Foundational concepts of group vocal techniques. Designed for choral educators to learn physiology of the voice, basics of vocal production, and applications for the Pre-K-12 choral classroom.

**7500:271 Piano Pedagogy & Literature I (2 Credits)**

Prerequisite: Permission of instructor. Examination of musical content and pedagogical orientation of beginning piano material to include appropriate teaching works, methods and ensemble pieces from a variety of historical periods.

**7500:272 Piano Pedagogy & Literature II (2 Credits)**

Prerequisite: 7520:125 or permission of the instructor. A survey of piano literature at all levels of difficulty, with practical emphasis on its use for teaching.

**7500:276 Trumpet & French Horn Methods (1 Credit)**

Prerequisite: 7500:102. A comprehensive approach to the performance and pedagogy of the trumpet and French horn for the instrumental music education major in preparation for teaching music.

**7500:277 Clarinet & Saxophone Methods (1 Credit)**

Prerequisite: 7500:276. A comprehensive approach to the performance and pedagogy of the clarinet and saxophone for the instrumental music education major in preparation for teaching music.

**7500:289 Music Education Department Jury (0 Credits)**

Prerequisites: minimum 2.5 accum, C or higher in all freshman/sophomore music education coursework, and minimum 200 jury level. Sophomore exam for music education majors.

**7500:298 Technologies of Music Education (2 Credits)**

Introductory hands-on experiences with a wide range of technology applications and strategies to integrate technology into the music curriculum.

**7500:305 Marching Band Organization & Techniques (1-2 Credits)**

Prerequisite: 7500:289, two semesters 7510:126. A discussion of the marching band. Students learn to write complete half-time show, administer marching band program. Required for instrumental music education majors.

**7500:307 Techniques of Jazz Ensemble Performance & Direction (1-2 Credits)**

Prerequisite: 7500:102, 7500:155, 7500:222, 7500:262, 7500:276, 7500:277, and 7500:305; permission of instructor. Basic experiences relating to conducting, rehearsal techniques, improvisation, performance, repertoire and other matters related to organization and direction of stage bands. Required for instrumental majors.

**7500:308 History & Literature of Jazz (3 Credits)**

Prerequisite: Permission of instructor. Study of origins of jazz music, its development and influence on today's culture. Investigates evolution of musical instruments as they pertain to jazz music, the artists who perform on them, and their music through live and recorded listening experiences.

**7500:309 Jazz Keyboard Techniques (2 Credits)**

Prerequisite: 7500:262. Study of and familiarization with basic jazz keyboard techniques as they relate to contemporary jazz harmony and theory.

**7500:310 Jazz Improvisation III (2 Credits)**

Prerequisite: 7500:211. Advanced study in the principles of jazz improvisation.

**7500:311 Jazz Improvisation IV (2 Credits)**

Prerequisite: 7500:310. Advanced study in the principles of jazz improvisation.

**7500:315 Equity and Excellence in Music Education (3 Credits)**

Prerequisite: 7500:289. Inquiry-based seminars and service learning field experiences for the music education major to develop competence implementing equity and excellence in a culturally pluralistic society.

**7500:325 Research in Music (2 Credits)**

Prerequisites: 7500:155, 7500:222, and 7500:262. Techniques of basic research methods; examination of selected music materials; field trips to specialized collections.

**7500:339 Teaching General Music I (2 Credits)**

Prerequisites: 7500:222, 7500:262, and 7500:289. Methods and materials for teaching general music in pre-K to 12th grade classrooms.

**7500:340 Teaching General Music II (2 Credits)**

Prerequisites: 7500:289, and 7500:339. Advanced methods and materials for teaching general music with emphasis on Orff, Kodaly and Dalcroze methodologies.

**7500:341 Junior High/Middle School Choral Methods (2 Credits)**

Prerequisites: 7500:289, and 7500:340. Methods and materials for teaching choral music at the JH/MS level. Develops competencies in literature selection, rehearsal techniques and assessment of the adolescent voice.

**7500:344 Secondary Choral Music Methods/Materials (2 Credits)**

Prerequisites: 7500:351, and 7500:361. Methods, techniques, and materials for teaching secondary choral music. Develops competencies in literature, selection, rehearsal techniques, and programming methodology.

**7500:345 Low Brass Methods (1 Credit)**

Prerequisites: 7500:222, 7500:262, 7500:277, and 7500:289. A comprehensive approach to the pedagogy and performance of the low brass for the instrumental music education major in preparation for teaching music.

**7500:346 Flute & Double Reed Methods (1 Credit)**

Prerequisites: 7500:345, 7500:340, and 7500:351. A comprehensive approach to the pedagogy and performance of the flute and double reeds for the instrumental music education major in preparation for teaching music.

**7500:351 Music History I (3 Credits)**

Sequential. Prerequisites: 7500:122 and 7500:155. Development of music from ancient to modern times; scores, recordings and live performances as illustrative material.

**7500:352 Music History II (3 Credits)**

Sequential. Prerequisites: 7500:351. Development of music from ancient to modern times; scores, recordings and live performances as illustrative material.

**7500:353 Electronic Music (3 Credits)**

Theory of electronically generated sound and practice of electronic music composition. Emphasis is on understanding digital and analog synthesizers in a MIDI recording studio.

**7500:361 Conducting (2 Credits)**

Prerequisites: All Majors 7500:155, 7500:222, and 7500:262; Vocal 7500:289, 7500:351, or permission; Instrumental 7500:254, 7500:346, 7500:352, 7500:454 or permission. Study and practice of conducting techniques; patterns, fermatas, tempo and dynamic change, attacks and releases, score reading, aural skills. One hour lab required.

**7500:363 Intermediate Conducting: Choral (2 Credits)**

Prerequisite: 7500:361 or instructor permission. Introduction to choral conducting with emphasis on manual techniques, vocal skills, aural skills, and gaining conducting experience.



**7500:366 Song Literature I (2 Credits)**

Prerequisite: 7500:222 or permission. Systematic study of French and German song literature presented chronologically. Includes study of stylistic compositional characteristics and repertoire of major composers of song literature.

**7500:367 Song Literature II (2 Credits)**

Prerequisite: 7500:222 or permission. Systematic study of American, British and Italian song literature presented chronologically. Includes study of stylistic compositional characteristics and repertoire of major composers of song literature.

**7500:368 Guitar Styles (2 Credits)**

Prerequisite: 200 performance level or permission of instructor. Techniques involved in performing musical styles other than those in classical guitar. Included are plectrum styles such as bluegrass, country and rock, as well as flamenco, folk, popular and jazz.

**7500:371 Analytical Techniques (2 Credits)**

Prerequisite: 7500:222. Techniques for analysis of musical score from all eras of Western music history, with major emphasis on works of Baroque, Classical and Romantic periods.

**Gen Ed:** Tier 3 - Critical Thinking

**7500:372 Post-Tonal Analytic Techniques (2 Credits)**

Prerequisite: 7500:222. Techniques for the analysis of musical scores from the 20th and 21st Centuries. Required of a composition major.

**7500:407 Jazz Arranging & Scoring (2 Credits)**

Prerequisites: 7500:309 and 7500:454. Study of jazz instrumentation from small groups to large ensembles.

**7500:415 Teaching and Literature: Brass Instruments (2 Credits)**

Prerequisite: Permission of instructor. Research in current trends and issues in brass teaching techniques and appropriate literature.

**7500:416 Teaching and Literature: Woodwind Instruments (2 Credits)**

Prerequisite: Permission of instructor. Research in current trends and issues in woodwind teaching techniques and appropriate literature.

**7500:432 Teaching & Literature: Percussion Instruments (2 Credits)**

To train undergraduate and graduate percussion students in techniques of percussion education. Emphasis on research, literature, performance, and techniques from elementary through secondary levels.

**7500:442 Instrumental Methods (2 Credits)**

Prerequisites: 7500:254, 7500:346, 7500:352, and 7500:454. Procedures for teaching instrumental music at all levels. Special emphasis will be placed on classroom management, recruitment, assessment, literature selection, scheduling, and rehearsal organization. Clinical and field experience.

**7500:443 Instrumental Practicum (2 Credits)**

Prerequisite: 7500:442. Procedures for teaching instrumental music at all levels. Special emphasis will be placed on classroom management, recruitment, assessment, literature selection, scheduling, and rehearsal organization. Clinical and field experience.

**7500:451 Introduction to Musicology (2 Credits)**

Prerequisite: 7500:352. Comparative musicology; acoustics; psychology and physiology of music; aesthetics; theory of music theory; historical musicology.

**7500:453 Music Software Survey and Use (2 Credits)**

Prerequisite: 7500:122 or permission of instructor. A survey and evaluation of available software in the various forms of musical instruction. Students will design a course suitable for submission to a programmer.

**7500:454 Orchestration (2 Credits)**

Prerequisite: 7500:222. Theory of instrumentation ranging from small ensembles to full band and orchestras.

**7500:455 Advanced Conducting: Instrumental (2 Credits)**

Prerequisite: 7500:361 and 7500:442 or permission. Baton techniques and problems relating to practice, reading and preparation of scores; organization of ensembles; programming; conducting large instrumental ensembles. One hour lab required.

**7500:456 Advanced Conducting: Choral (2 Credits)**

Prerequisite: 7500:363. Conducting techniques to the choral ensemble, including leadership, error detection, tonal development, stylistic accuracy and analysis. One hour lab required.

**7500:457 Senior Recital (0 Credits)**

Permission of applied instructor is required for this course, which is taken only during the semester of the Senior Recital.

**7500:458 Percussion Methods (1 Credit)**

Prerequisites: 7500:346, 7500:352 and admission into a Music Education Program. A comprehensive approach to the pedagogy and performance of the percussion instruments for the instrumental education major in preparation for teaching music.

**7500:463 Repertoire & Pedagogy: String Instruments (3 Credits)**

Prerequisite: Permission of instructor. Study in depth of the four bowed string instruments, their teaching and close relationship. Despite obvious difference in physical application of cello and bass from violin and viola, methods of bowing, sound production and coloring are closely related. Application of the instruments to solo, chamber and orchestral playing.

**7500:465 Vocal Pedagogy (2 Credits)**

Prerequisite: Junior standing. In depth study of subjects dealing with teaching voice: physiology of the vocal instrument, principles governing vocal production and application of vocal pedagogy.

**7500:467 Guitar Pedagogy (2 Credits)**

Prerequisite: Permission of instructor. A systematic analysis of prevailing schools of guitar pedagogy. Sound production physiology, method books and special problems in teaching addressed.

**7500:468 Guitar Arranging (2 Credits)**

Prerequisite: Permission of instructor. After comparative analysis of selected examples, students make original solo guitar arrangements of works written for other solo instruments and ensembles.

**7500:469 History & Literature: Guitar & Lute (2 Credits)**

Prerequisite: Permission of instructor. Study of plucked, fretted, string instruments from the 14th Century to the present: construction, notation, literature and performance practices. Modern editions and recordings evaluated.

**7500:471 Counterpoint (2 Credits)**

Prerequisite: Permission of instructor. Designed to give student of theory-composition necessary knowledge and skills for understanding contrapuntal practices and procedures; emphasis on 20th-Century techniques.

**7500:472 Advanced Orchestration (2 Credits)**

Prerequisite: 7500:454. Study of techniques of orchestral style as found in major works from classical orchestra of Haydn and Mozart through modern orchestra of Stravinsky, Bartok, Berg and Schoenberg.

**7500:490 Workshop in Music (1-3 Credits)**

Prerequisite: Permission of instructor. Investigation of topics not offered in regular curriculum. Graduate student must fulfill additional requirements.

**7500:492 Student Teaching Colloquium (1 Credit)**

Prerequisite: restricted to students enrolled in Student Teaching in Music. For music education majors; certification, contracts, benefits, job market prospects and student teaching experience sharing.

**7500:497 Independent Study in Music (1-2 Credits)**

(May be repeated for a total of four credits) Prerequisites: A minimum academic standing of Senior, a Music major and permission of department head. Independent study under supervision of specially selected faculty members in subject area bearing on student's own goals.

**7500:498 Senior Honors Project: Music (1-3 Credits)**

(May be repeated for a total of six credits) Individually designed project demonstrating scholarship, analysis, advanced musicianship, research and/or creativity according to student interest. Restricted to University honors music student.

## Music Arts, Minor

### Minor in Music - Arts (C50001M)

**Program Contact**

Dr. Marc Reed  
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330-972-5761  
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The following information has official approval of the **School of Music** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Music - Arts" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. In order to complete the Minor in Music, the student must successfully jury to the 200 level. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		11
Electives		14
Total Hours		25

## Required Courses

Code	Title	Hours
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:351	Music History I	3
or 7500:352	Music History II	
Total Hours		11

## Electives

Code	Title	Hours
<i>Select 2 Elective credits from the 300/400 level</i>		2
7500:3xx	300-level Music Electives	

7500:4xx	400-level Music Electives	
<i>Select 4 Ensemble Elective credits</i> <sup>1</sup>		4
7510:xxx	Ensemble Elective	
7510:xxx	Ensemble Elective	
7510:xxx	Ensemble Elective	
7510:xxx	Ensemble Elective	
<i>Select 8 Applied Music Credits</i> <sup>2</sup>		8
7520:xxx	Applied Music Elective	
7520:xxx	Applied Music Elective	
7520:xxx	Applied Music Elective	
7520:xxx	Applied Music Elective	
Total Hours		14

<sup>1</sup> Students must complete the 4 credits for the Ensemble Electives requirement (7510:XXX) in four separate semesters.

<sup>2</sup> Students must complete the 8 credits for the Applied Music requirement (7520:XXX) in four separate semesters.

## Music Education, Instrumental Band, BM

### Bachelor of Arts in Music Education, Instrumental Band (C50208BM)

More on the Music Education, Instrumental Band major (<https://www.uakron.edu/music/degrees/>)

The following information has official approval of **The School of Music** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements

### Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Music Core		30
Music Education Courses		42
College of Education Courses		12
Applied Music and Performance Courses		22
Additional Major Electives *		8
Total Hours		148

\* This major requires a minimum of 148 completed credit hours.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirement

Code	Title	Hours
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Music Core

Code	Title	Hours
7500:101	Introduction to Music Theory <sup>1</sup>	
7500:104	Class Piano I <sup>1</sup>	
7500:105	Class Piano II <sup>1</sup>	
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2
7500:351	Music History I	3

7500:352	Music History II	3
Total Hours		30

<sup>1</sup> Not counted in degree program total; required or excused per placement audition/test

## Music Education Courses

Code	Title	Hours
7500:102	Introduction to Music Education	2
7500:254	String Methods I	1
7500:255	String Methods II	1
7500:276	Trumpet & French Horn Methods	1
7500:277	Clarinet & Saxophone Methods	1
7500:289	Music Education Department Jury <sup>1</sup>	0
7500:298	Technologies of Music Education	2
7500:305	Marching Band Organization & Techniques	2
7500:307	Techniques of Jazz Ensemble Performance & Direction	2
7500:315	Equity and Excellence in Music Education	3
7500:339	Teaching General Music I	2
7500:345	Low Brass Methods	1
7500:346	Flute & Double Reed Methods	1
7500:361	Conducting	2
7500:442	Instrumental Methods	2
7500:443	Instrumental Practicum	2
7500:454	Orchestration	2
7500:455	Advanced Conducting: Instrumental	2
7500:458	Percussion Methods	1
7510:121	University Singers	1
5300:495	Student Teaching: Secondary Education <sup>2</sup>	10
7500:492	Student Teaching Colloquium <sup>2</sup>	1
Total Hours		42

<sup>1</sup> Student must pass jury before enrolling in subsequent music education courses.

<sup>2</sup> Must be taken in the same semester.

## College of Education Courses

Code	Title	Hours
5100:220	Educational Psychology	3
5500:360	Educational Planning: Instruction, Assessment and Classroom Management	3
5500:455	Literacy for Multiage Licensure	3
or 5500:480	Special Topics: Curriculum & Instruction	
5610:225	Introduction to Exceptionalities	3
Total Hours		12

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital (eight semesters)	0
7510:126	Marching Band (two semesters)	2
7520:1xx	Applied Music Primary Instrument	4
7520:2xx	Applied Music Primary Instrument <sup>1</sup>	4

7520:3xx	Applied Music Primary Instrument	4
7500:457	Senior Recital (half recital)	0
<i>Select one of the following:</i>		8
7510:104	Wind Symphony (eight semesters)	
7510:125	Symphony Band (eight semesters)	
7510:128	Concert Band (eight semesters)	
Total Hours		22

<sup>1</sup> Completion of 200 level required prior to student teaching.

## Music Education, Instrumental String, BM

### Bachelor of Arts in Music Education, Instrumental String (C50207BM)

More on the Music Education, Instrumental String major (<https://www.uakron.edu/music/degrees/>)

The following information has official approval of **The School of Music** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Music Core		30
Music Education Courses		38
College of Education Courses		12
Applied Music and Performance Courses		20
Additional Major Electives *		9
Total Hours		143

\* This major requires a minimum of 143 completed credit hours.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas **22**

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours **34**

## College of Arts & Sciences Requirement

**Code Title Hours**

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Music Core

Code	Title	Hours
7500:101	Introduction to Music Theory <sup>1</sup>	
7500:104	Class Piano I <sup>1</sup>	
7500:105	Class Piano II <sup>1</sup>	
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2
7500:351	Music History I	3
7500:352	Music History II	3
Total Hours		30

<sup>1</sup> Not counted in degree program total; required or excused per placement audition/test

## Music Education Courses

Code	Title	Hours
7500:102	Introduction to Music Education	2
7500:254	String Methods I	1
7500:255	String Methods II	1
7500:276	Trumpet & French Horn Methods	1
7500:277	Clarinet & Saxophone Methods	1
7500:289	Music Education Department Jury <sup>1</sup>	0

7500:298	Technologies of Music Education	2
7500:315	Equity and Excellence in Music Education	3
7500:339	Teaching General Music I	2
7500:345	Low Brass Methods	1
7500:346	Flute & Double Reed Methods	1
7500:361	Conducting	2
7500:442	Instrumental Methods	2
7500:443	Instrumental Practicum	2
7500:454	Orchestration	2
7500:455	Advanced Conducting: Instrumental	2
7500:458	Percussion Methods	1
7510:121	University Singers	1
5300:495	Student Teaching: Secondary Education <sup>2</sup>	10
7500:492	Student Teaching Colloquium <sup>2</sup>	1
Total Hours		38

<sup>1</sup> Student must pass jury before enrolling in subsequent music education courses.

<sup>2</sup> Must be taken during the same semester.

## College of Education Courses

Code	Title	Hours
5100:220	Educational Psychology	3
5500:360	Educational Planning: Instruction, Assessment and Classroom Management	3
5500:455 or 5500:480	Literacy for Multiage Licensure Special Topics: Curriculum & Instruction	3
5610:225	Introduction to Exceptionalities	3
Total Hours		12

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital (eight semesters)	0
7510:103	University Symphony: Orchestra (eight semesters)	8
7520:1xx	Applied Music Primary Instrument	4
7520:2xx	Applied Music Primary Instrument <sup>1</sup>	4
7520:3xx	Applied Music Primary Instrument	4
7500:457	Senior Recital (half recital)	0
Total Hours		20

<sup>1</sup> Jury to 300 level required prior to student teaching.

## Music Education, Vocal & Keyboard, BM

### Bachelor of Arts in Music Education, Vocal & Keyboard (C50206BM)

More on the Music Education, Vocal & Keyboard major (<https://www.uakron.edu/music/degrees/>)

The following information has official approval of **The School of Music** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established

at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Music Core		30
Music Education Courses		38
College of Education Courses		12
Applied Music and Performance Courses		24
Additional Major Electives *		10
Total Hours		148

\* This major requires a minimum of 148 completed credit hours.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirement

**Code**                      **Title**                                      **Hours**  
Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:

Upper-level (300/400) courses both in and outside of the student's major;  
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Music Core

Code	Title	Hours
7500:101	Introduction to Music Theory <sup>1</sup>	
7500:104	Class Piano I <sup>1</sup>	
7500:105	Class Piano II <sup>1</sup>	
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2
7500:351	Music History I	3
7500:352	Music History II	3
Total Hours		30

<sup>1</sup> Not counted in degree program total; required or excused per placement audition/test

## Music Education Courses

Code	Title	Hours
7500:102	Introduction to Music Education	2
7500:265	Diction for Singers I	2
7500:268	Group Vocal Techniques for Choral Music Education	2
7500:276	Trumpet & French Horn Methods	1
7500:277	Clarinet & Saxophone Methods	1
7500:289	Music Education Department Jury <sup>1</sup>	0
7500:298	Technologies of Music Education	2
7500:315	Equity and Excellence in Music Education	3
7500:339	Teaching General Music I	2
7500:340	Teaching General Music II	2
7500:341	Junior High/Middle School Choral Methods	2
7500:344	Secondary Choral Music Methods/Materials	2
7500:361	Conducting	2
7500:363	Intermediate Conducting: Choral	2
7500:442	Instrumental Methods	2
7500:456	Advanced Conducting: Choral	2
Complete the following two courses in the same semester for 9 credits:		9
5300:495	Student Teaching: Secondary Education	
7500:492	Student Teaching Colloquium	
Total Hours		38

<sup>1</sup> Student must pass jury before enrolling in subsequent music education courses.

## College of Education Courses

Code	Title	Hours
5100:220	Educational Psychology	3
5500:360	Educational Planning: Instruction, Assessment and Classroom Management	3
5500:455	Literacy for Multiage Licensure	3
or 5500:480	Special Topics: Curriculum & Instruction	
5610:225	Introduction to Exceptionalities	3
Total Hours		12

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital (eight semesters)	0
7520:1xx	Applied Music Primary Instrument	4
7520:2xx	Applied Music Primary Instrument <sup>1</sup>	4
7520:3xx	Applied Music Primary Instrument	4
7500:457	Senior Recital (full recital)	0
<i>Select one of the following:</i>		8
7510:120	Concert Choir (eight semesters)	
7510:121	University Singers (eight semesters)	
<i>Select one of the following groups:</i>		4
Guitar Majors:		
7520:24 & 7520:25	Voice and Piano	
Keyboard Majors:		
7520:22 & 7520:24	Classical Guitar and Voice	
Vocal Majors:		
7520:22 & 7520:25	Classical Guitar and Piano	
Total Hours		24

<sup>1</sup> Jury to 300 level required prior to student teaching.

## Music Jazz, Minor

### Minor in Music - Jazz (C50007M)

#### Program Contact

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The following information has official approval of the **School of Music** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Music - Jazz" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University

Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Electives		25
Total Hours		25

## Electives

Code	Title	Hours
<i>Select 13 credits from the following:</i>		13
7500:210	Jazz Improvisation I	
7500:211	Jazz Improvisation II	
7500:212	Music Industry: A Survey of Practices & Opportunities	
7500:307	Techniques of Jazz Ensemble Performance & Direction	
7500:308	History & Literature of Jazz	
7500:497	Independent Study in Music	
<i>Select 4 credits of Jazz Ensemble:<sup>1</sup></i>		4
7510:115	Jazz Ensemble	
<i>Select 8 credits of Applied Jazz Study:</i>		8
7520:1xx	Applied Jazz Study Elective	
7520:1xx	Applied Jazz Study Elective	
7520:1xx	Applied Jazz Study Elective	
7520:1xx	Applied Jazz Study Elective	
Total Hours		25

<sup>1</sup> Students need to complete 4 credits for course 7510:115 Jazz Ensemble

## Music Performance, Piano Accompanying, BM Bachelor of Arts in Music, Piano Performance Accompanying (C50107BM)

More on the Music, Piano Performance Accompanying major (<https://www.uakron.edu/music/degrees/>)

The following information has official approval of **The School of Music** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Music Core		32
Applied Music and Performance Courses		42
Additional Required Music Courses		12
Foreign Language Reading Requirement		4-12
Additional Credits for Graduation *		3
Total Hours		127-135

\* This major requires a minimum of 127 completed credit hours.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirement

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Music Core

Code	Title	Hours
7500:101	Introduction to Music Theory <sup>1</sup>	
7500:104	Class Piano I <sup>1</sup>	
7500:105	Class Piano II <sup>1</sup>	
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2
7500:351	Music History I	3
7500:352	Music History II	3
7500:453	Music Software Survey and Use	2
Total Hours		32

<sup>1</sup> Not counted in degree program total; required or excused per placement audition/test

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital (eight semesters)	0
7510:114	Keyboard Ensemble (eight semesters)	8
7520:24	Voice	2
7500:457	Senior Recital (full recital to include solo, accompanied, and chamber works)	0
<i>Complete the following four courses for a minimum of eight credit hours each:</i>		32
7520:125	Piano	
7520:225	Piano	
7520:325	Piano	
7520:425	Piano	
Total Hours		42

## Additional Required Music Courses

Code	Title	Hours
7500:325	Research in Music	2
7500:361	Conducting	2
7500:366	Song Literature I	2
7500:371	Analytical Techniques	2
7500:451	Introduction to Musicology	2
7500:497	Independent Study in Music (Chamber Music)	2
Total Hours		12

## Foreign Language Reading Requirement

Code	Title	Hours
7500:265 & 7500:266	Diction for Singers I and Diction for Singers II	4
-or-		

3520:101 & 3530:101 & 3550:101	Beginning French I and Beginning German I and Beginning Italian I	12
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## Music with Business Cognate, BA

### Bachelor of Arts in Music with Business Cognate (C50011BA)

Music training has grown to encompass more than performing and teaching. The BA in Music degree with Business Cognate prepares students to succeed in an increasingly business-savvy community of artists and musicians. Students will gain a diverse skill-set including skills in areas such as business technology, grant writing, and non-profit management.

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## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Music Core		32
Applied Music and Performance Courses		12
Business Courses		9
Additional Credits for Graduation *		33
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		

<b>Tier I: Academic Foundations</b>		<b>12</b>
Quantitative Reasoning: 3 credit hours		
Speaking: 3 credit hours		
Writing: 6 credit hours		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
Arts/Humanities: 9 credit hours		
Natural Sciences: 7 credit hours		



Social Sciences: 6 credit hours

Tier III: Tagged Courses	
Select one class from each of the following subcategories:	
Complex Systems	
Critical Thinking	
Domestic Diversity	
Global Diversity	
Review the General Education Requirements page for detailed course listings.	
Total Hours	34

## College of Arts & Sciences Requirement

Code	Title	Hours
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Music Core

Code	Title	Hours
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2
7500:351	Music History I	3
7500:352	Music History II	3
7500:453	Music Software Survey and Use	2
Total Hours		32

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital <sup>1</sup>	0
<b>Complete four semesters of the following: <sup>2</sup></b>		<b>4</b>
7510:103	University Symphony: Orchestra	
	or 7510:104 Wind Symphony	
	or 7510:120 Concert Choir	
	or 7510:125 Symphony Band	
<b>Complete eight semesters of the following: <sup>3</sup></b>		<b>8</b>
7520:121	Percussion	
7520:221	Percussion	
7520:122	Classical Guitar	
7520:222	Classical Guitar	
7520:124	Voice	
7520:224	Voice	
7520:125	Piano	

7520:225	Piano
7520:127	Violin
7520:227	Violin
7520:128	Viola
7520:228	Viola
7520:129	Cello
7520:229	Cello
7520:130	String Bass
7520:230	String Bass
7520:131	Trumpet or Cornet
7520:231	Trumpet or Cornet
7520:132	French Horn
7520:232	French Horn
7520:133	Trombone
7520:233	Trombone
7520:134	Baritone
7520:234	Baritone
7520:135	Tuba
7520:235	Tuba
7520:136	Flute or Piccolo
7520:236	Flute or Piccolo
7520:137	Oboe or English Horn
7520:237	Oboe or English Horn
7520:138	Clarinet or Bass Clarinet
7520:238	Clarinet or Bass Clarinet
7520:139	Bassoon or Contrabassoon
7520:239	Bassoon or Contrabassoon
7520:140	Saxophone
7520:240	Saxophone
Total Hours	12

- 1 Student must successfully complete four semesters of Student Recital.
- 2 Students must complete four semesters of a major conducted ensemble on their declared major instrument
- 3 Students must complete four credit hours at **both** the 100 level and the 200 level of Applied Music on their declared major instrument (8 credits in total). Students must also jury to the 300 level in Applied Music prior to graduation.

## Business Courses

Code	Title	Hours
<b>Students must complete a minimum of nine credits from any of the following business minors: 1) Entrepreneurship, 2) Business Administration for Non-Business majors, 3) Pre-MBA Minor for Non-Business majors, 4) Sales Management, 5) Consumer Marketing.</b>		<b>9</b>
Total Hours		9

## Music, BA

### Bachelor of Arts in Music (C50001BA)

More on the Music major (<https://www.uakron.edu/music/degrees/>)

The following information has official approval of **The School of Music** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirement	14
	Music Core	32
	Applied Music and Performance Courses	12
	Free Electives	23
	Additional Credits for Graduation *	5
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
	<b>Tier I: Academic Foundations</b>	<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
	<b>Tier II: Disciplinary Areas</b>	<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	
	<i>Social Sciences: 6 credit hours</i>	
	<b>Tier III: Tagged Courses</b>	
	<i>Select one class from each of the following subcategories:</i>	
	Complex Systems	
	Critical Thinking	
	Domestic Diversity	
	Global Diversity	
	<i>Review the General Education Requirements page for detailed course listings.</i>	
	<b>Total Hours</b>	<b>34</b>

## College of Arts & Sciences Requirements

**Code**                      **Title**    **Hours**

**Degree requirements in Arts & Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.**

<i>Foreign Language</i>		<b>14</b>
	101 Beginning I	
	102 Beginning II	
	201 Intermediate I	
	202 Intermediate II	
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Music Core

Code	Title	Hours
7500:101	Introduction to Music Theory <sup>1</sup>	
7500:104	Class Piano I <sup>1</sup>	
7500:105	Class Piano II <sup>1</sup>	
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2
7500:351	Music History I	3
7500:352	Music History II	3
7500:453	Music Software Survey and Use	2
	<b>Total Hours</b>	<b>32</b>

<sup>1</sup> Not counted in degree program total; required or excused per placement audition/test

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital (four semesters) <sup>1</sup>	0
7510:xxx	Major Conducted Ensemble (four semesters)	4
7520:1xx	Applied Music Primary Instrument	4
7520:2xx	Applied Music Primary Instrument <sup>2</sup>	4
	<b>Total Hours</b>	<b>12</b>

<sup>1</sup> Completion of 200 level required prior to graduation.

<sup>2</sup> Jury to 300 level required prior to graduation.

## Free Electives

Code	Title	Hours
<b>Complete 23 credits of free electives</b>		<b>23</b>
Total Hours		23

## Music, Brass Performance, BM Bachelor of Arts in Music, Brass Performance (C50108BM)

More on the Music, Brass Performance major (<https://www.uakron.edu/music/degrees/>)

The following information has official approval of **The School of Music** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Music Core		32
Applied Music and Performance Courses		40
Additional Required Music Courses		14-15
Music Electives		3-4
Additional Major Electives *		5-3
Total Hours		128

\* This major requires a minimum of 128 completed credit hours.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		

### Tier III: Tagged Courses

Select one class from each of the following subcategories:

Complex Systems	
Critical Thinking	
Domestic Diversity	
Global Diversity	
<i>Review the General Education Requirements page for detailed course listings.</i>	
Total Hours	34

## College of Arts & Sciences Requirement

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Music Core

Code	Title	Hours
7500:101	Introduction to Music Theory <sup>1</sup>	
7500:104	Class Piano I <sup>1</sup>	
7500:105	Class Piano II <sup>1</sup>	
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2
7500:351	Music History I	3
7500:352	Music History II	3
7500:453	Music Software Survey and Use	2
Total Hours		32

<sup>1</sup> Not counted in degree program total; required or excused per placement audition/test

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital (eight semesters)	0
7520:1xx	Applied Music Primary Instrument	8
7520:2xx	Applied Music Primary Instrument	8
7520:3xx	Applied Music Primary Instrument	8
7520:4xx	Applied Music Primary Instrument <sup>1</sup>	8
7500:457	Senior Recital (full recital)	0
<i>Select one of the following:</i>		<i>8</i>
7510:103	University Symphony: Orchestra (eight semesters)	
7510:104	Wind Symphony (eight semesters)	
7510:125	Symphony Band (eight semesters)	

7510:128	Concert Band (eight semesters)	
Total Hours		40

<sup>1</sup> Completion of 400 level required prior to graduation.

## Additional Required Music Courses

Code	Title	Hours
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:372	Post-Tonal Analytic Techniques	2
7500:415	Teaching and Literature: Brass Instruments	2
7500:454	Orchestration	2
7500:471	Counterpoint	2-3
or 7500:353	Electronic Music	
7500:497	Independent Study in Music (Chamber Music)	2
Total Hours		14-15

## Music Electives

Code	Title	Hours
<b>Complete three credits <sup>1</sup></b>		<b>3-4</b>
7500:xxx		
<i>The following courses do not satisfy this requirement:</i>		
7500:101	Introduction to Music Theory	
7500:104	Class Piano I	
7500:105	Class Piano II	
Total Hours		3-4

<sup>1</sup> If 7500:471 Counterpoint is applied to this requirement, the total number of required credits increases to four.

## Music, Composition, BM

### Bachelor of Arts in Music, Composition (C50003BM)

More on the Music, Composition major (<https://www.uakron.edu/music/degrees/>)

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## Requirements

### Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Music Core		32

Applied Music and Performance Courses	34-36
Additional Required Music Courses	19
Music Electives	8
Total Hours	127-129

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirement

Code	Title	Hours
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Music Core

Code	Title	Hours
7500:101	Introduction to Music Theory <sup>1</sup>	
7500:104	Class Piano I <sup>1</sup>	
7500:105	Class Piano II <sup>1</sup>	
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4

7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2
7500:351	Music History I	3
7500:352	Music History II	3
7500:453	Music Software Survey and Use	2
Total Hours		32

<sup>1</sup> Not counted in degree program total; required or excused per placement audition/test

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital (eight semesters)	0
7510:1xx	Conducted Ensemble	8
7520:1xx	Applied Music Primary Instrument	4
7520:2xx	Applied Music Primary Instrument <sup>1</sup>	4
7520:225	Piano <sup>1</sup>	2-4
7520:x42	Applied Composition <sup>2</sup>	16
7500:457	Senior Recital (full recital)	0
Total Hours		34-36

<sup>1</sup> Completion of 200 level required prior to graduation.

<sup>2</sup> Completion of 400 level required prior to graduation.

## Additional Required Music Courses

Code	Title	Hours
7500:353	Electronic Music	3
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:372	Post-Tonal Analytic Techniques	2
7500:451	Introduction to Musicology	2
7500:454	Orchestration	2
7500:455	Advanced Conducting: Instrumental	2
or 7500:456	Advanced Conducting: Choral	
7500:471	Counterpoint	2
7500:497	Independent Study in Music	2
Total Hours		19

## Music Electives

Code	Title	Hours
<b>Complete eight credits</b>		<b>8</b>
7500:xxx		
<i>The following courses do not satisfy this requirement:</i>		
7500:101	Introduction to Music Theory	
7500:104	Class Piano I	
7500:105	Class Piano II	
Total Hours		8

## Music, Guitar Performance, BM Bachelor of Arts Music, Guitar Performance (C50106BM)

More of the Music, Guitar Performance major (<https://www.uakron.edu/music/degrees/>)

The following information has official approval of **The School of Music** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Music Core		30
Applied Music and Performance Courses		40
Additional Required Music Courses		16-17
Music Electives		3-4
Additional Major Electives *		5-3
Total Hours		128

\* This major requires a minimum of 128 completed credit hours.

## General Education Courses

**Code**                      **Title**    **Hours**

Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

<b>Tier I: Academic Foundations</b>		<b>12</b>
Quantitative Reasoning: 3 credit hours		
Speaking: 3 credit hours		
Writing: 6 credit hours		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
Arts/Humanities: 9 credit hours		
Natural Sciences: 7 credit hours		
Social Sciences: 6 credit hours		
<b>Tier III: Tagged Courses</b>		
Select one class from each of the following subcategories:		
Complex Systems		
Critical Thinking		
Domestic Diversity		

## Global Diversity

Review the General Education Requirements page for detailed course listings.

Total Hours 34

## College of Arts & Sciences Requirement

**Code Title Hours**

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Music Core

Code	Title	Hours
7500:101	Introduction to Music Theory <sup>1</sup>	
7500:104	Class Piano I <sup>1</sup>	
7500:105	Class Piano II <sup>1</sup>	
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4
7500:261	Keyboard Harmony I	2
7500:351	Music History I	3
7500:352	Music History II	3
7500:453	Music Software Survey and Use	2
<b>Total Hours</b>		<b>30</b>

<sup>1</sup> Not counted in degree program total; required or excused per placement audition/test

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital (eight semesters)	0
7500:457	Senior Recital (full recital)	0
<b>Complete 8 credits of the following course:</b>		<b>8</b>

7510:116 Guitar Ensemble

**Complete one of the following groups of courses for a total of 32 credits:**

### Group 1

7520:122 Classical Guitar  
7520:222 Classical Guitar  
7520:322 Classical Guitar  
7520:422 Classical Guitar <sup>1</sup>

### Group 2

7520:162 Jazz Guitar  
7520:262 Jazz Guitar  
7520:362 Jazz Guitar  
7520:462 Jazz Guitar <sup>1</sup>

### Group 3

7520:163 Jazz Electric Bass  
7520:263 Jazz Electric Bass  
7520:363 Jazz Electric Bass  
7520:463 Jazz Electric Bass <sup>1</sup>

Total Hours 40

<sup>1</sup> Completion of 400 level required prior to graduation.

## Additional Required Music Courses

Code	Title	Hours
7500:259	Fretboard Harmony	2
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:467	Guitar Pedagogy	2
7500:468	Guitar Arranging	2
7500:469	History & Literature: Guitar & Lute	2
7500:471	Counterpoint	2-3
or 7500:353	Electronic Music	
7500:497	Independent Study in Music	2
<b>Total Hours</b>		<b>16-17</b>

## Music Electives

Code	Title	Hours
<b>Complete three credits <sup>1</sup></b>		<b>3-4</b>
7500:xxx		
<i>The following courses do not satisfy this requirement:</i>		
7500:101	Introduction to Music Theory	
7500:104	Class Piano I	
7500:105	Class Piano II	
<b>Total Hours</b>		<b>3-4</b>

<sup>1</sup> If 7500:471 Counterpoint is applied to this requirement, the total number of required credits increases to four.

## Music, Jazz Studies, BM

### Bachelor of Arts in Music, Jazz Studies (C50007BM)

More on the Music, Jazz Studies major (<https://www.uakron.edu/music/degrees/>)

The following information has official approval of **The School of Music** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Music Core	32
	Applied Music and Performance Courses	28
	Additional Required Music Courses	8
	Additional Required Jazz Courses	18-19
	Music Electives	6
	Additional Major Electives *	6-5
	<b>Total Hours</b>	<b>132</b>

\* This major requires a minimum of 132 completed credit hours.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	
	<i>Social Sciences: 6 credit hours</i>	
<b>Tier III: Tagged Courses</b>		
	<i>Select one class from each of the following subcategories:</i>	
	Complex Systems	
	Critical Thinking	
	Domestic Diversity	
	Global Diversity	
	<i>Review the General Education Requirements page for detailed course listings.</i>	
	<b>Total Hours</b>	<b>34</b>

## College of Arts & Sciences Requirement

Code	Title	Hours
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
	Upper-level (300/400) courses both in and outside of the student's major;	
	or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops	

## Music Core

Code	Title	Hours
7500:101	Introduction to Music Theory <sup>1</sup>	
7500:104	Class Piano I <sup>1</sup>	
7500:105	Class Piano II <sup>1</sup>	
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2
7500:351	Music History I	3
7500:352	Music History II	3
7500:453	Music Software Survey and Use	2
	<b>Total Hours</b>	<b>32</b>

<sup>1</sup> Not counted in degree program total; required or excused per placement audition/test

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital (eight semesters)	0
7500:457	Senior Recital (full recital)	0
	<b>Complete four credits of the following:</b>	<b>4</b>
7510:1xx	Major Conducted Ensemble	
	<b>Complete eight credits of each of the following:</b>	<b>24</b>
7510:115	Jazz Ensemble	
7520:1xx	Applied Music Primary Instrument	
7520:2xx	Applied Music Primary Instrument <sup>1,2,3</sup>	
	<b>Total Hours</b>	<b>28</b>

<sup>1</sup> Completion of 200 level required prior to graduation.

<sup>2</sup> Saxophone majors must jury to the 200 level of Applied Flute and Clarinet prior to graduation.

<sup>3</sup> Guitar majors must jury to the 200 level of Applied Classical Guitar prior to graduation.

## Additional Required Music Courses

Code	Title	Hours
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:454	Orchestration	2
7500:497	Independent Study in Music (Practicum in Jazz Studies)	2
	<b>Total Hours</b>	<b>8</b>

## Additional Required Jazz Courses

Code	Title	Hours
7500:210	Jazz Improvisation I	2
7500:211	Jazz Improvisation II	2

7500:212	Music Industry: A Survey of Practices & Opportunities	2
7500:307	Techniques of Jazz Ensemble Performance & Direction	1-2
7500:308	History & Literature of Jazz	3
7500:309	Jazz Keyboard Techniques	2
7500:310	Jazz Improvisation III	2
7500:311	Jazz Improvisation IV	2
7500:407	Jazz Arranging & Scoring	2
Total Hours		18-19

## Music Electives

Code	Title	Hours
<b>Complete six credits</b>		<b>6</b>
7500:xxx		
<i>The following courses do not satisfy this requirement:</i>		
7500:101	Introduction to Music Theory	
7500:104	Class Piano I	
7500:105	Class Piano II	
Total Hours		6

## Music, Percussion Performance, BM Bachelor of Arts in Music, Percussion Performance (C50105BM)

More on the Music, Percussion Performance major (<https://www.uakron.edu/music/degrees/>)

The following information has official approval of **The School of Music** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Music Core		32
Applied Music and Performance Courses		40
Additional Required Music Courses		14-15
Music Electives		3-4
Additional Major Electives *		5-3
Total Hours		128

\* This major requires a minimum of 128 completed credit hours.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirement

Code	Title	Hours
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Music Core

Code	Title	Hours
7500:101	Introduction to Music Theory <sup>1</sup>	
7500:104	Class Piano I <sup>1</sup>	
7500:105	Class Piano II <sup>1</sup>	
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2
7500:351	Music History I	3
7500:352	Music History II	3



7500:453	Music Software Survey and Use	2
Total Hours		32

<sup>1</sup> Not counted in degree program total; required or excused per placement audition/test

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital (eight semesters)	0
7500:457	Senior Recital (full recital)	0
<b>Complete eight credits of each of the following:</b>		<b>32</b>
7520:121	Percussion	
7520:221	Percussion	
7520:321	Percussion	
7520:421	Percussion <sup>1</sup>	
<b>Select one of the following for a total of eight credits:</b>		<b>8</b>
7510:103	University Symphony: Orchestra	
7510:104	Wind Symphony	
7510:125	Symphony Band	
7510:128	Concert Band	
Total Hours		40

<sup>1</sup> Completion of 400 level required prior to graduation.

## Additional Required Music Courses

Code	Title	Hours
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:372	Post-Tonal Analytic Techniques	2
7500:432	Teaching & Literature: Percussion Instruments	2
7500:454	Orchestration	2
7500:455	Advanced Conducting: Instrumental	2
7500:471	Counterpoint	2-3
or 7500:353	Electronic Music	
Total Hours		14-15

## Music Electives

Code	Title	Hours
<b>Complete three credits <sup>1</sup></b>		<b>3-4</b>
7500:xxx		
<i>The following courses do not satisfy this requirement:</i>		
7500:101	Introduction to Music Theory	
7500:104	Class Piano I	
7500:105	Class Piano II	
Total Hours		3-4

<sup>1</sup> If 7500:471 Counterpoint is applied to this requirement, the total number of required credits increases to four.

# Music, Piano Performance, BM Bachelor of Arts in Music, Piano Performance (C50100BM)

More on the Music, Piano Performance major (<https://www.uakron.edu/music/degrees/>)

The following information has official approval of **The School of Music and The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Music Core		32
Applied Music and Performance Courses		40
Additional Required Music Courses		14
Music Electives		4-5
Additional Major Electives *		3-2
Total Hours		127

\* This major requires a minimum of 127 completed credit hours.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		

## Global Diversity

Review the General Education Requirements page for detailed course listings.

Total Hours 34

## College of Arts & Sciences Requirement

Code	Title	Hours
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Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Music Core

Code	Title	Hours
7500:101	Introduction to Music Theory <sup>1</sup>	
7500:104	Class Piano I <sup>1</sup>	
7500:105	Class Piano II <sup>1</sup>	
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2
7500:351	Music History I	3
7500:352	Music History II	3
7500:453	Music Software Survey and Use	2
Total Hours		32

<sup>1</sup> Not counted in degree program total; required or excused per placement audition/test

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital (eight semesters)	0
7500:457	Senior Recital (full chamber music recital)	0
<b>Complete eight credits of each of the following:</b>		<b>40</b>
7510:114	Keyboard Ensemble	
7520:125	Piano	
7520:225	Piano	
7520:325	Piano	
7520:425	Piano <sup>1</sup>	
Total Hours		40

<sup>1</sup> Completion of 400 level required prior to graduation.

## Additional Required Music Courses

Code	Title	Hours
7500:271	Piano Pedagogy & Literature I	2
7500:272	Piano Pedagogy & Literature II	2
7500:325	Research in Music	2
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:451	Introduction to Musicology	2
7500:497	Independent Study in Music	2
Total Hours		14

## Music Electives

Code	Title	Hours
<b>Complete four credits <sup>1</sup></b>		<b>4-5</b>
7500:xxx		
<i>The following courses do not satisfy this requirement:</i>		
7500:101	Introduction to Music Theory	
7500:104	Class Piano I	
7500:105	Class Piano II	
Total Hours		4-5

<sup>1</sup> If 7500:471 Counterpoint is applied to this requirement, the total number of required credits increases to five.

## Music, String Performance, BM

### Bachelor of Arts in Music, String Performance (C50102BM)

More on the Music, String Performance major (<https://www.uakron.edu/music/degrees/>)

The following information has official approval of **The School of Music** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements

### Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Music Core		32
Applied Music and Performance Courses		40
Additional Required Music Courses		15-16
Music Electives		3-4
Additional Major Electives *		5-3
Total Hours		129

\* This major requires a minimum of 129 completed credit hours.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirement

Code	Title	Hours
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Music Core

Code	Title	Hours
7500:101	Introduction to Music Theory <sup>1</sup>	
7500:104	Class Piano I <sup>1</sup>	
7500:105	Class Piano II <sup>1</sup>	
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2
7500:351	Music History I	3

7500:352	Music History II	3
7500:453	Music Software Survey and Use	2
Total Hours		32

<sup>1</sup> Not counted in degree program total; required or excused per placement audition/test

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital (eight semesters)	0
7500:457	Senior Recital (full recital)	0
<b>Complete eight credits of each of the following:</b>		<b>40</b>
7510:103	University Symphony: Orchestra	
7520:1xx	Applied Music Primary Instrument	
7520:2xx	Applied Music Primary Instrument	
7520:3xx	Applied Music Primary Instrument	
7520:4xx	Applied Music Primary Instrument <sup>1</sup>	
Total Hours		40

<sup>1</sup> Completion of 400 level required prior to graduation.

## Additional Required Music Courses

Code	Title	Hours
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:372	Post-Tonal Analytic Techniques	2
7500:454	Orchestration	2
7500:463	Repertoire & Pedagogy: String Instruments	3
7500:471	Counterpoint	2-3
or 7500:353	Electronic Music	
7500:497	Independent Study in Music	2
Total Hours		15-16

## Music Electives

Code	Title	Hours
<b>Complete three credits <sup>1</sup></b>		<b>3-4</b>
7500:xxx		
<i>The following courses do not satisfy this requirement:</i>		
7500:101	Introduction to Music Theory	
7500:104	Class Piano I	
7500:105	Class Piano II	
Total Hours		3-4

<sup>1</sup> If 7500:471 Counterpoint is applied to this requirement, the total number of required credits increases to four.

## Music, Voice Performance, BM

### Bachelor of Arts in Music, Voice Performance (C50109BM)

More on the Music, Voice Performance major (<https://www.uakron.edu/music/degrees/>)

The following information has official approval of **The School of Music** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Music Core	32
	Applied Music and Performance Courses	42
	Additional Required Music Courses	14
	Foreign Language Requirement	12
	Music Electives	2
	Additional Major Electives *	5
	<b>Total Hours</b>	<b>141</b>

\* This major requires a minimum of 141 completed credit hours.

## General Education Courses

Code	Title	Hours
	Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.	
	<b>Tier I: Academic Foundations</b>	<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
	<b>Tier II: Disciplinary Areas</b>	<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	
	<i>Social Sciences: 6 credit hours</i>	
	<b>Tier III: Tagged Courses</b>	
	<i>Select one class from each of the following subcategories:</i>	
	Complex Systems	
	Critical Thinking	
	Domestic Diversity	
	Global Diversity	
	<i>Review the General Education Requirements page for detailed course listings.</i>	
	<b>Total Hours</b>	<b>34</b>

## College of Arts & Sciences Requirement

**Code**                      **Title**    **Hours**  
**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Music Core

Code	Title	Hours
7500:101	Introduction to Music Theory <sup>1</sup>	
7500:104	Class Piano I <sup>1</sup>	
7500:105	Class Piano II <sup>1</sup>	
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2
7500:351	Music History I	3
7500:352	Music History II	3
7500:453	Music Software Survey and Use	2
	<b>Total Hours</b>	<b>32</b>

<sup>1</sup> Not counted in degree program total; required or excused per placement audition/test

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital (eight semesters)	0
7500:457	Senior Recital (full recital)	0
	<b>Complete two credits of the following:</b>	<b>2</b>
7510:108	Opera/Lyric Theater Workshop	
	<b>Complete eight credits of each of the following:</b>	<b>40</b>
7510:120	Concert Choir	
	or 7510:121 University Singers	
7520:124	Voice	
7520:224	Voice	
7520:324	Voice	
7520:424	Voice <sup>1</sup>	
	<b>Total Hours</b>	<b>42</b>

<sup>1</sup> Completion of 400 level required prior to graduation.

## Additional Required Music Courses

Code	Title	Hours
7500:265	Diction for Singers I	2
7500:266	Diction for Singers II	2
7500:361	Conducting	2

7500:366	Song Literature I	2
or 7500:367	Song Literature II	
7500:371	Analytical Techniques	2
7500:465	Vocal Pedagogy	2
7500:471	Counterpoint	2
Total Hours		14

## Foreign Language Requirement

Code	Title	Hours
3520:101	Beginning French I	4
3530:101	Beginning German I	4
3550:101	Beginning Italian I	4
Total Hours		12

## Music Electives

Code	Title	Hours
<b>Complete two credits</b>		<b>2</b>
7500:xxx		
<i>The following courses do not satisfy this requirement:</i>		
7500:101	Introduction to Music Theory	
7500:104	Class Piano I	
7500:105	Class Piano II	
Total Hours		2

## Music, Woodwind Performance, BM Bachelor of Arts in Music, Woodwind Performance (C50103BM)

More on the Music, Woodwind Performance major (<https://www.uakron.edu/music/degrees/>)

The following information has official approval of **The School of Music** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Music Core		32
Applied Music and Performance Courses		40
Additional Required Music Courses		14-15
Music Electives		3-4

Additional Major Electives *	5-3
Total Hours	128

\* This major requires a minimum of 128 completed credit hours.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirement

Code	Title	Hours
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Music Core

Code	Title	Hours
7500:101	Introduction to Music Theory <sup>1</sup>	
7500:104	Class Piano I <sup>1</sup>	
7500:105	Class Piano II <sup>1</sup>	
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:221	Theory and Musicianship III	4
7500:222	Theory and Musicianship IV	4
7500:261	Keyboard Harmony I	2

7500:262	Keyboard Harmony II	2
7500:351	Music History I	3
7500:352	Music History II	3
7500:453	Music Software Survey and Use	2
Total Hours		32

<sup>1</sup> Not counted in degree program total; required or excused per placement audition/test

## Applied Music and Performance Courses

Code	Title	Hours
7500:157	Student Recital (eight semesters)	0
7520:1xx	Applied Music Primary Instrument	8
7520:2xx	Applied Music Primary Instrument	8
7520:3xx	Applied Music Primary Instrument	8
7520:4xx	Applied Music Primary Instrument <sup>1</sup>	8
7500:457	Senior Recital (full recital)	0
<b>Select one of the following for a total of eight credits:</b>		<b>8</b>
7510:103	University Symphony: Orchestra	
7510:104	Wind Symphony	
7510:125	Symphony Band	
7510:128	Concert Band	
Total Hours		40

<sup>1</sup> Completion of 400 level required prior to graduation.

## Additional Required Music Courses

Code	Title	Hours
7500:325	Research in Music	2
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:416	Teaching and Literature: Woodwind Instruments	2
7500:454	Orchestration	2
7500:471	Counterpoint	2-3
or 7500:353	Electronic Music	
7500:497	Independent Study in Music	2
Total Hours		14-15

## Music Electives

Code	Title	Hours
<b>Complete three credits <sup>1</sup></b>		<b>3-4</b>
7500:xxx		
<i>The following courses do not satisfy this requirement:</i>		
7500:101	Introduction to Music Theory	
7500:104	Class Piano I	
7500:105	Class Piano II	
Total Hours		3-4

<sup>1</sup> If 7500:471 Counterpoint is applied to this requirement, the total number of required credits increases to four.

# Piano Pedagogy, Certificate

## Certificate in Piano Pedagogy (C50210C)

### Program Contact

Dr. Marc Reed  
 Director  
 School of Music  
 330-972-5761  
 marcree@uakron.edu

The following information has official approval of the **School of Music** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Piano Pedagogy" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. Students must pass music placement tests and play a piano audition for admission into the program.

## Summary

Code	Title	Hours
Core Requirements		18
Piano		8
Total Hours		26

## Core Requirements

Code	Title	Hours
7500:121	Theory and Musicianship I	4
7500:122	Theory and Musicianship II	4
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:271	Piano Pedagogy & Literature I	2
7500:272	Piano Pedagogy & Literature II	2
7500:497	Independent Study in Music	2
Total Hours		18

## Piano

Code	Title	Hours
<b>Complete 8 credits of the following:</b>		<b>8</b>
7520:125	Piano <sup>1</sup>	
Total Hours		8

<sup>1</sup> Students may repeat course 7520:125 Piano twice, for a total of 8 credits.

- Two credits represent one half-hour lesson per week.
- Four credits represent an hour lesson per week.
- Enrollment may be repeated each semester for credit.
- A fee is charged in addition to regular tuition.

## Pan African Studies

The University of Akron's Pan African studies takes an interdisciplinary approach to understanding Afro-centric philosophy and world views. This approach encompasses analyzing African and African-American history from a social, psychological and cultural context. This approach provides students with a framework to compare and contrast the experiences of African and African American people past, present, and future and their contributions across academic disciplines and professions.

Students pursuing the Pan African Studies certificate should:

- Be fully admitted to the University of Akron as an undergraduate or post-baccalaureate student.
- Fill out the Pan African Studies Certificate Program Application (<https://www.uakron.edu/webforms/undergraduate-certificate-program-application/>)
- Turn in completed application to the Dr. Sheldon Wrice, Program Director.
- Complete a total of 15 credit hours (6 credit hours of required courses and 9 credit hours of elective courses).
- Pan African Studies, Certificate (p. 247)

## Pan African Studies (3002)

### 3002:201 Introduction to Pan-African Studies (3 Credits)

Prerequisite: 2020:121 or 3300:112. An interdisciplinary study from an Afrocentric perspective of African and African diaspora experiences. The course will focus on central issues related to the discipline.

**Gen Ed:** Tier 3 - Domestic Diversity

### 3002:252 The Black Experience 1619-1918 (3 Credits)

Prerequisite: 2020:121 or 3300:112. This course explores ideas, people and events which will allow the class to re-think their individual and collective beliefs regarding Africa, Africans, and African-Americans as well as Black people throughout the Diaspora. More specifically, the period of 1619 to 1918 examines the origins of African-Americans beginning with their unwilling departure from West Africa, slavery, abolition, the Civil War, emancipation, reconstruction, historical achievements and striving to achieve first class citizenship in America.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

### 3002:253 The Black Experience 1918-Present (3 Credits)

Prerequisite: 2020:121 or 3300:112. This course explores ideas, people and events which will allow students to re-think their individual and collective beliefs about Africa, Africans and African-Americans as well as Black people throughout the Diaspora. More specifically, the period of 1918 to Present examines the experiences of African-Americans following the Reconstruction. Topics include, but are not limited to, separate but equal doctrine, the civil rights movement, Black nationalism, segregation, desegregation and integration as strategies to ameliorate discrimination and achieve equal opportunity.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

### 3002:254 The Black Experience from 1619-1877 (2 Credits)

Prerequisite: 2020:121 or 3300:112. Examination of the black American including origins, historical achievements and striving to achieve first-class citizenship in America from 1619 to 1877.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

### 3002:256 Diversity in American Society (3 Credits)

Prerequisite: 2020:121 or 3300:112. Survey course covering demographic, social, economic, political, and educational realities of diversity in 21st Century. Focus on diversity and unity, historical overview.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

### 3002:257 The Black Experience 1877 - 1954 (2 Credits)

Prerequisite: 2020:121 or 3300:112. Examines the experiences of Blacks following Reconstruction. Topics to include: Separate but Equal doctrine, segregation, integration, and the achievements of Blacks in American society.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

### 3002:258 The Black Experience 1954 - Present (2 Credits)

Prerequisite: 2020:121 or 3300:112. Examines the relationship of the civil rights movement, Black nationalism, integration, segregation, and desegregation as strategies to ameliorate discrimination and achieve equal opportunity.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

### 3002:301 Civil Rights Movement in America: 1945-1974 (3 Credits)

Social and political actions, events and environment which produces civil rights movement in America. Legal, political and organizational strategies; philosophical arguments; prominent civil rights activists.

### 3002:401 Seminar in Afro-American Studies (3 Credits)

Prerequisite: 3400:361. Exploration and intensive examination of variety of issues related to role and minority group relations which normally stand outside the compass of any one subject matter area.

### 3002:405 African American Men's History and Studies (3 Credits)

This course will examine the experiences of the African American Men from a historical, socio-economic, philosophical, religious/spiritual, psychological standpoint.

### 3002:410 African American Religious Experience (3 Credits)

This course explores the diversity of African American religious beliefs, experiences, and expressions from the colonial era to the present.

### 3002:420 Special Topics in Afro-American Studies (1-3 Credits)

(May be repeated for a maximum of three semester credits). Prerequisite: Permission of instructor.

### 3002:498 Independent Study: Pan-African (1-3 Credits)

(May be repeated for a maximum of three semester credits).

Prerequisites: [3002:201 and 3400:260] or 3400:361 and permission of director. Directed study in a special field of interest chosen by student in consultation with instructor.

## Pan African Studies, Certificate Certificate in Pan African Studies (300002C)

As an interdisciplinary field, Pan-African Studies helps students to gain a better understanding of the African-American experience while providing comparable experiences of others who were a part of the African Diaspora. This certificate allows students to examine Pan-African experiences from a social, historical, psychological and cultural context.

### Program Contact

*Dr. Sheldon Wrice*

*Professor, Technical Writing & Composition, Assoc. Dean-Humanities  
330-972-6023*

*swrice1@uakron.edu*

The following information has official approval of the **Department of Pan African Studies** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Pan-African Studies" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. A student undertaking the Pan African Studies Certificate Program must have prior consultation with the director of Pan African Studies. Special Topics/ Selected Studies courses on topics appropriate to Pan African Study's certificate may be applied with permission of Director.

- Course 3300:389 Special Topics: Literature & Language must select from one of the following topics: Afro-American Novel or Afro-American Drama.
- Course 3300:689 Seminar in English must select topic: Seminar-Wright/Ellison/Baldwin.
- Course 3400:340 Selected Topics in History must select topic: African Expansion in Latin America.

## Summary

Code	Title	Hours
Core Requirements		6
Electives		9
Total Hours		15

## Core Requirements

Code	Title	Hours
3002:201	Introduction to Pan-African Studies	3
3400:361 or 3400:362	African American History, 1492-1877 African American History, 1877 to Present	3
Total Hours		6

## Electives

Code	Title	Hours
<b>Select 9 credits from the following:</b>		
3001:100	Social & Cultural Diversity in the United States	3
3001:110	Multicultural Sensitivity Training	3
3002:254	The Black Experience from 1619-1877	3
3002:257	The Black Experience 1877 - 1954	3
3002:258	The Black Experience 1954 - Present	3
3002:301	Civil Rights Movement in America: 1945-1974	3
3002:401	Seminar in Afro-American Studies	3
3002:405	African American Men's History and Studies	3
3002:410	African American Religious Experience	3
3002:420	Special Topics in Afro-American Studies	3
3002:498	Independent Study: Pan-African	3
3230:251	Human Diversity	3
3250:487	Urban Economics:Theory & Policy	3
3300:113	African American Language and Culture I: College Composition	3

3300:114	African American Language and Culture II: College Composition
3300:350	Black American Literature
3300:389	Special Topics: Literature & Language.
3300:471	U.S. Dialects: Black & White
3350:353	Latin America
3350:363	Africa South of the Sahara
3350:420	Urban Geography
3400:290	World Civilizations: Africa
3400:340	Selected Topics in History
3400:468	African-American Social & Intellectual History
3850:421	Race & Ethnic Relations
7750:270	Diversity and Social Work
7750:276	Introduction to Social Welfare
7750:455	Social Work Practice with African American Families

Total Hours 9

## Philosophy

### The Value of Philosophy

Philosophy students acquire knowledge and skills that can apply to a wide range of fields. Among these are critical thinking and analytical reasoning skills, decision-making skills, the ability to communicate effectively and to make ethical judgements, and the ability to apply knowledge and skills to real-world settings. Philosophy places the greatest value on demonstrated proficiency that cuts across all majors. As a result philosophy graduates achieve long-term career success.

### Career Paths

Philosophy graduates often continue their education in graduate, law, or med programs, or obtain positions in wide variety of fields, including education, publishing, marketing, consulting, government, environmental management, public administration, foreign services, law and law enforcement, human resources, insurance, libraries, and religious or social service areas.

### Admission

For students enrolled at the University of Akron and for students wishing to transfer directly to Buchtel College of Arts and Sciences from their institutions, the following criteria must be satisfied for admission to the Department of Philosophy.

- The student must be admissible to Buchtel College of Arts and Sciences
- A minimum grade point average of 2.00 must be met in all university work, including transfer credits
- A minimum grade point average of 2.00 must be met in all work in Philosophy, including university and transfer credits. Only credits earned at an accredited institution of post-secondary education, as recognized by The University of Akron, will be considered for transfer credit, and only those grades will be considered in the grade point average.



## Philosophy Programs

- Artificial Intelligence, Certificate (p. 251)
- Bioethics, Minor (p. 251)
- Environmental Ethics, Certificate (p. 252)
- Environmental Ethics, Minor (p. 253)
- Ethics, Minor (p. 254)
- General Philosophy, Minor (p. 254)
- Philosophy of Religions, Minor (p. 255)
- Philosophy of Science and Religion, Minor (p. 255)
- Philosophy of Science, Minor (p. 256)
- Philosophy, BA (p. 257)
- Philosophy/JD Degree Accelerated, BA (p. 258)
- Police Ethics, Certificate (p. 259)
- Pre-Law Philosophy, Minor (p. 260)

## Interdisciplinary Programs

- Social Science, Divisional PPE Track, BA (p. 293)
- Social Sciences, Divisional PSP Track, BA (p. 294)

## Philosophy (3600)

### 3600:101 Introduction to Philosophy (3 Credits)

Introduction to the methods of philosophy, important leading thinkers, and topics such as free will, consciousness, goodness, truth, and beauty.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Critical Thinking

### 3600:120 Introduction to Ethics (3 Credits)

Introduction to problems of moral conduct through readings from the tradition and class discussions; nature of "good," "right," "ought" and "freedom".

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Critical Thinking

### 3600:125 Theory & Evidence (3 Credits)

An investigation of the concept of evidence and the criteria for the evaluation of theories in various areas of study, including natural sciences, social sciences, and philosophy. The role of scientific information in the formation and justification of value judgments.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Critical Thinking

### 3600:150 Critical Thinking (3 Credits)

Examination of good and bad reasoning patterns. Topics may include rational and persuasive arguments, deductive and inductive inference, causal and basic statistical inference, logical fallacies, and moral arguments.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Critical Thinking

### 3600:170 Introduction to Logic (3 Credits)

Introduction to logic and critical thinking. Includes such topics as meaning, informal fallacies, propositional logic, predicate and syllogistic logic and nature of induction.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Critical Thinking

### 3600:200 Philosophy of World Religions (3 Credits)

A philosophical examination of the major religious traditions of the world including Christianity, Judaism, Islam, Buddhism, Hinduism, Taoism, tribal religions, and others.

**Gen Ed:** Tier 3 - Global Diversity

### 3600:207 Food Ethics (3 Credits)

Considers ethical questions about food choices and policies, what individuals eat, and what actions society ought to take regarding food growth, processing, marketing, selling, and consumption.

**Gen Ed:** Tier 3 - Complex Systems

### 3600:210 Logic for Lawyers (3 Credits)

An introduction to applied deductive and inductive logic reasoning skills, concentrating on applications to reasoning in legal contexts, e.g., courtroom argumentation and jury deliberations.

**Gen Ed:** Tier 3 - Critical Thinking

### 3600:211 History of Ancient Philosophy (3 Credits)

History and development of ancient Greek philosophy including Presocratics, Socrates, Plato, Aristotle, and Hellenistic philosophers. Readings of primary sources in translation.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Critical Thinking

### 3600:312 History of Medieval Philosophy (3 Credits)

History of Western philosophy from end of Roman Empire to Renaissance. Major philosophers studied include St. Augustine, St. Anselm, Peter Abelard, St. Thomas Aquinas, Duns Scotus and William of Ockham. Readings from primary sources.

**Gen Ed:** Tier 3 - Critical Thinking

### 3600:313 History of Modern Philosophy (3 Credits)

Analysis of major philosophical issues of 17th and 18th Centuries from Descartes through Kant. Readings of primary sources in translation.

**Gen Ed:** Tier 3 - Critical Thinking

### 3600:323 Advanced Topics in Ethics (3 Credits)

(May be repeated with change of topic for a total of nine credits). An examination of selected topics in applied ethics and ethical theory, such as the ethics of cloning, evolutionary ethics, history of ethics and ethical issues from the Human Genome Project. Specific topics will be announced in the course schedule.

### 3600:324 Social & Political Philosophy (3 Credits)

An examination of the normative justification of social and political institutions and practices. Analysis of concepts such as rights, justice, equality, and political obligation from historical as well as contemporary points of view. Application to particular social issues covered.

### 3600:327 Law and Morality (3 Credits)

Nature of law examined from the perspective of the law's alleged obligation to be ethical and promote justice.

### 3600:329 Philosophy of International Law (3 Credits)

Inquiry into the theories of utility of international law and the philosophical controversies surround them, e.g., international legal norms vs. international relations.

### 3600:331 Philosophy of Religion (3 Credits)

Discussion and analysis of problems of theology, nature of religious experience, God's nature, existence, immortality, sin, faith, reason, holy revelation, and redemption.

### 3600:333 Philosophy of Science and Religion (3 Credits)

Survey of conflict, independence, and integration models of science and religion. Topics include: origin and nature of the universe, life, mind, value, meaning, science, religion.

### 3600:340 Eastern Philosophy (3 Credits)

Examination and evaluation of philosophical traditions from India, China and Japan, including Hinduism, Buddhism, Taoism and Confucianism.

**Gen Ed:** Tier 3 - Global Diversity

**3600:350 Philosophy of Art (3 Credits)**

An examination of theories of the nature of art and the grounds of aesthetic evaluation. Analysis of such concepts as representation, form, content, expression, institution, convention, meaning and truth as they apply in the context of the arts.

**3600:361 Biomedical Ethics (3 Credits)**

The identification, analysis and evaluation of ethical issues arising most critically in the biomedical setting, e.g., abortion, termination of treatment, definition of death, IVF, AIDS.

**Gen Ed:** Tier 3 - Complex Systems

**3600:362 Business Ethics (3 Credits)**

Basic moral theories, moral principles, and the decision-making process applied to issues in business.

**3600:363 Police Ethics (3 Credits)**

Basic moral concepts and their application to the criminal justice system. Concerned with such issues as punishment, the use of force, and conflict resolution.

**3600:364 Digital Ethics (3 Credits)**

A critical examination of ethical issues arising in connection with digital technology, e.g., data privacy and use, artificial intelligence, censorship, and social media.

**3600:365 Environmental Ethics (3 Credits)**

Examination of the moral relationships among human beings, other species, and their shared environment. Ethical aspects of agriculture, global warming, extinction, and wilderness.

**Gen Ed:** Tier 3 - Complex Systems

**3600:366 Engineering Ethics (3 Credits)**

Addresses the specific ethical issues and problems that arise in the practice and study of engineering as a discipline.

**Gen Ed:** Tier 3 - Complex Systems

**3600:371 Philosophy of Mind (3 Credits)**

Nature of mind and the relationship between mind and body. Specific topics such as the limits of human reason, personal identity, the role of human thought in action and whether machines can think are also considered.

**3600:374 Symbolic Logic (3 Credits)**

Systematic study of various forms of deduction. Techniques and topics include truth-functional analysis and quantification.

**Gen Ed:** Tier 3 - Critical Thinking

**3600:392 Internship in Philosophy (1-3 Credits)**

Prerequisite: Minimum cumulative Grade Point Average of 2.7 or greater. Placement in appropriate public or private sector organization. Written assignments required. May repeat for maximum 6 credits.

**3600:411 Plato (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of C or higher. Detailed study of the origin and development of Plato's theory of forms and the related theories of knowledge, ethics and politics.

**3600:414 Aquinas (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. An in depth examination of the philosophy of St. Thomas Aquinas covering his contributions in metaphysics, epistemology, ethics, political theory, and philosophical theology.

**3600:415 Augustine (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. An in depth examination of the philosophy of St. Augustine covering his contributions in metaphysics, epistemology, ethics, political theory, and philosophical theology.

**3600:418 20th Century Analytic Philosophy (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. Study of ideal and ordinary language movements in 20th century British and American philosophy. Deals with such figures as Russell, Carnap, Ayer, Moore, Wittgenstein, Ryle and Austen.

**3600:421 Philosophy of Law (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. Identification and critical evaluation of classic and contemporary theories and assumptions of law, including legal reasoning, justice, natural law, punishment, etc.

**3600:424 Existentialism (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of C or higher, or permission of instructor. In-depth inquiry into the thought of Kierkegaard, Jaspers, Heidegger, Sartre, Tillich and other existentialists with their concern for the human condition.

**3600:426 Phenomenology (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of C or higher, or permission. Inquiry into methodology of Husserl and Heidegger and their influence upon Western European and American thought.

**3600:432 Aristotle (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of C or higher. Detailed study of Aristotle's metaphysics, philosophy of nature, philosophy of mankind and ethics.

**3600:434 Kant (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of C or higher. Study of Kantian system of thought and its relation to history of philosophy. Includes thorough investigation of one or more of Kant's philosophic works.

**3600:455 Philosophy of Feminism (3 Credits)**

Prerequisite: One course in philosophy with a grade of C or better, or permission of instructor. Introduction to feminist critiques of, and alternatives to, traditional western philosophy, including topics in ethics, metaphysics, epistemology, and religion.

**Gen Ed:** Tier 3 - Domestic Diversity

**3600:461 Neuroethics (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of C or higher. Discussion and evaluation of contemporary theories of moral agency arising from developments in neuroscience.

**3600:462 Theory of Knowledge (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. Examination of nature of knowledge; theories of perception, conception and truth, problem of induction and relation of language to knowledge.

**3600:464 Philosophy of Science (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. Nature of scientific inquiry, types of explanation, laws and causality, theoretical concepts and reality. Also considers critics of hypothetical-deductive view of science, e.g., Hanson and Kuhn.

**3600:471 Metaphysics (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. Theories about ultimate nature and ultimate explanation of reality. Uses readings from classical and contemporary sources.

**3600:480 Seminar in Philosophy (3 Credits)**

(May be repeated, for additional credit, with change of topic).

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. Varying philosophical topics not covered in regular course offerings.

**3600:481 Philosophy of Language (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of C or higher. An examination of contemporary debates in the philosophy of language and various influential views on meaning, reference, truth, and the content of belief.

**3600:490 Senior Honors Project in Philosophy (1-3 Credits)**

Prerequisite: Senior standing in Honors Program or senior honors standing as Philosophy major, and permission of Philosophy Department Honors Preceptor. Research leading to completion of senior honors thesis involving original work under faculty supervision. A maximum of 3 credit hours can be applied towards a philosophy major or minor. (May be repeated for 1-3 credits for a maximum of 6 credits)

**3600:497 Individual Study in Philosophy (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: 3600:101, 3600:120, 3600:170, 3600:211, 3600:312, and 3600:313. Directed independent study of philosopher, philosophy or philosophical problem under guidance of selected faculty member. Subject matter determined by selected faculty member in consultation with student. Graduate credit requires significant additional work which may include additional research paper.

## Artificial Intelligence, Certificate Certificate in Artificial Intelligence (360010C)

This certificate program offers coursework in philosophy intended to help those interested in artificial intelligence to better navigate philosophical issues associated with the topic. Believing that our industry is best served by having informed individuals, this certificate is designed for all students (non-degree-seeking or degree-seeking, no matter what their degree program) who have an interest in the ethics of artificial intelligence.

**Program Contact**

Dr. Matthew Wyszynski  
Acting Chair, Department of Philosophy  
330-972-6908  
wyszynski@uakron.edu

The following information has official approval of the **Department of Philosophy** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Artificial Intelligence" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

**Summary**

Code	Title	Hours
	Required Courses	6
	Electives	6
	Total Hours	12

**Required Courses**

Code	Title	Hours
3600:364	Digital Ethics	3
3600:371	Philosophy of Mind	3
	Total Hours	6

**Electives**

Code	Title	Hours
<b>Complete six credits:</b>		<b>6</b>
3600:125	Theory & Evidence	
3600:150	Critical Thinking	
3600:323	Advanced Topics in Ethics <sup>1</sup>	
3600:366	Engineering Ethics	
3600:374	Symbolic Logic	
3600:462	Theory of Knowledge	
3600:464	Philosophy of Science	
3600:480	Seminar in Philosophy <sup>1</sup>	
3600:481	Philosophy of Language	
3600:490	Senior Honors Project in Philosophy <sup>1</sup>	
3600:497	Individual Study in Philosophy <sup>1</sup>	
	Total Hours	6

<sup>1</sup> Must be on a related topic.

**Bioethics, Minor****Minor in Bioethics (360002M)**

The Bioethics Minor is designed for students to become familiar with the ethical issues surrounding medicine, health care, and other biomedical topics such as abortion, euthanasia, genetic testing, organ donation, scientific research, etc. Bioethics draws on perspectives from other disciplines, and so this program incorporates an interdisciplinary approach by allowing designated courses from other departments, such as Biology, Anthropology, Psychology, and Sociology, to count as partial credit towards the minor.

**Program Contact**

Dr. Matthew Wyszynski  
Acting Chair, Department of Philosophy  
330-972-6908  
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The following information has official approval of the **Department of Philosophy** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Bioethics" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Cannot overlap more than 6 credits if obtaining both a Philosophy major and a Philosophy minor or if obtaining two Philosophy minors. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		6
Electives		12
Total Hours		18

## Required Courses

Code	Title	Hours
3600:120	Introduction to Ethics	3
3600:361	Biomedical Ethics	3
Total Hours		6

## Electives

Code	Title	Hours
<b>Select 6 credits of the following:</b> <sup>1</sup>		<b>6</b>
3600:323	Advanced Topics in Ethics	
3600:365	Environmental Ethics	
3600:461	Neuroethics	
3600:464	Philosophy of Science	
3600:480	Seminar in Philosophy <sup>2</sup>	
<b>Select 6 credits of the following:</b>		<b>6</b>
3100:312	Neuroscience in Health and Disease	
3100:428	Biology of Behavior	
3230:309	Medicine & the Humanities	
3230:457	Medical Anthropology	
3250:436	Health Economics	
3600:323	Advanced Topics in Ethics	
3600:365	Environmental Ethics	
3600:392	Internship in Philosophy <sup>2</sup>	
3600:461	Neuroethics	
3600:464	Philosophy of Science	
3600:480	Seminar in Philosophy <sup>2</sup>	
3700:413	Global Public Health Threats	
3750:320	Biopsychology	
3750:335	Dynamics of Personality	
3750:340	Social Psychology	
3750:415	Cognitive Neuroscience	
3750:420	Abnormal Psychology	
3750:430	Psychological Disorders of Children	
3760:442	Human Sexuality	
3850:342	Sociology of Health & Illness	
3850:450	Sociology of Mental Health and Well-Being	
6500:480	Introduction to Health-Care Management <sup>3</sup>	
7700:454	Child in the Hospital	
7750:456	Social Work in Health Services	
8200:217	Pathophysiology for Nurses	
8200:412	Global Perspectives of Health and Health Care	
8200:445	Nursing of Communities/ - RN Only	
Total Hours		12

<sup>1</sup> Courses used in this section cannot be repeated for credit in section below.

<sup>2</sup> 3600:392 and 3600:480 need to be on a bioethics topic. See an adviser for approval.

<sup>3</sup> Students who are required to take 6500:301 Management: Principles & Concepts or have completed 6500:301 Management: Principles & Concepts or equivalent are not eligible to take this course for credit.

## Environmental Ethics, Certificate Certificate in Environmental Ethics (360006C)

This certificate program will offer coursework in philosophy intended to help those interested in environmental issues and the effects our individual and collective choices have on us and society at large. The certificate is designed for all students (non degree-seeking or degree-seeking, no matter what their degree program) who have an interest in environmental ethics.

### Program Contact

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The following information has official approval of the **Department of Philosophy** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Environmental Ethics" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		6
Electives		6
Total Hours		12

### Required Courses

Code	Title	Hours
3600:207	Food Ethics	3
3600:365	Environmental Ethics	3
Total Hours		6

## Electives

Code	Title	Hours
<b>Complete six credits:</b>		<b>6</b>
3600:125	Theory & Evidence	
3600:150	Critical Thinking	
3600:323	Advanced Topics in Ethics <sup>1</sup>	
3600:362	Business Ethics	
3600:455	Philosophy of Feminism	
3600:480	Seminar in Philosophy <sup>1</sup>	
3600:490	Senior Honors Project in Philosophy <sup>1</sup>	

3600:497	Individual Study in Philosophy <sup>1</sup>	
Total Hours		6

<sup>1</sup> Must be on a related topic.

## Environmental Ethics, Minor

### Minor in Environmental Ethics (360006M)

The Environmental Ethics Minor is designed for students to become familiar with the ethical relationship of humans to the natural environment and its inhabitants, particularly in a time of global warming, loss of rare habitats and species, and sustainability and green technology initiatives. Environmental Ethics draws on perspectives from other disciplines, and so this program incorporates an interdisciplinary approach by allowing designated courses from other departments to count as partial credit towards the minor.

#### Program Contact

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The following information has official approval of the **Department of Philosophy** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Environmental Ethics" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Students cannot overlap more than 6 credits if obtaining both a Philosophy major and a Philosophy minor or if obtaining two Philosophy minors. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

## Required Courses

Code	Title	Hours
3600:120	Introduction to Ethics	3
3600:207	Food Ethics	3
3600:365	Environmental Ethics	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select 3 credits of the following:</b>		<b>3</b>
3600:323	Advanced Topics in Ethics	
3600:324	Social & Political Philosophy	
3600:361	Biomedical Ethics	

3600:464	Philosophy of Science	
3600:480	Seminar in Philosophy <sup>1</sup>	
<b>Select 6 credits of the following:</b>		<b>6</b>
2235:220	Environmental Law & Regulations	
2235:221	Environmental Law & Regulations II	
2235:230	Water & Atmospheric Pollution	
2235:232	Environmental Sampling Laboratory	
3100:217	General Ecology	
3100:418	Field Ecology	
3100:421	Tropical Field Biology	
3100:422	Conservation Biology	
3100:423	Population Biology	
3100:426	Wetland Ecology	
3100:427	Freshwater Ecology	
3100:430	Community/Ecosystem Ecology	
3250:385	Economics of Natural Resources & the Environment	
3300:456	Thoreau, Emerson, and Their Circle	
3350:310	Physical & Environmental Geography	
3350:314	Climatology	
3350:351	Ohio: Environment & Society	
3350:415	Environmental Planning	
3350:495	Soil & Water Field Studies	
3370:200	Environmental Geology	
3370:201	Exercises in Environmental Geology I	
3370:203	Exercises in Environmental Geology II	
3370:211	Introduction to Environmental Science	
3370:355	Contemporary Issues in Environmental Science	
3370:371	Oceanography	
3370:445	Environmental and Engineering Geophysics	
3370:451	Field/Lab Studies in Environmental Science	
3370:463	Environmental Micropaleontology	
3370:465	Geomicrobiology	
3370:474	Groundwater Hydrology	
3370:480	Seminar in Environmental Studies	
3400:471	American Environmental History	
3600:323	Advanced Topics in Ethics	
3600:324	Social & Political Philosophy	
3600:361	Biomedical Ethics	
3600:392	Internship in Philosophy	
3600:464	Philosophy of Science	
3600:480	Seminar in Philosophy	
3700:417	Climate Crisis: Global Warming, Renewable Energy, and Related Policy Issues	
3850:321	Population, Environment, and Health	
4100:201	Energy & Environment	
4100:202	Atmospheric Pollution	
4100:203	Environmental Science & Engineering	
4200:463	Pollution Control	
4300:321	Introduction to Environmental Engineering	
4300:323	Water Supply & Pollution Control	
4300:426	Environmental Engineering Design	

4300:427	Water Quality Modeling & Management	
5570:400	Environmental Aspects of Health Education	
Total Hours		9

<sup>1</sup> Needs to be on an environmental or animal ethics topic.

## Ethics, Minor

### Minor in Ethics (360007M)

The Ethics Minor is designed to familiarize students with moral decision-making, as it applies to all areas of life. Lives change, companies rise and fall based on the ethical decisions made every day, everywhere around the world. Thus, the Ethics Minor can give any student a solid foundation for making sound moral judgments that can be put to use in any profession, as well as in one's personal life.

#### Program Contact

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The following courses constitute a "Minor in Ethics" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Cannot overlap more than 6 credits if obtaining both a Philosophy major and a Philosophy minor or if obtaining more than one Philosophy minor. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

### Summary

Code	Title	Hours
Required Courses		3
Electives		15
Total Hours		18

### Required Courses

Code	Title	Hours
3600:120	Introduction to Ethics	3
Total Hours		3

### Electives

Code	Title	Hours
<b>Select 15 credits from the following:</b>		<b>15</b>
3600:207	Food Ethics	
3600:323	Advanced Topics in Ethics	
3600:324	Social & Political Philosophy	
3600:327	Law and Morality	
3600:340	Eastern Philosophy	
3600:361	Biomedical Ethics	

3600:362	Business Ethics	
3600:363	Police Ethics	
3600:364	Digital Ethics	
3600:365	Environmental Ethics	
3600:366	Engineering Ethics	
3600:392	Internship in Philosophy <sup>1</sup>	
3600:421	Philosophy of Law	
3600:455	Philosophy of Feminism	
3600:461	Neuroethics	
3600:480	Seminar in Philosophy <sup>1</sup>	
3600:490	Senior Honors Project in Philosophy <sup>1</sup>	
3600:497	Individual Study in Philosophy <sup>1</sup>	

Total Hours 15

<sup>1</sup> Must be taken on an ethical topic.

## General Philosophy, Minor

### Minor in General Philosophy (360000M)

The General Philosophy Minor allows students to acquire valuable critical thinking skills to help them think more deeply about aspects of their major field of study. Philosophy helps students enhance their reasoning skills, acquire broad knowledge, and confront local and global challenges — all invaluable tools in any discipline and/or career.

#### Program Contact

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The following courses constitute a "Minor in General Philosophy" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Cannot overlap more than 6 credits if obtaining both a Philosophy major and a Philosophy minor or if obtaining two Philosophy minors. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

### Summary

Code	Title	Hours
Required Courses		3
Electives		15
Total Hours		18

### Required Courses

Code	Title	Hours
<b>Select one of the following:</b>		<b>3</b>
3600:101	Introduction to Philosophy	
3600:120	Introduction to Ethics	

3600:125	Theory & Evidence	
3600:150	Critical Thinking	
3600:170	Introduction to Logic	
Total Hours		3

## Electives

Code	Title	Hours
<b>Complete 15 credits of the following:</b>		
3600:3xx/4xx	300/400 level Philosophy courses	6
3600:xxx	Philosophy courses	9
Total Hours		15

## Philosophy of Religions, Minor Minor in Philosophy of Religions (360001M)

The Philosophy of Religions Minor allows students to reflect on their values and beliefs and to seek answers to questions on topics about morality, truth, humanity, and God. Religion permeates many aspects of life, and so the interdisciplinary nature of this program allows students to incorporate designated courses from other disciplines, such as Classics, Anthropology, English, and History, to meet some of the requirements.

### Program Contact

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The following courses constitute a "Minor in Philosophy of Religions" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Cannot overlap more than 6 credits if obtaining both a Philosophy major and a Philosophy minor or if obtaining two Philosophy minors. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		6
Electives		12
Total Hours		18

## Required Courses

Code	Title	Hours
3600:200	Philosophy of World Religions	3
3600:331	Philosophy of Religion	3

3600:340	Eastern Philosophy	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select 3 credits of the following:</b>		<b>3</b>
3600:312	History of Medieval Philosophy	
3600:313	History of Modern Philosophy	
3600:333	Philosophy of Science and Religion	
3600:414	Aquinas	
3600:415	Augustine	
3600:480	Seminar in Philosophy <sup>1</sup>	
<b>Select 6 credits of the following:</b>		<b>6</b>
3002:410	African American Religious Experience	
3200:289	Mythology of Ancient Greece	
3230:357	Magic, Myth, & Religion	
3300:360	Old Testament As Literature	
3300:361	The New Testament and Apocrypha as Literature	
3400:320	Medieval Europe, 1200-1500	
3400:321	Europe: Renaissance to Religious Wars, 1350-1610	
3400:322	Europe: Absolutism to Revolution, 1610-1789	
3400:340	Selected Topics in History <sup>1</sup>	
3400:341	Islamic Fundamentalism & Revolution	
3400:342	The Crusades through Arab Eyes	
3400:355	American Religious History	
3400:371	Selected Topics: North American History <sup>1</sup>	
3400:425	The Reformation	
3600:211	History of Ancient Philosophy	
3600:312	History of Medieval Philosophy	
3600:313	History of Modern Philosophy	
3600:333	Philosophy of Science and Religion	
3600:392	Internship in Philosophy <sup>1</sup>	
3600:414	Aquinas	
3600:415	Augustine	
3600:471	Metaphysics	
3600:480	Seminar in Philosophy <sup>1</sup>	
3850:365	Special Topics in Sociology <sup>1</sup>	
Total Hours		9

<sup>1</sup> Must be taken on a religious topic.

## Philosophy of Science and Religion, Minor Minor in Philosophy of Science and Religion (360003M)

The Philosophy of Science and Religion Minor allows students to reflect upon the coexistence of faith and reason/God and science by considering their relationship from both a theoretical and practical perspective. These two, seemingly at odds, disciplines draw on aspects from the natural sciences, social sciences, and humanities, and so the program

incorporates designated courses from these diverse areas to count as partial credit toward the minor.

#### Program Contact

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The following information has official approval of the **Department of Philosophy** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Philosophy of Science and Religion" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Cannot overlap more than 6 credits if obtaining both a Philosophy major and a Philosophy minor or if obtaining two Philosophy minors. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		12
Electives		6
Total Hours		18

## Required Courses

Code	Title	Hours
3600:125	Theory & Evidence	3
3600:331	Philosophy of Religion	3
3600:333	Philosophy of Science and Religion	3
3600:464	Philosophy of Science	3
Total Hours		12

## Electives

Code	Title	Hours
<b>Select 6 credits of the following:</b>		<b>6</b>
3100:316	Evolutionary Biology	
3100:428	Biology of Behavior	
3230:151	Human Evolution	
3230:410	Evolution and Human Behavior	
3300:360	Old Testament As Literature	
3300:361	The New Testament and Apocrypha as Literature	
3370:102	Introductory Historical Geology	
3370:360	Paleobiology	
3400:424	The Renaissance	
3400:487	Science and Technology in World History	
3600:392	Internship in Philosophy <sup>1</sup>	
3600:471	Metaphysics	
3600:480	Seminar in Philosophy <sup>1</sup>	
3750:320	Biopsychology	
3750:425	Psychology of Hate	

3850:315	Sociological Social Psychology	
3850:410	Social Structures & Personality	
3850:435	Sociology of Love	
3850:460	Sociological Theory	
Total Hours		6

<sup>1</sup> Must be taken on a science and/or religious topic.

## Philosophy of Science, Minor Minor in Philosophy of Science (360005M)

The Philosophy of Science Minor allows students to study the foundations, methods, and implications of science, and connect them to varying scientific fields. In virtue of its interdisciplinary nature, this program allows designated courses from other disciplines to count as partial credit toward the minor.

#### Program Contact

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The following information has official approval of the **Department of Philosophy** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Philosophy of Science" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Cannot overlap more than 6 credits if obtaining both a Philosophy major and a Philosophy minor or if obtaining two Philosophy minors. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		6
Electives		12
Total Hours		18

## Required Courses

Code	Title	Hours
3600:125	Theory & Evidence	3
3600:464	Philosophy of Science	3
Total Hours		6

## Electives

Code	Title	Hours
<b>Select 6 credits of the following:</b>		<b>6</b>
3600:170	Introduction to Logic	
3600:313	History of Modern Philosophy	



3600:323	Advanced Topics in Ethics <sup>1</sup>
3600:333	Philosophy of Science and Religion
3600:361	Biomedical Ethics
3600:371	Philosophy of Mind
3600:374	Symbolic Logic
3600:418	20th Century Analytic Philosophy
3600:461	Neuroethics
3600:462	Theory of Knowledge
3600:471	Metaphysics
3600:480	Seminar in Philosophy <sup>1</sup>
<b>Select 6 credits of the following:</b> 6	
3100:211	General Genetics
3100:217	General Ecology
3100:316	Evolutionary Biology
3100:331	Microbiology
3150:305	Physical Chemistry for the Biological Sciences
3150:423	Analytical Chemistry I
3150:424	Analytical Chemistry II
3230:151	Human Evolution
3230:311	Human Paleontology: Genus Homo
3230:359	Anthropological Theory
3230:410	Evolution and Human Behavior
3240:400	Archaeological Theory
3250:426	Applied Econometrics
3250:475	Development of Economic Thought
3370:360	Paleobiology
3370:462	Macroevolution
3400:487	Science and Technology in World History
3450:401	History of Mathematics
3470:450	Probability
3470:451	Theoretical Statistics I
3470:461	Applied Statistics
3600:170	Introduction to Logic
3600:313	History of Modern Philosophy
3600:323	Advanced Topics in Ethics
3600:333	Philosophy of Science and Religion
3600:361	Biomedical Ethics
3600:371	Philosophy of Mind
3600:374	Symbolic Logic
3600:418	20th Century Analytic Philosophy
3600:461	Neuroethics
3600:462	Theory of Knowledge
3600:471	Metaphysics
3600:480	Seminar in Philosophy
3600:481	Philosophy of Language
3650:261	Physics for Life Sciences I
3650:262	Physics for Life Sciences II
3650:291	Elementary Classical Physics I
3650:292	Elementary Classical Physics II
3750:320	Biopsychology
3750:340	Social Psychology
3750:345	Cognitive Processes

3850:301	Methods of Social Research I
3850:315	Sociological Social Psychology
3850:460	Sociological Theory
Total Hours	12

<sup>1</sup> Must be in a related topic.

## Philosophy, BA

### Bachelor of Arts in Philosophy (360000BA)

More on the Philosophy major (<https://www.uakron.edu/philosophy/academics/philosophy-ba-degree.dot>)

Philosophy students acquire knowledge and skills that can apply to a wide range of fields. Among these are critical thinking and analytical reasoning skills, decision-making skills, the ability to communicate effectively and to make ethical judgements, and the ability to apply knowledge and skills to real-world settings. Philosophy places the greatest value on demonstrated proficiency that cuts across all majors. As a result philosophy graduates achieve long-term career success.

Philosophy graduates often continue their education in graduate, law, or med programs, or obtain positions in wide variety of fields, including education, publishing, marketing, consulting, government, environmental management, public administration, foreign services, law and law enforcement, human resources, insurance, libraries, and religious or social service areas.

The following information has official approval of **The Department of Philosophy** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
College of Arts & Sciences Requirements		14
Philosophy Core		30
Additional Credits for Graduation *		42
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirements

Code	Title	Hours
<b>Degree requirements in Arts &amp; Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.</b>		
<i>Foreign Language</i>		<b>14</b>
101 Beginning I		
102 Beginning II		
201 Intermediate I		
202 Intermediate II		
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Philosophy Core

Code	Title	Hours
3600:101	Introduction to Philosophy	3
3600:120	Introduction to Ethics	3
3600:170	Introduction to Logic	3
3600:211	History of Ancient Philosophy	3
3600:312	History of Medieval Philosophy	3

3600:313	History of Modern Philosophy	3
3600:3xx/4xx	Philosophy Course	3
3600:3xx/4xx	Philosophy Course	3
3600:xxx	Philosophy Course	3
3600:xxx	Philosophy Course	3
Total Hours		30

## Philosophy/JD Degree Accelerated, BA

### Bachelor of Arts in Philosophy/Juris Doctor Degree Accelerated (360009BA)

More on the Philosophy Accelerated major (<https://www.uakron.edu/philosophy/academics/>)

This is an accelerated 3+3 BA/JD program that will allow eligible students to earn a Bachelor of Arts in Philosophy and a Juris Doctorate degree in six years (180 total credits). Admission as a freshman requires a high school GPA of 3.4 and an ACT of 25 or SAT of 1220. Maintaining eligibility to move on to the JD phase requires an undergraduate GPA of 3.4 by the mid-point of the junior year and taking the LSAT no later than the first semester of the junior year and achieving a score of at least 150.

The following information has official approval of **The Department of Philosophy, The School of Law and The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
College of Arts & Sciences Requirements		14
Philosophy Courses		21
Philosophy Electives		9
Electives		13
First Year Law Courses		29
Total Hours		120

Note: A GPA of 3.4 overall is needed to complete the degree and 92 credit hours, including all general education and philosophy requirements, must be completed by the conclusion of the junior year.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirements

Code	Title	Hours
<b>Degree requirements in Arts &amp; Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.</b>		
<i>Foreign Language</i>		<b>14</b>
101 Beginning I		
102 Beginning II		
201 Intermediate I		
202 Intermediate II		
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Philosophy Core

Code	Title	Hours
3600:101	Introduction to Philosophy	3
3600:120	Introduction to Ethics	3
3600:170	Introduction to Logic	3
3600:211	History of Ancient Philosophy	3
3600:312	History of Medieval Philosophy	3

3600:313	History of Modern Philosophy	3
3600:3xx/4xx	Philosophy Course	3
3600:3xx/4xx	Philosophy Course	3
3600:xxx	Philosophy Course	3
3600:xxx	Philosophy Course	3
Total Hours		30

## Philosophy Courses

Code	Title	Hours
3600:101	Introduction to Philosophy	3
3600:120	Introduction to Ethics	3
3600:170	Introduction to Logic	3
3600:211	History of Ancient Philosophy	3
3600:312	History of Medieval Philosophy	3
3600:313	History of Modern Philosophy	3
3600:327	Law and Morality	3
or 3600:329	Philosophy of International Law	
or 3600:421	Philosophy of Law	
Total Hours		21

## Philosophy Electives

Code	Title	Hours
<b>Select nine credits, three of which must be at the 300 level:</b>		
3600:3xx		3
3600:xxx		6
Total Hours		9

## Electives

Code	Title	Hours
<b>Complete 13 credits:</b>		
xxxx:xxx		
Total Hours		13

## First Year Law Courses

Code	Title	Hours
9200:601	Civil Procedure - Federal Jurisdiction	3
9200:602	Civil Procedure - Federal Litigation	3
9200:607	Criminal Law	3
9200:611	Contracts	4
9200:619	Legal Analysis, Research, & Writing I (LARW I)	3
9200:620	Legal Analysis, Research & Writing II (LARW II)	2
9200:625	Torts	4
9200:645	Property	4
9200:676	Legislation and Regulation	2
Total Hours		28

## Police Ethics, Certificate

### Certificate in Police Ethics (360008C)

This certificate program is intended for individuals who wish to enhance their knowledge of ethical decision-making in policing. This certificate

is independent of a degree and is designed for individuals in one of the following categories:

1. the person preparing for a career in law enforcement;
2. the person who is interested in law enforcement and seeks to enhance their knowledge of ethical decision-making related to policing;
3. the person employed in law enforcement who seeks to acquire the necessary methodology needed for ethical decision-making related to policing.

#### Program Contact

Dr. Matthew Wyszynski  
Acting Chair, Department of Philosophy  
330-972-6908  
wyszynski@uakron.edu

The following information has official approval of the **Department of Philosophy** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Police Ethics" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		6
Electives		6
Total Hours		12

## Required Courses

Code	Title	Hours
3600:363	Police Ethics	3
3600:480	Seminar in Philosophy <sup>1</sup>	3
Total Hours		6

<sup>1</sup> 3600:480 Seminar in Philosophy seminar must be Philosophy of Race

## Elective Courses

Code	Title	Hours
<b>Select six credits:</b>		<b>6</b>
3600:323	Advanced Topics in Ethics <sup>1</sup>	
3600:324	Social & Political Philosophy	
3600:327	Law and Morality	
3600:421	Philosophy of Law	
3600:455	Philosophy of Feminism	
3600:490	Senior Honors Project in Philosophy <sup>1</sup>	

<sup>1</sup> Must be on a related Police Ethics topic

# Pre-Law Philosophy, Minor

## Minor in Pre-Law Philosophy (360004M)

#### Program Contact

Dr. Matthew Wyszynski  
Acting Chair, Department of Philosophy  
330-972-6908  
wyszynski@uakron.edu

The following information has official approval of the **Department of Philosophy** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Pre-Law Philosophy" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Cannot overlap more than 6 credits if obtaining both a Philosophy major and a Philosophy minor or if obtaining two Philosophy minors. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		6
Electives		12
Total Hours		18

## Required Courses

Code	Title	Hours
3600:210	Logic for Lawyers	3
3600:421	Philosophy of Law	3
Total Hours		6

## Electives

Code	Title	Hours
<b>Select 3 credits of the following:</b>		<b>3</b>
3600:120	Introduction to Ethics	
3600:150	Critical Thinking	
3600:170	Introduction to Logic	
<b>Select 3 credits of the following:</b>		<b>3</b>
3600:324	Social & Political Philosophy	
3600:327	Law and Morality	
3600:329	Philosophy of International Law	
3600:363	Police Ethics	
3600:374	Symbolic Logic	
<b>Select 6 credits of the following:</b>		<b>6</b>
2235:220	Environmental Law & Regulations	
3002:301	Civil Rights Movement in America: 1945-1974	
3250:405	Economics of the Public Sector	
3300:376	Legal Writing	
3350:432	Land Use Planning Law	
3400:452	American Revolutionary Era	

3400:453	The Early American Republic
3600:324	Social & Political Philosophy
3600:327	Law and Morality
3600:329	Philosophy of International Law
3600:361	Biomedical Ethics
3600:362	Business Ethics
3600:363	Police Ethics
3600:374	Symbolic Logic
3600:418	20th Century Analytic Philosophy
3700:302	American Political Ideas
3700:313	International Law
3700:334	Law, Mediation, and Violence
3700:335	Law & Society
3700:360	The Judicial Process
3700:361	Politics of the Criminal Justice System
3700:363	Crime, Punishment, Politics: A Comparative Perspective
3700:406	Comparative Constitutional Law
3700:461	The Supreme Court & Constitutional Law
3700:462	The Supreme Court & Civil Liberties
3700:483	Constitutional Problems in Criminal Justice
3750:440	Personnel Psychology & the Law
3760:300	Legal Environment of Families
3800:275	Legal Aspects of Corrections
3800:287	The Legal System and Psychology
3800:302	Theory of Criminal Law
3850:330	Criminology
3850:441	Sociology of Law
6400:220	Legal & Social Environment of Business
6400:323	International Business Law
7600:245	Argumentation
7600:252	Persuasion
7600:284	Legal Issues in Media
7750:470	Law for Social Workers

Total Hours 12

## Political Science

Successful graduates of this program go on to graduate or law school, manage campaigns, run for office, work in state and local government or for various federal government agencies, including the U.S. Marshall's Office, U.S. State Department, Federal Bureau of Investigation, Environmental Protection Agency, and Amnesty International.

### Statement of Policies – Admission

For students enrolled at The University of Akron and for students wishing to transfer directly to Buchtel College of Arts and Sciences from other institutions, the following criteria must be satisfied for admission to the Department of Political Science:

- The student must be admissible to Buchtel College of Arts and Sciences
- A minimum grade point average of 2.20 must be met in all university work, including transfer credits

- A minimum grade point average of 2.20 must be met in all work in Political Science, including university and transfer credits. Only credits earned at an accredited institution of post-secondary education, as recognized by The University of Akron, will be considered for transfer credit, and only those grades will be considered in the grade point average.

## Retention

Students in the Political Science programs must maintain a minimum grade point average of 2.20 overall and a minimum of 2.20 grade point average in Political Science courses (including transfer credit) in order to remain in the program. A student who fails to maintain the 2.20 cumulative average (including transfer credit) will be placed on academic probation. Failure to raise the average after one semester will result in dismissal from the program. The student may not apply for readmission for at least one semester.

- American Politics, Minor (p. 264)
- Applied Politics, Certificate (p. 264)
- Comparative Politics, Minor (p. 265)
- Conflict Transformation & Social Entrepreneurship, Certificate (p. 265)
- Criminal Justice, Minor (p. 266)
- Political Science, BA (p. 266)
- Political Science, National Security, BA (p. 268)
- Political Science/JD Degree Accelerated, BA (p. 269)
- Politics of Homeland Security, Minor (p. 270)
- Pre-Law, Minor (p. 271)

## Political Science (3700)

### 3700:100 Government & Politics in the United States (3 Credits)

Examination of American political system with emphasis on fundamental principles, ideas, institutions and processes of modern government. Lecture and discussion sections (day classes only).

**Gen Ed:** Tier 2 - Social Science

### 3700:150 World Politics & Government (3 Credits)

Introduction to international politics and an examination of the governments and foreign policies of selected states from a comparative perspective.

**Gen Ed:** Tier 2 - Social Science

### 3700:210 State & Local Government & Politics (3 Credits)

Examination of institutions, processes and intergovernmental relations at state and local levels.

### 3700:300 Comparative Politics (3 Credits)

Introduction to comparative political analysis; description of political systems of Great Britain, France, Germany and Soviet Union; contrast between democracy and totalitarianism.

**Gen Ed:** Tier 3 - Global Diversity

### 3700:301 Introduction to Political Research (3 Credits)

Introduction to the research process in political science through an introduction to the logic of social science inquiry and contemporary techniques of analysis.

### 3700:302 American Political Ideas (3 Credits)

Study of major thinkers and writers of American political thought.

### 3700:303 Introduction to Political Thought (3 Credits)

Survey of major ideas and concepts of Western political theory from pre-Socrates through period of Enlightenment.

**3700:304 Modern Political Thought (3 Credits)**

Examination of central concepts of political thought from 19th Century to present. Modern liberalism, communism, fascism and totalitarianism emphasized.

**3700:310 International Politics & Institutions (3 Credits)**

Relations among nations examined in political context.

**3700:311 Developing States in World Politics (3 Credits)**

Examines how developing states are conditioned by the global system and how they attempt to modify it.

**3700:313 International Law (3 Credits)**

Prerequisite: 3700:150 or 3700:310. This course explores law at the international level and will focus on diplomacy, treaties, covenants, laws of war, and the legal role of international organizations.

**3700:321 European Politics (3 Credits)**

Description and analysis of government and politics of France, Germany, Italy, the United Kingdom, and Russia, with appropriate references to the European Union.

**3700:326 Politics of Developing Nations (3 Credits)**

General introduction to concepts and theories of political development and political institutions, elite-recruitment and political processes of selected emerging nations.

**3700:328 American Foreign Policy Process (3 Credits)**

Examination of American foreign policy-making process; public opinion and other limitations on policy; specific contemporary problems in selected foreign policy areas.

**3700:333 Social Entrepreneurship (3 Credits)**

Scholarly analysis of successful social and political entrepreneur's efforts to address real world problems and an interdisciplinary analysis of the strategies and skills they deploy.

**3700:334 Law, Mediation, and Violence (3 Credits)**

A critical analysis of the practical challenges central to learning to better prevent, resolve, or reduce the harms associated with conflict.

**3700:335 Law & Society (3 Credits)**

This course will examine how law constructs and constrains political conflict, and how legal institutions mediate, reinforce, and challenge existing power relationships.

**3700:336 Homeland Security Policy and Process (3 Credits)**

The course will focus on the topic of homeland security, an area that has received a great deal of attention following the tragic events of September 11, 2001.

**3700:337 Terrorism: Perpetrators, Politics and Response (3 Credits)**

Survey of terrorist organizations, political implications of terrorism, and governmental response to terrorism.

**3700:339 Terrorism and the Constitution (3 Credits)**

Primary goals include learning about the balance courts try to strike in safeguarding public safety and respect for personal freedom in a constitutional republic.

**3700:341 The American Congress (3 Credits)**

Examination of structure and function of Congress, with comparative materials on legislative process on all levels. Presidential and congressional conflict examined.

**3700:345 World Politics in Film (3 Credits)**

This course examines the political meaning and content of films. Themes investigated include war, the nuclear age and its consequences, postindustrial society, the future, and unemployment.

**3700:346 American Politics in Film (3 Credits)**

Examines the portrayal and representation of American politics through cinema. Emphasis on the positive and negative roles that movies play in educating the public.

**3700:350 The American Presidency (3 Credits)**

The presidency as focal point of politics, policy and leadership in American political system.

**3700:351 Inside the White House (3 Credits)**

The course looks behind the curtain at the inner-workings of the White House. Topics include: physical structure of the White House, travel, protection, and staff.

**3700:352 Weapons of Mass Destruction (3 Credits)**

An exploration of the various weapons of mass destruction available to terrorists and other potential enemies with an emphasis on the challenge America faces in responding to such threats.

**3700:353 Future International Threats (3 Credits)**

A study of future threats through the use of scenario construction and future projections.

**3700:360 The Judicial Process (3 Credits)**

Role of police, lawyers, courts and judges in context of American political process. Structure and process of judicial policy making and limitations on judicial power.

**3700:361 Politics of the Criminal Justice System (3 Credits)**

Examines the impact of the political process and political institutions on criminal law and policy.

**3700:363 Crime, Punishment, Politics: A Comparative Perspective (3 Credits)**

Comparative study of the structures, practices, power relationships, and politics in various criminal justice systems.

**3700:370 Public Administration: Concepts & Practices (4 Credits)**

Examines current administrative theories and their application in public bureaucracies. Emphasis is placed on practices to improve the quality of public sector administration.

**3700:375 Women in Politics (3 Credits)**

Course examines the past, present, and future role of women in politics.

**3700:381 State Politics (3 Credits)**

Analysis of the state political process in terms of its capacity to deal with a wide range of socioeconomic problems. Special emphasis on legislators, administrators, parties and interest groups.

**3700:391 Honors in Political Science (3 Credits)**

Prerequisites: at least 17 credits and a 3.25 average in political science and permission of adviser.

**3700:392 Selected Topics in Political Science (1-3 Credits)**

(May be repeated, but no more than three credits can be applied to major in political science) Topics of substantial current importance, specialized topics within political science or experimental courses.

**3700:395 Internship in Government & Politics (2-9 Credits)**

(May be taken twice for a total of nine hours. No more than four credits may be applied toward major in political science.) Prerequisite: Completion of 3 courses with a 2.20 GPA in political science. Supervised individual placement with political office holders, party groups, governmental agencies, law firms and other organizations providing professional-level work.

**3700:397 Independent Study: Political Science (1-4 Credits)**

(May be repeated for a total of four credits) Prerequisites: Minimum academic standing of a Senior and a 3.00 GPA.

**3700:400 Political Extremism & Violence (3 Credits)**

This course examines the causes and consequences of political extremism and political violence in democracies and failed democracies.

**3700:401 Advanced Topics in Research Methods (3-6 Credits)**

Prerequisite: 3700:301 or 3850:301. Special advanced topics of interest in research methods. This course can be taken twice if topics are different, for six credits total.

**3700:402 Politics and the Media (3 Credits)**

Examination of relationships between the press, the news media and political decision makers.

**3700:403 Media, Crime and Public Opinion (3 Credits)**

Examines the social construction of crime in mass media and how it impacts public, including fear of crime, beliefs about crime causation, and crime policy.

**3700:405 Politics in the Middle East (3 Credits)**

The rise of the state system in the Middle East after World War I; an analysis of the socio-cultural, ideological forces influencing the political behavior of the people of the Middle East. In-depth study of selected political systems.

**3700:406 Comparative Constitutional Law (3 Credits)**

This course will explore the essential principles and theories of law and constitutionalism and then apply them, comparatively, to several different constitutional traditions from various regions of the world.

**3700:410 International Security Policy (3 Credits)**

Prerequisite: 3700:310 or 3400:461. Introduction to political uses of military forces. Major focus on methodological, conceptual, and ethical dilemmas confronted in developing and implementing security policy.

**3700:413 Global Public Health Threats (3 Credits)**

An introduction to comparative global biological and public health security policy. Topics include: infectious disease outbreaks, bioterrorism, and potential "nano-terrorism."

**3700:414 Wealth and Power Among Nations (3 Credits)**

Studies relationship between politics and economy; mesh theoretical perspectives with exploration of key empirical issues. Topics: trade, relations, unions, finance, development, aid, sanctions.

**3700:417 Environmental Security: Policy & Politics (3 Credits)**

Prerequisite: 3700:100. Examines the politics, economics, science, security, and policy changes behind global warming/climate change, peak oil (looming energy shortages), and related governmental and resource security.

**3700:422 Understanding Racial and Gender Conflicts (3 Credits)**

This is the core course the Certificates in Racial and Gender Conflict, providing students with an opportunity to intensively examine racial and gender conflict.

**3700:428 Ohio Politics (3 Credits)**

Prerequisite: 3700:100. This course focuses on factors that make Ohio economically competitive. Material focuses on recent election results, public opinion polling and influence of socioeconomic factors.

**3700:437 Government Versus Organized Crime (3 Credits)**

The course gives a history of organized crime and the government's responses to fight it. Newly emerging international crime groups are also discussed.

**3700:440 Survey Research Methods (3 Credits)**

Prerequisites: 3700:100. Study of survey research methods as applied to the analysis of public opinion, political behavior, and public policy formation.

**3700:441 The Policy Process (3 Credits)**

Prerequisites: eight credits in political science. Intensive study of policy-making process, emphasizing roles of various participants in executive and legislative branches as well as private individuals and groups.

**3700:442 Methods of Policy Analysis (3 Credits)**

Prerequisite: 3700:201. Examines variety of methods available for analyzing public policies. Techniques of cost benefit analysis, evaluation research quasi-experimentation are covered as well as consideration of ethical questions in policy analysis, the practical problems facing policy analysts.

**3700:443 Political Scandals & Corruption (3 Credits)**

This course will provide information on major political scandals, including media coverage, public opinion, the role of special prosecutors, and the impacts of scandals.

**3700:445 Al Qaeda and ISIS (3 Credits)**

This course explores the causes and consequences of Al Qaeda and ISIS ideologies and tactics around the world.

**3700:446 National Security Intelligence (3 Credits)**

The aim of this course is to familiarize students with the politics and policy of national security intelligence in the US.

**3700:447 Counterterrorism (3 Credits)**

The course introduces students to the federal national security agencies, polices, politics, and methods of containing and defeating terrorism abroad and within the United States.

**3700:448 Intelligence Analysis (3 Credits)**

This course is intended to for students who seek a career in the field of government or private sector intelligence or who just have an interest in how intelligence analysis is done.

**3700:450 Administering Prisons, Probation, and Parole (3 Credits)**

Prerequisite: 3700:100. Analysis of the administrative, electoral, and community conflicts central to understanding, resolving, and preventing these conflicts in a correctional environment.

**3700:461 The Supreme Court & Constitutional Law (3 Credits)**

Prerequisite: 3700:100. Interpretation of the Constitution by the Supreme Court with emphasis on federal judicial, legislative and executive power; separation of powers; and federalism.

**3700:462 The Supreme Court & Civil Liberties (3 Credits)**

Prerequisite: 3700:100. Interpretation of the Constitution by the Supreme Court with emphasis on freedom of speech and press, freedom of religion, criminal rights and right to privacy.

**3700:463 Human Rights in World Politics (3 Credits)**

An introduction to human rights from a comparative perspective; topics include: definition and development of human rights with attention paid to government interaction and wartime.

**3700:470 Campaign Management I (3 Credits)**

Reading, research and practice in campaign management decision making.

**3700:471 Campaign Management II (3 Credits)**

Prerequisite: 3700:470. The second course in campaign management. The focus is on timing, coalition building, candidate positioning, event planning, internal organization, and other elements of campaign strategy.

**3700:472 Campaign Finance (3 Credits)**

Reading and research in financial decision making in political campaigns.

**3700:473 Voter Contact & Elections (3 Credits)**

Theoretical and practical approaches to communication in all types of campaigns.

**3700:474 Political Opinion, Behavior & Electoral Politics (3 Credits)**

Prerequisite: 3700:100 or 3700:301. Advanced analysis of psychological, cultural, and group processes of opinion formation and change. Attention given to the effect of opinion change on electoral outcomes.

**3700:475 American Interest Groups (3 Credits)**

Prerequisite: Completion of six or more political science credits. Reading and research on the development, structure and function of interest groups in the United States.

**3700:476 American Political Parties (3 Credits)**

Prerequisites: Completion of six or more political science credits. Reading and research on the development, structure and function of parties in the United States.

**3700:477 Lobbying (3 Credits)**

Examines the lobbying profession in the political process. Topics include theories of lobbying, tools of lobbying, the lobbying process, and types of lobbying.

**3700:480 Policy Problems in Political Science (3 Credits)**

Intensive study of selected problems in public policy.

**3700:481 The Challenges of Police Work (3 Credits)**

Prerequisite: 3700:100. Analysis of the neighborhood, bureaucratic, electoral, and operational conflicts central to police work, with a focus on efforts and obstacles to improving police work.

**3700:482 Criminal Justice Topic: Current Issues (3 Credits)**

(May be repeated for a maximum of six credits) Prerequisite: 3700:100. Critical analysis of current issues relating to political science and criminal justice. No more than three credits can be applied to the major.

**3700:483 Constitutional Problems in Criminal Justice (3 Credits)**

Prerequisite: 3700:100. Analyzes Supreme Court policy-making regarding problems of criminal justice, including search and seizure, self-incrimination, right to counsel, jury selection, and post-appeal prisoner rights.

**3700:492 Selected Topics in Political Science (3 Credits)**

Topics of substantial current importance or specialized topics within political science (May be repeated for a total of 6 credits).

**3700:497 Senior Honors Project in Political Science (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission. Open only to a political science major in Honors Program. Independent study leading to completion of senior honors thesis or other original work.

## American Politics, Minor

### Minor in American Politics (370003M)

**Program Contact**

*Dr. Nancy Marion*  
Professor, Political Science  
330-972-5551  
nmarion@uakron.edu

The following information has official approval of the **Department of Political Science** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in American Politics" and must be completed with a minimum grade point average of 2.0 overall

for the minor to be noted on the student's record. At least 9 credits must be at the 300/400 level. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		3
Electives		15
Total Hours		18

## Required Courses

Code	Title	Hours
3700:100	Government & Politics in the United States	3
Total Hours		3

## Electives

Code	Title	Hours
<b>Select 15 credits from the following:</b>		<b>15</b>
3700:210	State & Local Government & Politics	
3700:341	The American Congress	
3700:350	The American Presidency	
3700:360	The Judicial Process	
3700:370	Public Administration: Concepts & Practices	
3700:381	State Politics	
3700:395	Internship in Government & Politics	
3700:402	Politics and the Media	
3700:440	Survey Research Methods	
3700:470	Campaign Management I	
3700:471	Campaign Management II	
3700:472	Campaign Finance	
3700:474	Political Opinion, Behavior & Electoral Politics	
3700:475	American Interest Groups	
3700:476	American Political Parties	
Total Hours		15

## Applied Politics, Certificate

### Certificate in Applied Politics (370005C)

**Program Contact**

*Dr. David Cohen*  
Professor, Political Science  
330-972-6045  
dbcohen@uakron.edu (nmarion@uakron.edu)

The following information has official approval of the **Department of Political Science** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Applied Politics" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. Students must



maintain at least a B average in their coursework for the certificate. Political Science majors will, upon completion of the program, be awarded a B.A. or B.S. degree in Political Science with a Certificate in Applied Politics. Majors in other disciplines will have the Certificate noted on their permanent record.

## Summary

Code	Title	Hours
Core Requirements		12-18
Electives		6
Total Hours		18-24

## Core Requirements

Code	Title	Hours
3700:395	Internship in Government & Politics	3-9
3700:470	Campaign Management I	3
3700:471	Campaign Management II	3
<b>Select at least 3 credits from the following:</b>		<b>3</b>
3700:402	Politics and the Media	
3700:440	Survey Research Methods	
3700:473	Voter Contact & Elections	
3700:474	Political Opinion, Behavior & Electoral Politics	
3700:475	American Interest Groups	
Total Hours		12-18

## Electives

Code	Title	Hours
<b>Select 6 elective credits of the following:</b>		<b>6</b>
3700:381	State Politics	
3700:392	Selected Topics in Political Science	
3700:397	Independent Study: Political Science	
3700:402	Politics and the Media	
3700:440	Survey Research Methods	
3700:472	Campaign Finance	
3700:473	Voter Contact & Elections	
3700:474	Political Opinion, Behavior & Electoral Politics	
3700:475	American Interest Groups	
3700:476	American Political Parties	
7600:475	Political Communication	
Total Hours		6

## Comparative Politics, Minor Minor in Comparative Politics (370006M)

### Program Contact

*Dr. Ron Gelleny*

*Associate Professor, Political Science*

330-972-2773

[Gelleny@uakron.edu](mailto:Gelleny@uakron.edu) ([nmarion@uakron.edu](mailto:nmarion@uakron.edu))

The following information has official approval of the **Department of Political Science** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number

of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Comparative Politics" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. At least 9 credits must be at the 300/400 level. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		6
Electives		12
Total Hours		18

## Required Courses

Code	Title	Hours
3700:150	World Politics & Government	3
3700:300	Comparative Politics	3
Total Hours		6

## Electives

Code	Title	Hours
<b>Select 12 credits of the following:</b>		<b>12</b>
3700:304	Modern Political Thought	
3700:321	European Politics	
3700:326	Politics of Developing Nations	
3700:405	Politics in the Middle East	
3700:414	Wealth and Power Among Nations	
Total Hours		12

## Conflict Transformation & Social Entrepreneurship, Certificate

### Certificate in Conflict Transformation & Social Entrepreneurship (370016C)

Because the skills needed to more productively navigate the conflicts in our lives overlap with the skills that characterize successful social entrepreneurs, this uniquely interdisciplinary, free-standing, certificate offers you an opportunity to learn skills designed to help you become a leader in your own life.

### Program Contact

*Dr. Bill Lyons*

*Associate Dean, College of Arts and Sciences*

330-972-5855

[wtylons@uakron.edu](mailto:wtylons@uakron.edu)

The following information has official approval of the **Department of Political Science** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Conflict Transformation & Social Entrepreneurship" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Core Required Courses		6
Electives		3-4
Total Hours		9-10

## Core Requirements

Code	Title	Hours
3700:334	Law, Mediation, and Violence	3
<b>Complete one of the following courses:</b>		<b>3</b>
3700:333	Social Entrepreneurship	
3850:490	Organizations, Community, and Social Action	
3850:320	Social Inequalities	
Total Hours		6

## Electives

Code	Title	Hours
<b>Complete one of the following courses:</b>		<b>3-4</b>
7600:444	Communication & Conflict	
3850:441	Sociology of Law	
3230:460	Field Methods in Cultural Anthropology	
Total Hours		3-4

## Criminal Justice, Minor Minor in Criminal Justice (370001M)

### Program Contact

*Dr. Nancy Marion*

*Professor, Political Science*

330-972-5551

nmarion@uakron.edu

The following information has official approval of the **Department of Political Science** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Criminal Justice" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. At least 9 credits must be at the 300/400 level. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		9
Electives		8

Additional Credits for Minor	1
Total Hours	18

## Required Courses

Code	Title	Hours
3700:100	Government & Politics in the United States	3
3700:301	Introduction to Political Research	3
3700:361	Politics of the Criminal Justice System	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select 8 credits from the following:</b>		<b>8</b>
3700:363	Crime, Punishment, Politics: A Comparative Perspective	
3700:395	Internship in Government & Politics <sup>1</sup>	
3700:450	Administering Prisons, Probation, and Parole	
3700:480	Policy Problems in Political Science	
3700:481	The Challenges of Police Work	
3700:482	Criminal Justice Topic: Current Issues	
3700:483	Constitutional Problems in Criminal Justice	
Total Hours		8

<sup>1</sup> A maximum of 4 credits of internship can be applied to minor and must be in a Criminal Justice related field.

## Political Science, BA Bachelor of Arts in Political Science (370000BA)

More on the Political Science major (<https://www.uakron.edu/polisci/academics/undergraduate/>)

Successful graduates of this program go on to graduate or law school, manage campaigns, run for office, work in state and local government or for various federal government agencies, including the U.S. Marshall's Office, U.S. State Department, Federal Bureau of Investigation, Environmental Protection Agency, and Amnesty International.

### Statement of Policies – Admission

For students enrolled at The University of Akron and for students wishing to transfer directly to Buchtel College of Arts and Sciences from other institutions, the following criteria must be satisfied for admission to the Department of Political Science:

- The student must be admissible to Buchtel College of Arts and Sciences
- A minimum grade point average of 2.20 must be met in all university work, including transfer credits
- A minimum grade point average of 2.20 must be met in all work in Political Science, including university and transfer credits. Only credits earned at an accredited institution of post-secondary education, as recognized by The University of Akron, will be considered for transfer credit, and only those grades will be considered in the grade point average.

## Retention

Students in the Political Science programs must maintain a minimum grade point average of 2.20 overall and a minimum of 2.20 grade point average in Political Science courses (including transfer credit) in order to remain in the program. A student who fails to maintain the 2.20 cumulative average (including transfer credit) will be placed on academic probation. Failure to raise the average after one semester will result in dismissal from the program. The student may not apply for readmission for at least one semester.

The following information has official approval of **The Department of Political Science** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Political Science Core	15
	Political Science 300/400 Level Courses	18
	Additional Credits for Graduation *	39
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.2 cumulative GPA is required for graduation.

## General Education Courses

Code	Title	Hours
	Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.	

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*<sup>1</sup>

3450:135 Mathematics for Everyday Life  
 or 3470:250 Statistics for Everyday Life  
 or 3470:260 Basic Statistics  
 or 3470:261 Introductory Statistics I  
 or 3470:262 Introductory Statistics II

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

Select one class from each of the following subcategories:

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

Review the General Education Requirements page for detailed course listings.

Total Hours 34

<sup>1</sup> At least three credits must come from one of the courses listed.

## College of Arts & Sciences Requirements

**Code Title Hours**

**Degree requirements in Arts & Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.**

*Foreign Language 14*

101 Beginning I

102 Beginning II

201 Intermediate I

202 Intermediate II

7700:222 Survey of Deaf Culture in America (American Sign Language option only)

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Political Science Core

**Code Title Hours**

### Political Science Core

3700:100 Government & Politics in the United States 3

3700:150 World Politics & Government 3

3700:301 Introduction to Political Research 3

3700:300 Comparative Politics 3

3700:303 Introduction to Political Thought 3

Total Hours 15

## Political Science 300/400 Level Courses

**Code Title Hours**

**Complete 18 credits: 18**

3700:3xx

3700:4xx<sup>1</sup>

3700:392 Selected Topics in Political Science<sup>2</sup>

3700:395 Internship in Government & Politics<sup>3</sup>

Total Hours 18

- <sup>1</sup> Nine credits must be at the 400 level or above.
- <sup>2</sup> No more than 3 credits of a Selected Topics course (3700:392 Selected Topics in Political Science) may be applied toward completion of the major requirements.
- <sup>3</sup> No more than 4 credits from an internship (3700:395 Internship in Government & Politics) may be applied toward completion of the major requirements.

## Political Science, National Security, BA

### Bachelor of Arts in Political Science, National Security (370018BA)

More on the Political Science, National Security major (<https://www.uakron.edu/polisci/academics/undergraduate/>)

This degree track will prepare students for the study and practice of national security. Thus, the degree track will help educate students for a career in international diplomacy, the Intelligence Community, the military, private intelligence and security contractors, law enforcement, business, as well as others.

The following information has official approval of **The Department of Political Science** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Required Courses	15
	Track Core Electives	6
	Core Electives	9
	Additional Credits for Graduation *	42
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.2 cumulative GPA is required for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i> <sup>1</sup>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
<b>Total Hours</b>		<b>34</b>

<sup>1</sup> At least three credits must come from one of the courses listed.

## College of Arts & Sciences Requirements

Code	Title	Hours
<b>Degree requirements in Arts &amp; Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.</b>		
<i>Foreign Language</i>		<b>14</b>
101	Beginning I	
102	Beginning II	
201	Intermediate I	
202	Intermediate II	
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Required Courses

Code	Title	Hours
3700:100	Government & Politics in the United States	3
3700:150	World Politics & Government	3
3700:300	Comparative Politics	3

3700:301	Introduction to Political Research	3
3700:303	Introduction to Political Thought	3
Total Hours		15

## Track Core Electives

Code	Title	Hours
<b>Complete six credits:</b>		<b>6</b>
3700:310	International Politics & Institutions	
3700:328	American Foreign Policy Process	
3700:336	Homeland Security Policy and Process	
3700:337	Terrorism: Perpetrators, Politics and Response	
3700:446	National Security Intelligence	
Total Hours		6

## Track Electives

Code	Title	Hours
<b>Complete nine credits:</b>		<b>9</b>
3700:326	Politics of Developing Nations	
3700:339	Terrorism and the Constitution	
3700:352	Weapons of Mass Destruction	
3700:400	Political Extremism & Violence	
3700:405	Politics in the Middle East	
3700:410	International Security Policy	
3700:413	Global Public Health Threats	
3700:414	Wealth and Power Among Nations	
3700:417	Climate Crisis: Global Warming, Renewable Energy, and Related Policy Issues	
3700:445	Al Qaeda and ISIS	
3700:447	Counterterrorism	
3700:448	Intelligence Analysis	
3700:461	The Supreme Court & Constitutional Law	
3700:463	Human Rights in World Politics	
3700:492	Selected Topics in Political Science	
Total Hours		9

## Political Science/JD Degree Accelerated, BA

### Bachelor of Arts in Political Science/Juris Doctor Degree Accelerated (370017BA)

More on the Political Science Accelerated major (<https://www.uakron.edu/law/curriculum/three-plus-three/>)

For undergraduates in select programs, you can earn your bachelor's and law degrees in six years instead of seven. To complete law school, you typically need four years to complete a bachelor's degree and three years to complete a law degree (juris doctor degree).

Akron Law's new 3 + 3 Program allows eligible undergraduate students participating in partner programs to apply to Akron Law in their junior year of college.

Students admitted under the program fulfill their senior year of undergraduate credits through the successful completion of their first-

year law school courses (<https://www.uakron.edu/law/curriculum/jd.dot>), allowing them to graduate with both a bachelor's and law degree in just six years, saving a year of tuition and related costs, and they begin their legal careers a year ahead of time.

### Applicants

Pursuant to Akron Law's 3 + 3 policy, an applicant must be in his or her junior year and participating in a partner program. Applicants must also meet his or her undergraduate institution's criteria for eligibility.

Typically, you must have a 3.4 grade point average and 150 LSAT score to qualify for admission. However, this might vary depending on your program. Each undergraduate institution determines which majors and programs are eligible for participation.

### Application requirements

In addition to being an eligible junior in a partner program, applicants must take the Law School Admissions Test (LSAT), complete the law school application, and submit a certification of eligibility from the partner program. Applicants can request the certification form from the contact person at their institution as listed above. 3 + 3 candidates are considered alongside Akron Law's regular pool of applicants.

Applicants to the 3 + 3 program are encouraged to take the LSAT in October or December of their junior year in college and apply in January after their fall grades are available. However, later applications, including those from June LSAT-takers, will also be considered.

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Political Science Core	23-30
	Additional Credits for Graduation *	19
Total Hours		90-97

\* Bachelor's degrees require a minimum of 120 credit hours for graduation. Students admitted to University of Akron School of Law will receive BA in Political Science after completing 30 credits during the first year of law school.

Note: A GPA of 3.4 overall is needed to complete the degree along with a minimum Political Science GPA of a 2.2

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i> <sup>1</sup>		
3450:135	Mathematics for Everyday Life	
	or 3470:250 Statistics for Everyday Life	
	or 3470:260 Basic Statistics	
	or 3470:261 Introductory Statistics I	
	or 3470:262 Introductory Statistics II	
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

<sup>1</sup> At least three credits must come from one of the courses listed.

## College of Arts & Sciences Requirements

Code	Title	Hours
<b>Degree requirements in Arts &amp; Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.</b>		
<i>Foreign Language</i>		<b>14</b>
101	Beginning I	
102	Beginning II	
201	Intermediate I	
202	Intermediate II	
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Political Science Core

Code	Title	Hours
3700:100	Government & Politics in the United States	3
3700:150	World Politics & Government	3
3700:301	Introduction to Political Research	3
3700:300	Comparative Politics	3
3700:303	Introduction to Political Thought	3
3700:395	Internship in Government & Politics	2-9
3700:360	The Judicial Process	3
	or 3700:335 Law & Society	
3700:461	The Supreme Court & Constitutional Law	3
	or 3700:462 The Supreme Court & Civil Liberties	
Total Hours		23-30

## Politics of Homeland Security, Minor Minor in Politics of Homeland Security (370008M)

### Program Contact

Dr. Nancy Marion

Professor, Political Science

330-972-5551

nmarion@uakron.edu

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The following courses constitute a "Minor in Politics of Homeland Security" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

## Required Courses

Code	Title	Hours
3700:336	Homeland Security Policy and Process	3
3700:337	Terrorism: Perpetrators, Politics and Response	3
3700:100	Government & Politics in the United States	3
	or 3700:150 World Politics & Government	
Total Hours		9

## Electives

Code	Title	Hours
<b>Select 9 credits from the following:</b>		<b>9</b>
3700:310	International Politics & Institutions	
3700:328	American Foreign Policy Process	
3700:334	Law, Mediation, and Violence	
3700:339	Terrorism and the Constitution	
3700:352	Weapons of Mass Destruction	
3700:353	Future International Threats	
3700:392	Selected Topics in Political Science	
3700:410	International Security Policy	
3700:413	Global Public Health Threats	
3700:445	Al Qaeda and ISIS	
Total Hours		9

## Pre-Law, Minor

### Minor in Pre-Law (370009M)

#### Program Contact

Dr. Phillip Marcin

Asst. Professor of Instruction

330-972-6480

pjm@uakron.edu

The following information has official approval of the **Department of Political Science** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Pre-Law" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. At least 9 credits must be completed at the 300/400 level. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

## Required Courses

Code	Title	Hours
3700:100	Government & Politics in the United States	3
3700:360	The Judicial Process	3
3700:461	The Supreme Court & Constitutional Law	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select 9 credits from the following:</b>		<b>9</b>
3700:210	State & Local Government & Politics	

3700:341	The American Congress	
3700:361	Politics of the Criminal Justice System	
3700:395	Internship in Government & Politics <sup>1</sup>	
3700:462	The Supreme Court & Civil Liberties	
Total Hours		9

<sup>1</sup> A maximum of 3 credits of internship can be applied to the minor.

## Psychology

Psychology majors learn about human and animal behavior, and are prepared for diverse careers in health, business, industry, and research. The Department of Psychology offers an extensive and varied curriculum coupled with an active faculty and student-driven research program that develops the analytical and problem-solving skills desired by employers and graduate programs. In addition there is a Field Experience program that introduces students to field work in local agencies. The academic background and applied experiences provided by the major enable students to seek regional postgraduate employment and successfully compete for graduate school opportunities leading to advanced degrees.

- Psychology, BA (p. 273)
- Psychology, Minor (p. 274)

## Psychology (3750)

### 3750:100 Introduction to Psychology (3 Credits)

Introduction to scientific study of behavior, survey of physiological basis of behavior, sensation and perception, development, learning and cognition, personality, social interaction and other selected topics.

**Gen Ed:** Tier 2 - Social Science

### 3750:105 Professional & Career Issues in Psychology (1 Credit)

Corequisite: 3750:100. An overview of the field of psychology including educational requirements, career opportunities and professional issues for students considering a psychology major.

### 3750:110 Quantitative Methods in Psychology (4 Credits)

Prerequisite or corequisite: 3750:100. Presentation of data, descriptive statistics, correlation, hypothesis testing and introduction to statistical methodologies in psychology, including computer applications.

**Gen Ed:** Tier 3 - Critical Thinking

### 3750:220 Introduction to Experimental Psychology (4 Credits)

Prerequisites: 3750:100 and 3750:110. Lectures and laboratory experience in the scientific bases of psychology such as experimental design, methods and apparatus, collection and analysis of data and interpretation of results.

**Gen Ed:** Tier 3 - Critical Thinking

### 3750:230 Developmental Psychology (4 Credits)

Prerequisite: 3750:100. Determinants and nature of behavioral change from conception to death.

### 3750:250 Psychology of Diversity (4 Credits)

Prerequisite: 3750:100. Psychology of Diversity encompasses macro-level issues and micro-level experiences. To live effectively in the emerging global community, one must be able to understand the diversity among human beings and relate effectively to non-majority group members. Issues of diversity are not only individual and personal, but also collective and social.

**Gen Ed:** Tier 3 - Domestic Diversity

**3750:320 Biopsychology (4 Credits)**

Prerequisite: 3750:100. Relationship between behavior and its biological/physiological foundations including brain structure and function, sensation, behavior genetics, learning and memory, and other topics.

**3750:330 Emotion Across the Lifespan (4 Credits)**

Prerequisites: 3750:100 & 3750:230. We read and discuss primary writings on theoretical and empirical research in emotional development in adulthood. Topics include emotion perception and emotion regulation.

**3750:335 Dynamics of Personality (4 Credits)**

Prerequisite: 3750:100. An overview of theory and research involving the development, maintenance and assessment of personality and individual differences.

**3750:340 Social Psychology (4 Credits)**

Prerequisite: 3750:100. The examination of an individual's response to social environment and social interaction processes. Social perception, attitude formation and change, affiliation and attraction, altruism, group processes and nonverbal behavior.

**3750:345 Cognitive Processes (4 Credits)**

Prerequisite: 3750:100. Survey of the basic phenomena, concepts and theories in the areas of human perception, learning, memory and cognition.

**3750:380 Industrial/Organizational Psychology (4 Credits)**

Prerequisite: 3750:100. Survey of the application of psychology to the workplace including an emphasis on organizational (e.g., motivation) and personnel issues (e.g., selection).

**3750:400 Personality (4 Credits)**

Prerequisites: 3750:100 and 3750:335. Consideration of current conceptualizations of the normal personality with emphasis on methods of measurement, experimental findings and research techniques.

**3750:405 Sensation & Perception (4 Credits)**

Prerequisite: 3750:100. Reviews the basic psychological and neural components of sensation and perception involving visual, auditory, cutaneous, and chemical sensory systems.

**3750:410 Psychological Tests & Measurements (4 Credits)**

Prerequisites: 3750:100 and 3750:110. Consideration of the nature, construction and use of tests and measurements in industry, government and education. Includes aptitude and achievement tests, rating scales, attitude and opinion analysis.

**3750:415 Cognitive Neuroscience (4 Credits)**

Prerequisite: 3750:100. A review of neuroimaging studies addressing contemporary themes in human behavior, including consciousness, learning and memory, neuropathology, and emotion.

**3750:420 Abnormal Psychology (4 Credits)**

Prerequisite: 3750:100. Survey of syndromes, etiology, diagnoses and treatments of major psychological conditions ranging from transient maladjustments to psychoses.

**3750:425 Psychology of Hate (4 Credits)**

Prerequisites: Junior or higher standing and 3750:100. The primary objective of this course is to understand the psychology behind hate. Topics include racism, sexism, heterosexism, religious intolerance, classism and ageism.

**Gen Ed:** Tier 3 - Complex Systems

**3750:430 Psychological Disorders of Children (4 Credits)**

Prerequisites: 3750:100 and 3750:230. Survey of syndromes, etiologies and treatments of behavioral disorders in children from the standpoint of developmental psychology. Behavioral data and treatment approaches emphasized.

**3750:435 Cross-Cultural Psychology (4 Credits)**

Prerequisites: 3750:100. Influence of culture and ethnicity upon development of individual psychological processes including functioning, identity, social motives, sex roles and values.

**Gen Ed:** Tier 3 - Domestic Diversity

**3750:440 Personnel Psychology & the Law (4 Credits)**

Prerequisite: 3750:380 or 6500:301. The implications of equal employment law on the practice of personnel psychology.

**3750:441 Clinical & Counseling Psychology I (4 Credits)**

Prerequisites: 3750:100 and 3750:335. Overview of the fields of clinical and counseling psychology with a major focus on psychotherapeutic approaches, including cultural considerations, legal/ethical issues, and outcome research.

**Gen Ed:** Tier 3 - Critical Thinking

**3750:442 Clinical & Counseling Psychology II (4 Credits)**

Prerequisite: 3750:441. Overview of individual counseling and psychotherapy, group counseling, personality and ability testing, marriage and family counseling, hypnosis, sex therapy, psychopharmacology and related specialties. Specific topics in clinical and counseling practice including professional trends, ethics, various therapeutic and diagnostic procedures, and specialty areas.

**3750:443 Human Resource Management (4 Credits)**

Prerequisites: 3750:100 and 3750:380. The application of psychological theory to the effective management of human resources in an organization, including recruitment, selection, training and retention of personnel.

**3750:444 Organizational Theory (4 Credits)**

Prerequisites: 3750:100 and 3750:380. The application of psychological theory to macro-level processes in organizations including leadership, motivation, task performance, organizational theories and development.

**3750:445 Psychology of Small Group Behavior (4 Credits)**

Prerequisites: 3750:100. Intensive investigation of factors affecting behavior and performance in small groups including effects of personality, social structures, task, situational and social-cognitive variables.

**3750:450 Cognitive Development (4 Credits)**

Prerequisites: 3750:100 and 3750:345. Theory and research on life-span changes in cognitive processes including concept formation/categorization, information processing and Piagetian assessment tasks.

**3750:460 History of Psychology (3 Credits)**

Prerequisite: 3750:100. Psychology in pre-scientific period and details of developmental or systematic viewpoints in 19th and 20th Centuries.

**3750:474 Psychology of Women (4 Credits)**

Prerequisites: 3750:100 or 3001:200. Reviews theory and research in the psychology of women and gender and encourages students to use these in their everyday lives.

**Gen Ed:** Tier 3 - Domestic Diversity

**3750:475 Psychology of Adulthood & Aging (4 Credits)**

Prerequisites: 3750:100 and 3750:230. Psychological aspects of human development from adolescence to older adulthood including age-related changes in socialization, personality, intelligence, sensation, perception, learning, memory and clinical applications.



**3750:480 Special Topics in Psychology (1-4 Credits)**

(May be repeated to a maximum of 8 credits) Prerequisite: 3750:100 and 64 credits completed. Junior standing. Comprehensive survey of contemporary status of specialized topics and issues in psychology. Emphasis on original source materials, critical analysis and synthesis of empirical and theoretical aspects.

**3750:488 Honors Project in Psychology (4 Credits)**

Prerequisites: Psychology major and departmental permission, and 3750:100, 3750:105, 3750:110, 3750:220, and [3750:320 or 3750:335 or 3750:340 or 3750:345]. Selection of research topic, review of relevant literature, research design, and proposal.

**3750:489 Honors Project in Psychology (4 Credits)**

Prerequisites: Psychology major and departmental permission, and 100 and 105 and 110 and 220, and 320 or 335 or 340 or 345. Data collection, analysis, and preparation of the final research report in journal style.

**3750:495 Field Experience in Psychology (1-4 Credits)**

(May be repeated to a maximum of 6 credits). Prerequisites: 3750:100, 3750:105, 3750:110 and eight additional credits in psychology. On-site supervised individual placements in appropriate settings. The academic component of the experience will be under the supervisor of a selected faculty member.

**3750:497 Independent Reading/Research in Psychology (1-3 Credits)**

(May be repeated to a maximum of 6 credits). Prerequisites: 3750:100, 3750:105, 3750:110, 3750:220 and four additional credits in psychology. Independent reading and/or research in an area of psychology under the supervision and evaluation of a selected faculty member.

**3750:498 Honors Research in Psychology (1-3 Credits)**

Prerequisites: Psychology major and approval of honors advisor. Individual research with a faculty advisor leading to the completion of a research project satisfying departmental and university requirements.

## Psychology, BA

### Bachelor of Arts in Psychology (375000BA)

More on the Psychology major (<https://www.uakron.edu/psychology/academics/undergraduate/>)

The following information has official approval of **The Department of Psychology** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Psychology Core	28
	Psychology Electives	12

Additional Credits for Graduation *	32
Total Hours	120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

**Tier I: Academic Foundations 12**

*Quantitative Reasoning: 3 credit hours*<sup>1</sup>

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

**Tier II: Disciplinary Areas 22**

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

**Tier III: Tagged Courses**

*Select one class from each of the following subcategories:*

Complex Systems

3750:425 Psychology of Hate

Critical Thinking

3750:441 Clinical & Counseling Psychology I

Domestic Diversity

3750:435 Cross-Cultural Psychology

or 3750:474 Psychology of Women

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours	34
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<sup>1</sup> The Psychology Department recommends that a student take a statistics course to satisfy their general education math requirement.

## College of Arts & Sciences Requirements

Code	Title	Hours
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**Degree requirements in Arts & Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.**

<i>Foreign Language</i>		14
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101 Beginning I

102 Beginning II

201 Intermediate I

202 Intermediate II

7700:222 Survey of Deaf Culture in America (American Sign Language option only)

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Psychology Core

Code	Title	Hours
3750:100	Introduction to Psychology	3
3750:105	Professional & Career Issues in Psychology	1
3750:110	Quantitative Methods in Psychology <sup>1</sup>	4
3750:220	Introduction to Experimental Psychology	4
<b>Select 16 credits of the following:</b>		<b>16</b>
3750:230	Developmental Psychology	
3750:320	Biopsychology	
3750:335	Dynamics of Personality	
3750:340	Social Psychology	
3750:345	Cognitive Processes	
3750:410	Psychological Tests & Measurements	
Total Hours		28

<sup>1</sup> The Psychology Department recommends that a student take a statistics course to satisfy their general education math requirement. It is strongly recommended that a student complete statistics prior to 3750:110 Quantitative Methods in Psychology.

## Psychology Electives

Code	Title	Hours
<b>Complete 12 credits:<sup>1</sup></b>		<b>12</b>
3750:2xx	200-level Psychology courses	
3750:3xx	300-level Psychology courses	
3750:4xx	400-level Psychology courses	
Total Hours		12

<sup>1</sup> No more than four credits may be fulfilled with 3750:495 Field Experience in Psychology or 3750:497 Independent Reading/Research in Psychology.

## Psychology, Minor Minor in Psychology (375000M)

### Program Contact

Dr. Paul Levy  
Professor, Department of Psychology  
330-972-8369  
plevy@uakron.edu

The following information has official approval of the **Department of Psychology** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number

of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Psychology" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. At least 8 credits must be at the 300/400 level. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		11
Electives		8
Total Hours		19

## Required Courses

Code	Title	Hours
3750:100	Introduction to Psychology	3
<b>Select one of the following:</b>		<b>4</b>
3750:110	Quantitative Methods in Psychology	
3750:220	Introduction to Experimental Psychology	
3750:230	Developmental Psychology	
<b>Select one of the following:</b>		<b>4</b>
3750:320	Biopsychology	
3750:335	Dynamics of Personality	
3750:340	Social Psychology	
3750:345	Cognitive Processes	
3750:380	Industrial/Organizational Psychology	
Total Hours		11

## Electives

Code	Title	Hours
<b>Select 8 credits of 300/400-level courses:</b>		<b>8</b>
3750:3xx	300-level Psychology Electives	
3750:4xx	400-level Psychology Electives	
Total Hours		8

## Sociology

**Mission and Vision: Mission and Vision:** The Department of Sociology is committed to providing students with the tools to engage, and the skills to solve, real-world problems (e.g., health/well-being, environmental and social justice, inequalities). Our graduates have strong analytic and communication skills, can think critically and act creatively to address social problems. By ensuring that all students apply their learning through hands-on research projects and internships, we graduate informed students who are prepared to work in areas designed to address systemic problems facing our local, regional and global communities.

A BA degree in Sociology enables students to develop a deep understanding of the social world and how it operates as well as how personal issues and public concerns interconnect. In addition, a sociology degree develops students' research knowledge and skills in ways that enable graduates to confidently apply the critical thinking,

analytical, and communication skills that are crucial for success in today's ever-changing world.

Earning a BA in sociology offers students wide flexibility in terms of career choices. Graduates apply their knowledge and skills within such areas as medical and health services, recreation, business, law and law enforcement, urban planning, social policy, and social services. Sociology students are also prepared for graduate and professional school programs in areas such as law, medicine, health professions, public policy, business, sociology, social work, and other social sciences.

## Statement of policies - Admission

For students enrolled at the University of Akron and for students wishing to transfer directly to Buchtel College of Arts and Sciences from their institutions, the following criteria must be satisfied for admission to the Department of Sociology:

- The student must be admissible to Buchtel College of Arts and Sciences
- A minimum grade point average of 2.0 must be met in all university work, including transfer credits until 30 UA credits are earned. Only credits earned at an accredited institution of postsecondary education, as recognized by The University of Akron, will be considered for transfer credit, and only those grades will be considered in the grade point average.

## Graduation

A Sociology major must earn a cumulative 2.0 grade point average in Sociology and overall to graduate with such a declared major.

- Research Methods for the Social Sciences, Certificate (p. 277)
- Sociology, BA (p. 277)
- Sociology, Minor (p. 278)

## Sociology (3850)

### 3850:100 Introduction to Sociology (3 Credits)

Basic terminology, concepts and approaches in sociology, including introduction to analysis of social groups and application of sociological concepts to the understanding of social systems. Required of majors. Lecture/discussion.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

### 3850:301 Methods of Social Research I (3 Credits)

Prerequisites: 3850:100 and 3 credits of Mathematics (3450) or Statistics (3470) courses. The basis of this course is learning to apply course material to improve thinking, problem solving, and decisions in conducting research design and data gathering techniques. Required of all majors.

**Gen Ed:** Tier 3 - Critical Thinking

### 3850:302 Methods of Social Research II (3 Credits)

Prerequisites: Completion of [3700:301 or 3850:301], and 3850:100, and 3 credits of Mathematics (3450) or Statistics (3470) courses. Essential objectives of this course are developing expression skills in writing and learning fundamental principles in statistics. Other key topics include quantitative techniques and application to sociological data. Required of all majors.

### 3850:310 Social Problems (3 Credits)

Prerequisite 3850:100 or permission. Study of selected contemporary problems in society; application of sociological theory and research to understand the social construction of and response to these problems.

### 3850:315 Sociological Social Psychology (3 Credits)

Prerequisite: 3850:100. The reciprocal influence of individuals and groups. How interpersonal processes produce and affect group structure. How groups affect the development and behavior of the social person.

### 3850:320 Social Inequalities (3 Credits)

Prerequisite: 3850:100 or permission. This course covers local, regional, national, and global dimensions of social inequalities. Structural and interactionist approaches to relations of power in society frame the course.

**Gen Ed:** Tier 3 - Complex Systems

### 3850:321 Population (3 Credits)

Prerequisite: 3850:100 or permission. An introduction to world and national population trends, related demographic and social characteristics. Topics include fertility, mortality, morbidity, migration, abortion, birth control, population policy in relation to societal problems. Lecture.

**Gen Ed:** Tier 3 - Global Diversity

### 3850:324 Social Movements (3 Credits)

Prerequisite: 3850:100 or permission. Social movements as distinguished from other forms of collective behavior; analysis of social situations which produce social movements; focus on development of social movements and their role in social change. Lecture.

### 3850:325 Sociology of Women in Global Society (3 Credits)

Prerequisite: 3850:100 or permission. Examination of research and theories pertaining to women's status in global society, including economic conditions, the relationship between structure and experience, and global/local linkages.

### 3850:330 Criminology (3 Credits)

Prerequisite: 3850:100 or permission. Major focus on interrelationships and analysis of crimes, criminals, criminal justice systems and society. Lecture.

**Gen Ed:** Tier 3 - Complex Systems

### 3850:336 Sociology of Work & Occupations (3 Credits)

Prerequisite: 3850:100 or permission. Survey of theory and empirical research in areas such as the structure of occupations and professions, occupational attainment, work force characteristics, work values and orientations, the nature of work. Lecture.

### 3850:340 The Family (3 Credits)

Prerequisite: 3850:100 or permission. Analysis of family as a social system; historical, comparative and contemporary sociological approaches examined in relation to family structure and functions. Lecture.

### 3850:341 Political Sociology (3 Credits)

Prerequisite: 3850:100 or permission. Survey of theory and empirical research dealing with relationship between political phenomena and the larger network of social processes in human societies. Lecture.

### 3850:342 Sociology of Health & Illness (3 Credits)

Prerequisite: 3850:100 or permission. General survey of sociological perspectives, concepts and research on health, illness and health-care delivery systems. Lecture.

**Gen Ed:** Tier 3 - Complex Systems

### 3850:343 Sociology of Aging (3 Credits)

Prerequisite: 3850:100 or permission. Examination of process of aging from perspective of behavioral and sociological aspects. Lecture.

**3850:350 Drugs in Society (3 Credits)**

Prerequisite: 3850:100 or permission. This course is a survey, from a sociological perspective, of drug abuse, of the relationship between drugs and crime, and of various treatment strategies.

**3850:360 Social Effects of Crime in the Media (3 Credits)**

Prerequisite: 3850:100. Sociological examination of the consequences of images of crime in the media. Focus on issues of stereotypes and discrimination by race, sex and class.

**3850:365 Special Topics in Sociology (1-3 Credits)**

(May be repeated) Prerequisite: Permission. Special topics of interest to sociology major and non-major not covered in regular course offerings.

**3850:397 Sociological Readings & Research (1-3 Credits)**

Prerequisite: Permission. Individual study of problem area of specific interest to individual student under guidance of department member. Preparation of a research paper.

**3850:401 Advanced Topics in Research Methods (3-6 Credits)**

Prerequisites: 3700:201 or 3850:301. Special topics of interest in advanced methods not covered in regular course offerings.

**3850:410 Social Structures & Personality (3 Credits)**

Prerequisite: 3850:100 or permission. Interrelationships between position in society, personality characteristics. Personality treated as both result and determinant of social structure and process. Lecture.

**3850:411 Social Interaction (3 Credits)**

Prerequisite: 3850:100 or permission. Intensive study of advanced theory and research in social psychology, particularly how social interaction and self-conception affect one another. Lecture.

**3850:412 Socialization: Child to Adult (3 Credits)**

Prerequisite: 3850:100 or permission. Theoretical and empirical analysis of process by which infant, child, adolescent and adult learn social and cultural requirements necessary to function in new roles, changing roles and society in general.

**3850:415 Women in Prison (3 Credits)**

Prerequisite: 3850:100 or permission of instructor. In depth examination of women's experiences in prison. Includes processes involved in the movement into prison, experiences while in institutions, and transitioning out of prison.

**3850:416 Women and Crime (3 Credits)**

Prerequisite: 3850:100 or permission. An overview of women's experiences with crime, including women as offenders, victims, and workers in the criminal justice system.

**3850:421 Race & Ethnic Relations (3 Credits)**

Prerequisite: 3850:100 or permission. Analysis of structure and dynamics of race and ethnic relations from a variety of perspectives emphasizing both historical and contemporary issues. Lecture.

**3850:425 Sociology of Urban Life (3 Credits)**

Prerequisite: 3850:100 or permission. Emergence and development of urban society. Examination of urban social structure from neighborhood to metropolis, the problems and prospects. Emphasis on various life styles of urban subcultures. Lecture/discussion.

**3850:428 Victim in Society (3 Credits)**

Prerequisite: 3850:100 or permission. Study of the nature, causes, and consequences of victimization with special focus on crime victimization.

**3850:430 Juvenile Delinquency (3 Credits)**

Prerequisite: 3850:100 or permission. Analysis of social structure and process from which delinquency develops. Emphasis on current and past research. Lecture/discussion.

**3850:431 Corrections (3 Credits)**

Prerequisite: 3850:330 or 3850:430. Theories, beliefs and practices of community and institutional corrections systems, including past and current social research. Course taken prior to 3 credit hour Field Placement in Corrections (3850:471).

**3850:433 Sociology of Deviant Behavior (3 Credits)**

Prerequisites: 3850:100 and at least six additional credits of sociology courses or permission. Survey of theories of deviant behavior and relevant empirical research. Special emphasis given to interaction processes and social control. Lecture.

**Gen Ed:** Tier 3 - Complex Systems

**3850:435 Sociology of Love (3 Credits)**

Prerequisite: 3850:100 or permission. Study of the relation of love to the social order. Coverage includes diverse types, such as romantic, familial, religious, and altruistic love.

**3850:441 Sociology of Law (3 Credits)**

Prerequisite: 3850:100 or permission of department. Social origins and consequences of law and legal processes. Emphasis on uses of law, social change and aspects of legal professions.

**3850:447 Sociology of Sex and Gender (3 Credits)**

Prerequisite: 3850:100 or permission. Review of research and theories of sex and gender. Examination of gender as structure, process and experience in society.

**3850:450 Sociology of Mental Illness (3 Credits)**

Prerequisite: 3850:100 or permission. The social history of the mental hospital, theories and epidemiology of mental illness, community-based treatment models, the organization of mental health services, the role of personal social networks and mutual support groups.

**3850:455 Family Violence (3 Credits)**

Prerequisite: 3850:100. Family violence with a focus on child abuse, courtship violence, spouse/partner abuse, and elder abuse. Theories, methodologies, and strategies to end family violence are explored.

**3850:460 Sociological Theory (3 Credits)**

Prerequisite: 3850:100 or permission. An overview and examination of theoretical issues in sociology through the study of both classical and contemporary theoretical work.

**3850:470 Research Methods for the Social Sciences Pro-seminar (3 Credits)**

Prerequisite: Completion of required coursework for the Research Methods Certificate Program or Permission of Instructor. Application of qualitative and/or quantitative research methods and analysis, and preparation of a scholarly research paper for presentation and/or publication. Seminar.

**3850:490 Organizations, Community, and Social Action (3 Credits)**

Survey of organizational and community issues that affect the achievement of shared goals. Emphasis on the evidence-based approaches at both the organizational and community levels.

**3850:495 Field Internship (2-4 Credits)**

Prerequisites: permission of a faculty supervisor and a minimum of 64 hours of undergraduate coursework of which 12 hours must be in sociology. Placement in community organization for supervised experience related to degree requirements. Student must submit an application to the intern coordinator during semester prior to enrollment.

**3850:496 Senior Honors Project (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: enrollment in Honors College, Senior standing, and major in sociology. Thesis or original creative work appropriate to student's area of interest. Requirements and evaluation of project determined by departmental honors preceptor and student's honors project adviser.

## Research Methods for the Social Sciences, Certificate

### Certificate in Research Methods for the Social Sciences (385000C)

**Program Contact**

Dr. Lia Wiley

Asst. Professor of Instruction, Sociology

330-972-7951

lmc73@uakron.edu

The following information has official approval of the **Department of Sociology** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Research Methods for the Social Sciences" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. To satisfy the requirements for the certificate, a student must complete a minimum of 15 semester credits, including two core courses, two complementary courses and the RMSS Pro-seminar.

## Summary

Code	Title	Hours
<b>Complete the following areas for a minimum of 15 credits:</b>		<b>15</b>
Core Requirements		
Complementary Interdisciplinary Courses		
Total Hours		15

## Core Requirements

Code	Title	Hours
<b>Core Requirement I</b>		
<i>Select one of the following:</i> <sup>1</sup>		2-4
2235:340	Disaster Research Methods	
3230:398	Introduction to Anthropological Data	
3350:481	Research Methods in Geography & Planning	
3400:310	Historical Methods	
3700:301	Introduction to Political Research	
3750:220	Introduction to Experimental Psychology	
3850:301	Methods of Social Research I	
6600:335	Marketing Research	
7600:384	Communication Research	
8200:435	Nursing Research	
<b>Core Requirement II</b>		
3850:365	Special Topics in Sociology <sup>2</sup>	1-3

or 3230:460 Field Methods in Cultural Anthropology

**Core Requirement III**

3850:470	Research Methods for the Social Sciences Pro-seminar <sup>3</sup>	3
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Total Hours 6-10

## Complementary Interdisciplinary Courses

Code	Title	Hours
<b>Select 6 credits from at least two different groups:</b>		
<i>Group 1: Philosophy</i>		
3600:426	Phenomenology	
3600:464	Philosophy of Science	
<i>Group 2: English</i>		
3300:479	Management Reports	
3300:489	Seminar in English	
<i>Group 3: Statistics and Sociology</i>		
3470:462	Applied Regression and ANOVA	
3470:465	Design of Sample Surveys	
3850:302	Methods of Social Research II	
Total Hours		6

- <sup>1</sup> Students can apply the methods course taken in their major discipline to the certificate or choose to take a course in another discipline. Students choosing a course in another discipline should be advised that there may be prerequisites for the class in that department.
- <sup>2</sup> Students must select a research based topic.
- <sup>3</sup> 3850:470 Research Methods for the Social Sciences Pro-seminar will be the final course for students completing the Certificate program in Research Methods. Students will demonstrate their ability to apply the research methods they have learned from conceptualization, design, data collection, analysis, and interpretation. The seminar will be offered in Sociology and Anthropology on a rotating basis.

## Sociology, BA

### Bachelor of Arts in Sociology 385000BA

More on the Sociology major (<https://www.uakron.edu/sociology/academics/undergraduate-programs/>)

#### Statement of policies - Admission

For students enrolled at the University of Akron and for students wishing to transfer directly to Buchtel College of Arts and Sciences from their institutions, the following criteria must be satisfied for admission to the Department of Sociology:

- The student must be admissible to Buchtel College of Arts and Sciences
- A minimum grade point average of 2.20 must be met in all university work, including transfer credits. Only credits earned at an accredited institution of postsecondary education, as recognized by The University of Akron, will be considered for transfer credit, and only those grades will be considered in the grade point average.

## Graduation

A Sociology major must earn a cumulative 2.0 grade point average in Sociology and overall to graduate with such a declared major.

The following information has official approval of **The Department of Sociology** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Sociology Core	12
	Sociology Electives	18
	Additional Credits for Graduation *	42
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.2 cumulative GPA is required for graduation in this major.

## General Education Courses

Code	Title	Hours
	Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.	
	<b>Tier I: Academic Foundations</b>	<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
	<b>Tier II: Disciplinary Areas</b>	<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	
	<i>Social Sciences: 6 credit hours</i>	
	<b>Tier III: Tagged Courses</b>	
	<i>Select one class from each of the following subcategories:</i>	
	Complex Systems	
	Critical Thinking	
	Domestic Diversity	
	Global Diversity	

Review the General Education Requirements page for detailed course listings.

Total Hours 34

## College of Arts & Sciences Requirements

Code	Title	Hours
	<b>Degree requirements in Arts &amp; Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.</b>	
	<i>Foreign Language</i>	<b>14</b>
	101 Beginning I	
	102 Beginning II	
	201 Intermediate I	
	202 Intermediate II	
	7700:222 Survey of Deaf Culture in America (American Sign Language option only)	

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Sociology Core

Code	Title	Hours
3850:100	Introduction to Sociology	3
3850:301	Methods of Social Research I (Only offered fall semester)	3
3850:302	Methods of Social Research II (Only offered spring semester)	3
3850:460	Sociological Theory	3
	<b>Total Hours</b>	<b>12</b>

## Sociology Electives

Code	Title	Hours
	<b>Complete 18 credits:</b>	<b>18</b>
	3850:3xx	
	3850:4xx	
	<b>Total Hours</b>	<b>18</b>

## Sociology, Minor Minor in Sociology (385000M)

### Program Contact

Dr. Lia Wiley

Asst. Professor of Instruction Sociology

330-972-7951

lmc73@uakron.edu

The following information has official approval of the **Department of Sociology** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number

of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Sociology" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		3
Electives		15
Total Hours		18

## Required Courses

Code	Title	Hours
3850:100	Introduction to Sociology	3
Total Hours		3

## Electives

Code	Title	Hours
<b>Select a minimum of 15 credits of Sociology courses at the 300/400 level:</b>		<b>15</b>
3850:3xx	300-level Sociology Electives	
3850:4xx	400-level Sociology Electives	
Total Hours		15

## Statistics

The BS Statistics program prepares students to enter the workforce or pursue graduate studies. Students learn how to use numerical information to solve problems in a wide variety of fields, ranging from business and industry to medical research.

In addition to providing students with a solid background in Statistics, the Actuarial Science option prepares students for careers in the actuarial field.

- Statistics, Actuarial Science, BS (p. 280)
- Statistics, BS (p. 282)
- Statistics, Data Science, BS (p. 283)
- Statistics, Minor (p. 284)

## Statistics (3470)

### 3470:250 Statistics for Everyday Life (4 Credits)

Prerequisite: placement test. Conceptual approach to the basic ideas and reasoning of statistics. Topics include descriptive statistics, probability (uncertainty), statistical inference (estimation and hypothesis testing). Computer applications laboratory.

**Gen Ed:** Tier 1 - Quantitative Reasoning

### 3470:260 Basic Statistics (3 Credits)

Prerequisite: placement test. Applied approach to data description and statistical inference (hypothesis testing, estimation). Analysis of ratios, rates, and proportions. Computer applications. Laboratory.

**Gen Ed:** Tier 1 - Quantitative Reasoning

### 3470:261 Introductory Statistics I (2 Credits)

Prerequisite: placement test. Descriptive statistics, tabular and graphical data displays; probability, probability distributions. Introduction to statistical inference (hypothesis testing, estimation); one-sample parametric and nonparametric methods. Computer applications.

**Gen Ed:** Tier 1 - Quantitative Reasoning

### 3470:262 Introductory Statistics II (2 Credits)

Prerequisite: 3470:261 or equivalent. Parametric and nonparametric methods of statistical inference for paired data and two-sample problems; one-way ANOVA, simple linear regression and correlation. Computer applications.

**Gen Ed:** Tier 1 - Quantitative Reasoning

### 3470:289 Selected Topics in Statistics (1-3 Credits)

Prerequisite: Permission. Selected topics of interest in statistics.

### 3470:360 Statistical Investigations (3 Credits)

Prerequisites: 3470:250 or 3470:260 or 3470:262. This course provides practical statistical methods beyond the introductory course. The topics include design of experiments, data analysis, multiple regression and modern software use.

### 3470:401 Probability and Statistics for Engineers (2 Credits)

Prerequisite: 3450:222. Introduction to probability, statistics, random variables, data descriptions, statistical inference, confidence intervals, hypothesis testing, design of experiments, and applications of statistics to engineering.

### 3470:450 Probability (3 Credits)

Prerequisite: 3450:221. Introduction to probability, random variables and probability distributions, expected value, sums of random variables, Markov processes.

### 3470:451 Theoretical Statistics I (3 Credits)

Sequential. Prerequisite: 3450:223. Elementary combinatorial probability theory, probability distributions, mathematical expectation, functions of random variables, sampling distributions, point and interval estimation, tests of hypotheses, regression and correlation, introduction to experimental designs.

### 3470:452 Theoretical Statistics II (3 Credits)

Sequential. Prerequisite: 3470:451. Elementary combinatorial probability theory, probability distributions, mathematical expectation, functions of random variables, sampling distributions, point and interval estimation, tests of hypotheses, regression and correlation, introduction to experimental designs.

### 3470:461 Applied Statistics (4 Credits)

Prerequisite: 3450:222. Applications of statistical theory to natural and physical sciences and engineering, including probability distributions, interval estimation, hypotheses testing (parametric and nonparametric), and simple linear regression and correlation.

### 3470:462 Applied Regression and ANOVA (4 Credits)

Prerequisite: 3470:262 or 3470:461. Applications of the techniques of regression and multifactor analysis of variance.

### 3470:465 Design of Sample Surveys (3 Credits)

Prerequisite: 3470:262 or 3470:461 or equivalent. Design and analysis of frequently used sample survey techniques.

### 3470:469 Reliability Models (3 Credits)

Prerequisite: 3470:461. Selected topics in reliability modeling including parametric and nonparametric models, competing modes of failure, censored data and accelerated life models.

**3470:470 Biostatistics and Epidemiology (3 Credits)**

Prerequisite: 3470:261 and 34701:262 or 3470:461, or equivalent. Biostatistics and Epidemiological methods for biological and medical studies, including ANOVA, analysis of repeated measures, disease-related measures, log-linear models, and clinical trials.

**3470:471 Introduction to Actuarial Science (3 Credits)**

Prerequisite: 3470:221 or equivalent. Pre/Corequisite: 3470:222 or equivalent. Interest theory and financial mathematics used in actuarial science. Topics include value of money, annuities, loans, bonds, cash flows and immunization, interest rate swaps.

**3470:472 Actuarial Models (3 Credits)**

Prerequisite: 3470:451. Study of severity, frequency and aggregate models used in actuarial applications. Calibration and evaluation. credibility procedures, fundamental principles of pricing in short-term insurance coverage.

**3470:473 Survival Analysis (3 Credits)**

Prerequisite: 3470:262 or 3470:461. Basic concepts in survival analysis, censoring and data truncation, estimation of survival models, nonparametric hazard and survival function estimation, comparing survival times between groups.

**3470:475 Foundations of Statistical Quality Control (3 Credits)**

Prerequisite: 3470:461 or equivalent. Course provides a solid foundation in the theory and applications of statistical techniques widely used in industry.

**3470:476 Bayesian Statistics (3 Credits)**

Prerequisite: 3470:262 or 3470:461 or equivalent. Basic concepts in Bayesian theory, sampling methods, MCMC, and hierarchical modeling. Computer applications of Bayesian statistics to natural; and physical; sciences and engineering.

**3470:477 Time Series Analysis (3 Credits)**

Prerequisite: 3470:262, 3470:450, 3470:451, or 3470:461. Stationarity. ARIMA modeling with seasonality. Parameter estimation, model diagnostics and forecasting. Regression with autocorrelated errors. Cointegration and multivariate ARMA models. Heteroscedasticity and long-memory models.

**3470:480 Statistical Data Management (3 Credits)**

Prerequisite: 3470:262 or 3470:461. Students learn data organization and structures, design of statistical data bases, statistical software analysis, importing and exporting data between software, and missing data analysis.

**3470:483 Advanced Statistical Computing (3 Credits)**

Prerequisite: 3470:262 or 3470:461 or equivalent. Topics include data management, random number generation, resampling methods, numerical optimization, Markov Chain Monte Carlo, smoothing methods, data mining: clustering and classification.

**3470:484 Introduction to Machine Learning (3 Credits)**

Prerequisite: 3470:262 or 3470:461 or equivalent. Methodologies for statistical learning, including generalized logistic regression, ridge regression, neural networks, support vector machines, principal components analysis, and K-means and hierarchical clustering.

**3470:485 Applied Analytics-Decision Trees (3 Credits)**

Prerequisite: 3470:262 or 3470:461. Selected topics in predictive modeling using CHAID, Classification and Regression Trees, Logistic Regression and Neural Networks.

**3470:486 Spatial-temporal Statistics (3 Credits)**

Prerequisite: 3470:262 or 3470:461 or equivalent. Basic concepts of geostatistics, point pattern, area unit. Spatial-temporal modeling in high dimensional data. Computer applications to natural and physical sciences and engineering.

**3470:489 Topics in Statistics (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission. Selected topics in advanced statistics, including quality control, reliability, sampling techniques, decision theory, advanced inference, stochastic processes and others.

**3470:491 Workshop in Statistics (1-3 Credits)**

(May be repeated with change of topic) Group studies of special topics in statistics. May not be used to meet undergraduate or graduate major requirements in mathematics and statistics. May be used for elective credit only.

**3470:495 Statistical Consulting (1-3 Credits)**

Prerequisite: 3470:462 or 3470:480 or permission. Students will learn about various aspects of statistical consulting and will work on current projects of the Center for Statistical Consulting. May be repeated for a total of 4 credits.

**3470:497 Individual Reading: Statistics (1-2 Credits)**

(May be repeated for a total of four credits) Prerequisites: senior standing and permission. Directed studies in statistics designed as introduction to research problems under guidance of selected faculty member.

**3470:498 Senior Honors Project (1-3 Credits)**

Prerequisite: 3470:489 (honors). Directed study for senior student in the University Honors Program who has completed 3450:489 (honors). An introduction to research problems in the mathematical sciences under the guidance of selected faculty.

## Statistics, Actuarial Science, BS

### Bachelor of Science in Statistics, Actuarial Science (347003BS)

More on the Statistics, Actuarial Science major (<https://www.uakron.edu/statistics/academics/academics-UG.dot>)

In addition to providing students with a solid background in Statistics, the Actuarial Science option prepares students for careers in the actuarial field.

The following information has official approval of **The Department of Statistics** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.



## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Statistics Core	36
	Actuarial Science Requirement	21
	Statistics Elective	3
	Additional Credits for Graduation *	12
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.0 cumulative GPA in all statistics is required for graduation.

Note: 14 credits in the major must be completed at The University of Akron

## General Education Courses

Code	Title	Hours
	Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.	

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

**Total Hours** 34

## College of Arts & Sciences Requirements

Code	Title	Hours
	Degree requirements in Arts & Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.	
	<i>Foreign Language</i>	14
	101 Beginning I	
	102 Beginning II	

	201 Intermediate I	
	202 Intermediate II	
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Statistics Core

Code	Title	Hours
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3460:209	Computer Science I	4
3470:451	Theoretical Statistics I	3
3470:452	Theoretical Statistics II	3
3470:461	Applied Statistics	4
or 3470:261 & 3470:262	Introductory Statistics I and Introductory Statistics II	
3470:462	Applied Regression and ANOVA	4
3470:480	Statistical Data Management	3
3470:495	Statistical Consulting <sup>1</sup>	3
	<b>Total Hours</b>	<b>36</b>

<sup>1</sup> Three credits of 3470:495 Statistical Consulting are required. It is recommended that students take two credits in one semester and one credit in a later semester.

## Actuarial Science Requirements

Code	Title	Hours
3250:244	Introduction to Economic Analysis	3
or 3250:200 & 3250:201	Principles of Microeconomics and Principles of Macroeconomics	
3470:471	Introduction to Actuarial Science	3
3470:472	Actuarial Models	3
3470:477	Time Series Analysis	3
6200:201	Accounting Principles I	3
6400:301	Principles of Finance	3
6400:343	Investments	3
or 6400:414 or 6400:415	Risk Management: Property and Casualty Risk Management: Life and Health Insurance	
	<b>Total Hours</b>	<b>21</b>

## Statistics Elective

Code	Title	Hours
	<b>Select three credits of 400 level Statistics electives:</b>	<b>3</b>
	3470:4xx	
	<i>The following courses do not satisfy this requirement:</i>	
	3470:401 Probability and Statistics for Engineers	

3470:461 Applied Statistics

Total Hours 3

## Statistics, BS

### Bachelor of Science in Statistics (347000BS)

More on the Statistics major (<https://www.uakron.edu/statistics/academics/academics-UG.dot>)

The Statistics program prepares students to enter the workforce or pursue graduate studies. Students will learn how to use numerical information to solve problems in a wide variety of fields, ranging from business and industry to medical research.

The following information has official approval of **The Department of Statistics** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Statistics Core	36
	Statistics Electives	6
	Additional Credits for Graduation *	30
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.0 cumulative GPA in all statistics is required for graduation.

Note: 14 credits in the major must be completed at The University of Akron

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		

**Tier I: Academic Foundations 12**

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

**Tier II: Disciplinary Areas 22**

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

**Tier III: Tagged Courses**

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## College of Arts & Sciences Requirements

Code	Title	Hours
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**Degree requirements in Arts & Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.**

*Foreign Language 14*

101 Beginning I

102 Beginning II

201 Intermediate I

202 Intermediate II

7700:222 Survey of Deaf Culture in America (American Sign Language option only)

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Statistics Core

Code	Title	Hours
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3460:209	Computer Science I	4
3470:451	Theoretical Statistics I	3
3470:452	Theoretical Statistics II	3
3470:461	Applied Statistics	4
or 3470:261 & 3470:262	Introductory Statistics I and Introductory Statistics II	
3470:462	Applied Regression and ANOVA	4
3470:480	Statistical Data Management	3
3470:495	Statistical Consulting <sup>1</sup>	3
<b>Total Hours</b>		<b>36</b>

<sup>1</sup> Three credits of 3470:495 Statistical Consulting are required. It is recommended that students take two credits one semester and one credit in a later semester.

## Statistics Elective

Code	Title	Hours
<b>Select six credits of 400-level Statistics electives:</b>		<b>6</b>
3470:4xx		
<i>The following courses are not permitted to satisfy this requirement:</i>		
3470:401	Probability and Statistics for Engineers	
3470:461	Applied Statistics	
Total Hours		6

## Statistics, Data Science, BS

### Bachelor of Science in Statistics, Data Science (347004BS)

More on the Statistics, Data Science major (<https://www.uakron.edu/statistics/academics/academics-UG.dot>)

The Data Science track is designed to provide students with skills needed to work with the "big data" problems that arise in business and industry, government, and medical research.

The following information has official approval of **The Department of Statistics** and **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Statistics Core	36
	Data Science Requirements	15
	Statistics Elective	6
	Additional Credits for Graduation *	15
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.0 cumulative GPA in all statistics is required for graduation.

Note: 14 credits in the major must be completed at The University of Akron

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## College of Arts & Sciences Requirements

Code	Title	Hours
<b>Degree requirements in Arts &amp; Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.</b>		
<i>Foreign Language</i>		<b>14</b>
101 Beginning I		
102 Beginning II		
201 Intermediate I		
202 Intermediate II		
7700:222	Survey of Deaf Culture in America (American Sign Language option only)	
<b>Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:</b>		
Upper-level (300/400) courses both in and outside of the student's major;		
or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops		

## Statistics Core

Code	Title	Hours
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3460:209	Computer Science I	4
3470:451	Theoretical Statistics I	3

3470:452	Theoretical Statistics II	3
3470:461	Applied Statistics	4
or 3470:261 & 3470:262	Introductory Statistics I and Introductory Statistics II	
3470:462	Applied Regression and ANOVA	4
3470:480	Statistical Data Management	3
3470:495	Statistical Consulting <sup>1</sup>	3
Total Hours		36

<sup>1</sup> Three credits of 3470:495 Statistical Consulting are required. It is recommended that students take two credits one semester and one credit in a later semester.

## Data Science Requirements

Code	Title	Hours
3460:445	Introduction to Bioinformatics	3
3470:477	Time Series Analysis	3
3470:483	Advanced Statistical Computing	3
3470:485	Applied Analytics-Decision Trees	3
6500:324	Database Management for Information Systems	3
Total Hours		15

## Statistics Elective

Code	Title	Hours
<b>Select six credits of 400-level Statistics electives:</b>		<b>6</b>
3470:4xx		
<i>The following courses are not permitted to satisfy this requirement:</i>		
3470:401	Probability and Statistics for Engineers	
3470:461	Applied Statistics	
Total Hours		6

## Statistics, Minor

### Minor in Statistics (347000M)

The following information has official approval of the **Department of Statistics** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Statistics" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		12
Additional Required Courses		4
Electives		6
Total Hours		22

## Required Courses

Code	Title	Hours
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3470:462	Applied Regression and ANOVA	4
Total Hours		12

## Additional Required Courses

Code	Title	Hours
<b>Complete one of the following options:</b>		<b>4</b>
3470:261 & 3470:262	Introductory Statistics I and Introductory Statistics II	
<i>-or-</i>		
3470:461	Applied Statistics	
Total Hours		4

## Electives

Code	Title	Hours
<b>Complete six credits of 400-level Statistics:</b>		<b>6</b>
3470:4xx		
Total Hours		6

## Women's Studies

### About Women's Studies

The Women's Studies Program at the University of Akron engages students in critical inquiry on women's oppression in the U.S and globally; the socially constructed nature of gender and sexuality; the intersection of women's oppression with race, ethnicity, class, sexuality, and other forms of inequality; and importantly, histories and modes of feminist resistance. Through a wide variety of classes, Women's Studies encourages students to debate assumptions, explore divergent viewpoints, and investigate the social, economic, and cultural practices that have shaped the lives of women around the world.

With an emphasis on critical thinking, the program integrates intellectual scholarship and research to explore how women have been represented in literature, history, society, sociology, and the media. The course, Introduction to Women's Studies, leads students in studies on systemic privilege/oppression, media and gender, sexuality, family studies, reproductive justice, work, gender violence, social policy, and feminist resistance. This course provides a foundation upon which to build a deeper knowledge of issues surrounding feminism, gender, and sexuality. Other courses in the Women's Studies Program, as well as cross listed classes in Anthropology, English, Family and Consumer Sciences, History, Philosophy, Psychology, and Sociology, provide an eye opening and often life-altering college curriculum that prepares students to challenge power disparities found in society's most powerful institutions—family, church, academia, media, business, and government—and to work for a world founded on equality and dignity for all.

Contact Mary Triece, Director of The Women's Studies Program  
 mtriece@uakron.edu  
 330-972-6222  
<https://uakron.edu/ws/>

- Women's Studies, Certificate (p. 285)

## Women's Studies (3001)

### 3001:100 Social & Cultural Diversity in the United States (3 Credits)

See department for course description.

### 3001:110 Multicultural Sensitivity Training (1 Credit)

See department for course description.

### 3001:200 Introduction to Women's Studies (3 Credits)

Introduction to the interdisciplinary program in Women's Studies.

Explores current scholarship in women's issues and experiences from perspectives of psychology, history, sociology, anthropology, and literary criticism. Feminist orientation and methodology.

**Gen Ed:** Tier 3 - Domestic Diversity

### 3001:480 Feminist Theory (3 Credits)

Prerequisite: 3001:200. A summary of feminist theory to familiarize students with the main currents in contemporary feminist theory and the origins and evolution of that thought.

### 3001:485 Special Topics in Women's Studies (1-3 Credits)

Special topics and current issues in Women's Studies. Covers content not currently addressed in other courses. Fosters a critical approach to knowledge about women. (May not be repeated)

### 3001:489 Internship in Women's Studies (1-4 Credits)

Prerequisites: 3001:200 and permission of Director of Women's Studies. This class provides supervised experience and on-the-job training in an organization, agency, corporation or group dealing with women's issues.

### 3001:490 Women's Studies Lecture Series (1-3 Credits)

Various topics focused on women. Themes and course materials vary each semester. Lecture and discussion.

### 3001:493 Individual Studies on Women (1-3 Credits)

Prerequisites: 3001:200 and permission of Director of Women's Studies. Directed study of selected topics related to women. Projects are chosen by student in consultation with instructor.

### 3001:499 Seminar in Women's Studies (1 Credit)

See department for course description.

## Women's Studies, Certificate Certificate in Women's Studies (300110C)

Interdisciplinary and personalized, the Women's Studies certificate fosters a critical approach to knowledge about women; at the core of its intellectual agenda is diversity. By focusing on cultural practices that have largely excluded and devalued differences in gender, sexual orientation, ethnicity, race, and class, Women's Studies prepares students to appreciate and act in a pluralistic world. The Women's Studies certificate integrates scholarship and research on women and gender from different disciplinary traditions. Students are challenged to debate assumptions, explore divergent viewpoints, and critically examine society's most powerful institutions - family, religion, education, business, and government. The Women's Studies Program helps students to evaluate what they have been taught and, most importantly, it empowers them to work for social justice after their education. Students may enroll in any Women's Studies courses and/or make an appointment with the director to discuss a plan of study. Students need not be enrolled in the certificate program to take Women's Studies courses. This certificate may be earned independently of a degree.

### Program Contact

*Professor Mary E. Triece, Ph.D.*

*Director of Women's Studies, School of Communication*  
330-972-6222  
mtriece@uakron.edu

The following information has official approval of the **Department of Women's Studies** and the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Women's Studies" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		9
Electives		12
Total Hours		21

## Required Courses

Code	Title	Hours
3001:200	Introduction to Women's Studies	3
3001:480	Feminist Theory	3
or 3600:455	Philosophy of Feminism	
3001:489	Internship in Women's Studies	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select 12 credits from the following: <sup>1</sup></b>		<b>12</b>
3001:485	Special Topics in Women's Studies	
3001:493	Individual Studies on Women	
3200:363	Women in Ancient Greece and Rome	
3230:416	Anthropology of Sex and Gender	
3300:364	Women Writers	
3300:440	Women and Film	
3300:453	American Women Poets	
3400:325	Women in Modern Europe	
3400:350	U.S. Women's History	
3400:400	Gender and Culture in China	
3400:469	African-American Women's History	
3400:499	Women and Gender in Middle Eastern Societies	
3580:430	Women in 20th Century Hispanic Literature	
3600:455	Philosophy of Feminism	
3700:375	Women in Politics	
3750:474	Psychology of Women	
3850:325	Sociology of Women in Global Society	
3850:415	Women in Prison	
3850:416	Women and Crime	
3850:447	Sociology of Gender, Sex, and Sexualities	
3850:455	Family Violence	
3760:201	Intimate Relationships	

3760:265	Child Development
3760:442	Human Sexuality
3760:446	Culture, Ethnicity & Family
7350:219	Dress and Culture
7750:265	Women & Addiction
7750:411	Women's Issues in Social Work Practice
<hr/>	
Total Hours	12

<sup>1</sup> At least 9 credits must be at the 300/400 level and no more than 2 courses may be taken from the same department.

## Interdisciplinary Programs

- Applied Professional Writing, Certificate (p. 286)
- Arts, AA (p. 286)
- Arts, Communication Option, AA (p. 287)
- Gerontology, Certificate (p. 289)
- Humanities Divisional, BA (p. 289)
- Latin American Studies, Certificate (p. 291)
- Multidisciplinary Studies, BAT (p. 291)
- Science, AS (p. 292)
- Social Science, Divisional PPE Track, BA (p. 293)
- Social Sciences, Divisional PSP Track, BA (p. 294)
- Technical Studies, ATS (p. 295)
- Workplace Communication, Certificate (p. 296)

### See also:

- Biomedical Science, BS (p. 82)
- Women's Studies, Certificate (p. 285)

## Applied Professional Writing, Certificate

### Certificate in Applied Professional Writing (202000C)

This certificate, involving a minimum of 12 credit hours, will help students to apply such skills to pragmatic workplace scenarios.

#### Program Contact

*Kelly Webb Bronstrup*

*Associate Professor, Department of Applied General & Technical Studies*

*330-972-7140*

*kwebb@uakron.edu*

The following information has official approval of **The Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Applied Professional Writing" and must be completed with a minimum grade point average of 2.5 overall for the certificate to be noted on the student's record. The granting of this certificate does not require the completion of a degree. At

least 6 of the 12 credit hours must be taken through the Department of Applied General and Technical Studies.

## Summary

Code	Title	Hours
Required Courses		12
<hr/>		
Total Hours		12

## Required Courses

Code	Title	Hours
<b>Complete 12 credits from the following courses:</b>		<b>12</b>
2020:120	Writing and Editing	
2020:123	Writing for Presentations	
2020:216	Collaborative Writing	
2020:220	Writing and Research	
2020:222	Technical Report Writing	
2020:227	Writing for the World Wide Web	
2020:290	Special Topics: Associate Studies	
2020:325	Signs of Professional Writing	
200/300/400-level Writing Intensive Courses <sup>1</sup>		
<hr/>		
Total Hours		12

<sup>1</sup> Must be writing-intensive courses approved by the English area faculty of the Department of Applied General and Technical Studies.

## Arts, AA

### Associate of Arts (202000AA)

#### Contact Information

*Dr. Katie Cerrone*

*Program Coordinator*

*Polsky 131*

*330-972-8809*

*kc24@uakron.edu*

#### Program Information

The Associate of Art degree cultivates in students the habit of life-long learning through a diverse curriculum and teaches students to think critically and creatively about their perceptions of ideas, events and people. This degree is designed to position the student for successful employment, career advancement or more focused study at the baccalaureate level.

#### Career Information

There are many careers a student can pursue with an Associate of Arts degree. For additional information please visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) (<http://www.bls.gov/>) or visit the Career Center at the Student Union, room 211.

#### Bachelor Degree Program

Students earning an Associate of Arts can "step up" to the Bachelor of Organizational Supervision or many other degrees offered at The University of Akron. Meet with your academic advisor to discuss all the options.

The following information has official approval of **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. Transfer students should consult their Advisor to identify courses that are equivalent.

1st Year		Hours
<b>Fall Semester</b>		
2020:121	English	3
2420:263	Professional Communications and Presentations	3
7750:230	Human Relations	3
	Electives <sup>3</sup>	3
Select one of the following:		4
2030:152 & 2030:153	Technical Mathematics II and Technical Mathematics III <sup>1</sup>	
2030:161	Mathematics for Modern Technology <sup>1</sup>	
Hours		16
<b>Spring Semester</b>		
2020:222	Technical Report Writing	3
2040:241 or 2040:242 or 2040:243 or 2040:247	Technology & Human Values or American Urban Society or Contemporary Global Issues or Survey of Basic Economics	3
7750:244 or 3002:256	Death & Dying <sup>1</sup> or Diversity in American Society	3
	Electives <sup>3</sup>	7-6
Hours		16-15
<b>2nd Year</b>		
<b>Fall Semester</b>		
	Natural Science Requirement without Lab <sup>4</sup>	4
	Humanities Requirement <sup>5</sup>	3
	Electives <sup>3</sup>	7
Hours		14
<b>Spring Semester</b>		
	Natural Science Requirement without Lab <sup>4</sup>	3
	Electives <sup>3</sup>	6
Select one of the following:		3
3300:252	Shakespeare & His World	
3600:101	Introduction to Philosophy	
	Arts or Humanities Requirement <sup>5</sup>	
Select one of the following:		3
7100:210	Visual Arts Awareness	
7500:201	Exploring Music: Bach to Rock	
7900:200	Viewing Dance	

Arts Requirement <sup>5</sup>	
Hours	15
Total Hours	61-60

- <sup>1</sup> If you take a 3-credit mathematics course, then you must take a Domestic Diversity course from the Ohio Transfer Module (7750:244 Death & Dying or 3002:256 Diversity in American Society) or an additional course from the Ohio Transfer Module.
- <sup>2</sup> If you take a Social Sciences Equivalent course, it must be a course in the Ohio Transfer Module.
- <sup>3</sup> 21-22 elective credits are required. You may choose any electives, but they should be in some logical sequence that leads towards an upper college degree program.
- <sup>4</sup> Seven hours of science are required. A majors-track course in the natural sciences from the Ohio Transfer Module can substitute for a General Education Natural Science course.
- <sup>5</sup> The Arts or Humanities Requirement must be a course in the Ohio Transfer Module.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your *required* General Education English, Mathematics, and Communications (Speech) requirements.**

## Arts, Communication Option, AA Associate of Arts, Communication Option (202001AA) Contact Information

Dr. Katie Cerrone  
 Program Coordinator  
 Polsky 131  
 330-972-8809  
 kc24@uakron.edu

### Program Information

The Associate of Arts degree cultivates in students the habit of life-long learning through a diverse curriculum and teaches students to think critically and creatively about their perceptions of ideas, events and people. This degree is designed to position the student for successful employment, career advancement or more focused study in Communication at the baccalaureate level.

### Career Information

There are many careers a student can pursue with an Associate of Arts degree. For additional information please visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) (<https://nam03.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.bls.gov%2F&data=02%7C01%7Csjj%40uakron.edu%7C3d9c4bf7309a42537fee08d7e83f4e0f%7Ce8575dedd7f94ecea4aa0b32991aeedd%7C0%7C0%7C637233230913435252&sdata=wdFJD1DvDDyen2jDZ8tptMsjr2An05%2F%2F%3D&reserved=0>) or visit the Career Center at the Student Union, room 211.

### Bachelor Degree Program

Students earning an Associate of Arts - Communication Option can “step up” to the Bachelor of Arts in Communication or many other degrees

offered at The University of Akron. Meet with your academic advisor to discuss all the options.

The following information has official approval of the **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. Transfer students should consult their Advisor to identify courses that are equivalent.

### 1st Year

Fall Semester		Hours
2020:121	English	3
7750:230	Human Relations <sup>4</sup>	3
7600:101	Introduction to Communication <sup>8</sup>	3
7600:105 or 7600:106	Introduction to Public Speaking <sup>2</sup> or Effective Oral Communication	3
Select one of the following:		4
2030:152 & 2030:153	Technical Mathematics II and Technical Mathematics III <sup>1</sup>	
-or-		
2030:161	Mathematics for Modern Technology <sup>1</sup>	
Hours		16

### Spring Semester

2020:222	Technical Report Writing	3
2040:241 or 2040:242 or 2040:243 or 2040:247	Technology & Human Values <sup>4</sup> or American Urban Society or Contemporary Global Issues or Survey of Basic Economics	3
7750:244 or 3002:256	Death & Dying <sup>1,3</sup> or Diversity in American Society	3
7600:219 or 7600:235 or 7600:274 or 7600:360	Introduction to Public Relations or Interpersonal Communication or Introduction to the Media Industries or Theories of Rhetoric	3
7600:228 or 7600:230 or 7600:231 or 7600:232	ZTV <sup>10</sup> or WZIP-FM or Forensics or Buchtelite	1
Beginning Language I <sup>3,11</sup>		4
Hours		17

### 2nd Year

Fall Semester		Hours
3400:210 or 3400:221	Humanities in the Western Tradition from Ancient Times to 1500 <sup>3,6</sup> or Humanities in the World since 1300	3
Natural Science Requirement with Lab <sup>5</sup>		4
Communication Electives <sup>7</sup>		6
Hours		13

### Spring Semester

3300:252 or 3600:101	Shakespeare & His World or Introduction to Philosophy	3
7100:210 or 7500:201 or 7900:200	Visual Arts Awareness or Exploring Music: Bach to Rock or Viewing Dance	3
7600:245	Argumentation <sup>8</sup>	3
Natural Science Requirement <sup>5</sup>		3
Communication Electives <sup>7</sup>		3
Hours		15
Total Hours		61

## Communication Elective Courses

Code	Title	Hours
7600:384	Communication Research <sup>8</sup>	3
<b>Public Relations Electives</b>		
7600:209	Principles of Social Media	3
7600:219	Introduction to Public Relations	3
7600:303	Public Relations Writing	3
7600:309	Public Relations Publications	3
<b>Media Studies Electives</b>		
7600:210	Multiplatform Production <sup>8</sup>	3
7600:274	Introduction to the Media Industries	3
7600:284	Legal Issues in Media	3
7600:300	Newswriting Across the Media	3
7600:317	Topics in Media Production	3
7600:368	Basic Audio & Video Editing	3
<b>Strategic Organizational Communication Electives</b>		
7600:226	Interviewing	3
7600:227	Non-Verbal Communication	3
7600:235	Interpersonal Communication	3
7600:252	Persuasion	3
7600:305	Communication Theory	3
7600:325	Intercultural Communication	3
7600:344	Small Group Communication	3
7600:360	Theories of Rhetoric	3

<sup>1</sup> If you take a 3 credit mathematics course, then you must choose a Domestic Diversity course from the Ohio Transfer Module (7750:244 Death & Dying or 3002:256 Diversity in American Society) or an additional course from the Ohio Transfer Module. If you take a 4 credit mathematics course, then you may choose any Domestic Diversity course, including 7600:325 Intercultural Communication, which also counts as a Communication Elective Course in the Communication Option.

<sup>2</sup> A grade of C or better is required in order to graduate

<sup>3</sup> You must complete 32 credit hours in your first year to meet the prerequisite for 3400:210 Humanities in the Western Tradition from Ancient Times to 1500 and 3400:221 Humanities in the World since 1300

<sup>4</sup> If you take a Social Sciences Equivalent course, it must be a course in the Ohio Transfer Module

<sup>5</sup> Seven hours of science are required. A majors-track course in the natural sciences from the Ohio Transfer Module can substitute for a General Education Natural Science course



- <sup>6</sup> If you take an Arts or Humanities Equivalent course, it must be a course in the Ohio Transfer Module.
- <sup>7</sup> Communication Elective Courses (choose 3): You are allowed to take any 3 courses listed below but it is strongly recommended that you choose courses from the same area. Only 200 level courses are required to complete the degree. However, 300 level courses may be used for electives if you choose to take them.
- <sup>8</sup> This is a core course for a Communication Bachelor’s Degree
- <sup>9</sup> This degree requires that you take a minimum 36 credit hours of courses in the Ohio Transfer Module.
- <sup>10</sup> Students who do not wish to participate in a co-curricular activity may instead take one additional 3 credit elective from the list of Communication Elective Courses
- <sup>11</sup> 7700:101 American Sign Language I may be taken in place of Beginning Language I.

## Gerontology, Certificate

### Certificate in Gerontology (300006C)

#### Program Contact

Harvey L. Sterns, Ph.D.  
 Director, Institute for Lifespan  
 Development & Gerontology  
 Professor Emeritus, Psychology  
 330-972-7243  
 hsterns@uakron.edu

The following information has official approval of the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a “Certificate in Gerontology” and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student’s record. To participate in the program, a student must participate in an interview, receive written notification of admission, and consult with the Director or a designated faculty member of the Institute for Lifespan Development and Gerontology to formulate a program of study.

### Summary

Code	Title	Hours
Required Courses		10-12
Electives		10-8
Total Hours		20

### Required Courses

Code	Title	Hours
3006:450	Interdisciplinary Seminar in Life-Span Development & Gerontology	2
3006:495	Practicum in Life-Span Development & Gerontology	1-3
3750:475	Psychology of Adulthood & Aging <sup>1</sup>	4
3850:343	Sociology of Aging <sup>1</sup>	3
Total Hours		10-12

## Electives

Code	Title	Hours
<b>Select Elective credits (outside the Major Degree Department) from 10-8 the following:</b>		
2040:244	Death & Dying	
2040:344	Death & Dying	
3006:485	Special Topics in Life-Span Development & Gerontology <sup>3</sup>	
3006:486	Retirement Specialist	
3006:490	Workshop in Life-Span Development & Gerontology <sup>4</sup>	
3850:365	Special Topics in Sociology <sup>2</sup>	
5400:400	Adult Learning	
6500:480	Introduction to Health-Care Management <sup>1</sup>	
3760:441	Family Relationships in Middle and Later Years	
7700:110	Introduction to Disorders of Communications	
7750:450	Social Needs & Services: Aging <sup>1</sup>	
	Independent Study <sup>5</sup>	
Total Hours		10-8

- <sup>1</sup> In the absence of the prerequisites for 3750:475 Psychology of Adulthood & Aging, 3850:343 Sociology of Aging, 6500:480 Introduction to Health-Care Management and 7750:450 Social Needs & Services: Aging, the student in this certificate may request permission of the instructor to waive the prerequisite.
- <sup>2</sup> 3006:495 Practicum in Life-Span Development & Gerontology and 3850:365 Special Topics in Sociology are typically offered for 3 credits.
- <sup>3</sup> 3006:485 Special Topics in Life-Span Development & Gerontology courses are typically offered for 3 credits.
- <sup>4</sup> 3006:490 Workshop in Life-Span Development & Gerontology are typically offered for 2 credits.
- <sup>5</sup> Students may also use Independent Study to fulfill elective requirement. In special cases, more than one course in a major department may be used with permission.

## Humanities Divisional, BA

### Bachelor of Arts, Humanities Divisional (390001BA)

More on the Humanities major ([https://www.uakron.edu/academics\\_majors/undergraduate/programs\\_detail.dot?programId=52606&pageTitle=Undergraduate %20Programs&crumbTitle=Humanities](https://www.uakron.edu/academics_majors/undergraduate/programs_detail.dot?programId=52606&pageTitle=Undergraduate%20Programs&crumbTitle=Humanities))

This divisional major is appropriate for those desiring a Liberal Arts degree with a general emphasis in the humanities. The humanities division consists of the Departments of English, Modern Languages and Philosophy. These disciplines and the disciplines of History and the creative and dramatic arts (Art, Music, Theatre Arts) are included in a prescribed manner in this divisional degree.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Humanities Requirements	54
	Additional Credits for Graduation *	18
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	
	<i>Social Sciences: 6 credit hours</i>	
<b>Tier III: Tagged Courses</b>		
	<i>Select one class from each of the following subcategories:</i>	
	Complex Systems	
	Critical Thinking	
	Domestic Diversity	
	Global Diversity	
	<i>Review the General Education Requirements page for detailed course listings.</i>	
	<b>Total Hours</b>	<b>34</b>

## College of Arts & Sciences Requirements

Code	Title	Hours
<b>Degree requirements in Arts &amp; Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.</b>		
	<i>Foreign Language</i>	<b>14</b>
	101 Beginning I	
	102 Beginning II	
	201 Intermediate I	
	202 Intermediate II	
	7700:222 Survey of Deaf Culture in America (American Sign Language option only)	

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Humanities Requirements

Requirements include earning a minimum of 54 credits, 24 credits of which must be at the 300/400 level, and 18 credits in each of three of the following fields.

Code	Title	Hours
<b>Humanities Fields</b>		
Select 18 credits in each of three of the following fields:		<b>54</b>
<i>Classics</i>		
3200:289	Mythology of Ancient Greece	
3200:361	The Literature of Greece	
3200:362	The Literature of Rome	
<i>Select 9 credits from the following</i>		
3200:363	Women in Ancient Greece and Rome	
3200:480	Reading & Research in Classical Studies	
3200:499	Honors Project in Classics	
3200:504	Assyriology	
3200:550	Select Topics: Ancient Cultures	
<i>English</i>		
Select 18 credits with nine credits of 300/400 level including at least two courses at the 400 level		
<i>History</i>		
Select 18 credits with a minimum of 10 credits of 300/400 level course work		
<i>Modern Languages</i>		
Composition and Conversation (6 cr)		
Literature (6 cr)		
Linguistics and Culture-Civilization (6 cr)		
<i>Philosophy</i>		
3600:101	Introduction to Philosophy	
3600:120	Introduction to Ethics	
3600:170	Introduction to Logic	
<i>Select 9 credits from the following</i>		
3600:125	Theory & Evidence	
3600:150	Critical Thinking	
3600:200	Philosophy of World Religions	
3600:210	Logic for Lawyers	
3600:211	History of Ancient Philosophy	
3600:312	History of Medieval Philosophy	
3600:313	History of Modern Philosophy	
<i>Creative and Dramatic Arts</i>		
Select 18 credits non-performance courses in Art (7100) Music (7500) or Theatre (7800)		
	<b>Total Hours</b>	<b>54</b>

# Latin American Studies, Certificate

## Certificate in Latin American Studies (300008C)

### Program Contact

Martha Santos  
Associate Professor, History  
330-972-2686  
santos@uakron.edu

The following information has official approval of the **Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Latin American Studies" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. Course substitutions may be made with the approval of the director of the certificate program. Study abroad credits earned through The University of Akron are especially appropriate for such course substitutions.

## Summary

Code	Title	Hours
	Spanish/Portuguese Requirement <sup>1</sup>	3
	Interdisciplinary Electives	15
	Total Hours	18

## Interdisciplinary Electives

Code	Title	Hours
<b>Select 15 credits from at least three departments: <sup>1</sup></b>		<b>15</b>
<i>Economics Department</i>		
3250:460	Economics of Developing Countries	
<i>History Department</i>		
3400:291	World Civilizations: Latin America	
3400:373	Selected Topics: Other	
3400:377	History of Women in Latin America	
3400:378	Spanish Conquest and Colonization of the Americas	
3400:379	Modern Latin America	
3400:417	Latin America and the United States	
3400:418	History of Brazil Since 1500	
3400:496	Special Studies in History: Other <sup>2</sup>	
<i>International Business Department</i>		
6800:421	Foreign Market Entry	
<i>Geography Department</i>		
3350:353	Latin America	
<i>Spanish Department</i>		
3580:311	Spanish/Spanish-American Cultural Experience	
3580:250	Hispanic Literature in Translation	
3580:408	Survey of Hispanic Literature: Spanish-America	
3580:414	Cultural Politics in the River Plate	
3580:425	20th Century Spanish-American Novel	

3580:427	Latino Cultures in the USA
3580:430	Women in 20th Century Hispanic Literature
3580:432	Hispanic Culture: Spanish America
Total Hours	15

- <sup>1</sup> Students must demonstrate competency in Spanish or Portuguese by completion of a minimum of 3 credits in Spanish or Portuguese at the 4th semester (202) or above at The University of Akron or the equivalent at another accredited institution. Students must consult the program director to plan a course of study.
- <sup>2</sup> Students must select the topic Latin America.

## Multidisciplinary Studies, BAT

### Bachelor or Arts in Multidisciplinary Studies (300105BAT)

The Multidisciplinary Studies program is a self-designed major, allowing the student to examine traditional disciplines from diverse points of view and to plan a program of study targeted to his/her specific needs and interests. This program also serves students who desire to bring closure to their education when they have accumulated hours in varied areas without clear progress to a specific major or those who have divergent interests that cannot be accommodated in a traditional degree program.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Foreign Culture Requirement	6
	Multidisciplinary Studies Requirements	54
	Additional Credits for Graduation *	26
	Total Hours	120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	
	<i>Social Sciences: 6 credit hours</i>	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		

Complex Systems	
Critical Thinking	
Domestic Diversity	
Global Diversity	
<i>Review the General Education Requirements page for detailed course listings.</i>	
Total Hours	34

## Foreign Culture and College Requirements

Code	Title	Hours
	<b>A minimum of 6 credits of course work in foreign culture. Students may complete coursework in foreign language or sign language, courses focusing on a foreign culture (e.g., History of Mexico, Latin American Politics, etc.) or culture courses completed during a Study Abroad experience. Courses shall be selected by the student with approval of the Associate Dean. Note, courses used to meet General Education requirements (i.e. Global Diversity) will not also be counted towards the 6 credits of course work in foreign culture requirement.</b>	6

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

Total Hours	6
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## Multidisciplinary Studies Requirements

Code	Title	Hours
<b>Multidisciplinary Studies Tracks</b>		
<b>Select one of the following tracks:</b>		<b>54</b>
<i>Track 1</i> <sup>1</sup>		
Primary area of focus		
Select 21 hours in one BCAS program area		
Secondary area of focus		
Select 15 to 18 hours in another area (may be a mixed or non-BCAS area)		
Tertiary area of focus		
Select 15 to 18 hours in another area (may be a mixed area)		
<i>Track 2</i> <sup>2</sup>		
Primary area of focus		
Select 30 hours in one BCAS program area		
Secondary area of focus		
Select 24 hours in another area (may be a mixed or non-BCAS area)		
Total Hours		54

<sup>1</sup> A minimum of 9 upper level (300/400) credit hours are required in two of the three concentration areas. Two of the three concentration areas (including the primary area) must be within the Buchtel College of Arts and Sciences.

<sup>2</sup> A minimum of 9 upper level (300/400) credit hours are required in each concentration area.

Note: This is an individually designed degree and may be done only with approval of the BCAS Dean who oversees it.

## Science, AS

### Associate of Science (202005AS)

#### Contact Information

Dr. Katie Cerrone  
Program Coordinator  
Polsky 131  
330-972-8809  
kc24@uakron.edu

#### Program Information

The Associate of Science degree teaches students to think critically and creatively about their perceptions of ideas, events and people. This degree is for students who would like to pursue a science based degree. Core curriculum emphasizes mathematics and science, but also includes English, history, and social studies, while learning fundamental skills in analysis, research, composition and reading comprehension. This is a science intensive degree designed to position the student for successful employment, career advancement, or more focused study in STEM (science, technology, engineering and mathematics) fields at the baccalaureate level.

Upon completion of the Associate of Science degree, students should demonstrate:

- the ability to make qualitative and quantitative judgments
- the ability to utilize critical thinking and analytical skills
- the ability to communicate in a clear, concise, and authentic manner
- a knowledge of science, technology, and mathematics and their effects on human activities

#### Career Information

There are many careers a student can pursue with an Associate of Science degree. For additional information please visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) (<http://www.bls.gov/>) or visit the Career Center at the Student Union, room 211.

#### Bachelor Degree Program

Students earning an Associate of Science can "step up" to the Bachelor of Organizational Supervision or many other degrees offered at The University of Akron. Meet with your academic advisor to discuss all the options.

The following information has official approval of **The Buchtel College of Arts & Sciences**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Transfer students should consult their Advisor to identify courses that are equivalent.

1st Year		Hours
<b>Fall Semester</b>		
2020:121	English	3
7750:230	Human Relations	3
	Natural Science Requirement with Lab <sup>3</sup>	4
	Electives <sup>4</sup>	2
Select one of the following:		4
2030:152 & 2030:153	Technical Mathematics II and Technical Mathematics III	
2030:161	Mathematics for Modern Technology <sup>1</sup>	
<hr/>		
Hours		16
<b>Spring Semester</b>		
2020:222	Technical Report Writing	3
2040:241 or 2040:242 or 2040:243 or 2040:247	Technology & Human Values <sup>2</sup> or American Urban Society or Contemporary Global Issues or Survey of Basic Economics	3
	Natural Science Requirement without Lab <sup>3</sup>	3
	Electives <sup>4</sup>	6
<hr/>		
Hours		15
<b>2nd Year</b>		
<b>Fall Semester</b>		
2420:263	Professional Communications and Presentations	3
7750:244 or 3002:256	Death & Dying <sup>1</sup> or Diversity in American Society	3
	Humanities Requirement <sup>5</sup>	3
	Electives <sup>4</sup>	6
<hr/>		
Hours		15
<b>Spring Semester</b>		
	Electives <sup>4</sup>	8
Select one of the following:		3
3300:252	Shakespeare & His World	
3600:101	Introduction to Philosophy	
	Arts or Humanities Requirement <sup>5</sup>	
Select one of the following:		3
7100:210	Visual Arts Awareness	
7500:201	Exploring Music: Bach to Rock	
7900:200	Viewing Dance	
	Arts Requirement <sup>5</sup>	
<hr/>		
Hours		14
<hr/>		
Total Hours		60

<sup>1</sup> If you take a 3-credit mathematics course, then you must take a Domestic Diversity course from the Ohio Transfer Module (7750:244 Death & Dying or 3002:256 Diversity in American Society) or an additional course from the Ohio Transfer Module.

<sup>2</sup> If you take a Social Sciences Equivalent course, it must be a course in the Ohio Transfer Module.

<sup>3</sup> Seven hours of science are required. A majors-track course in the natural sciences from the Ohio Transfer Module can substitute for a General Education Natural Science course.

<sup>4</sup> 21-22 elective credits required. In the science program, a student is free to choose any electives. However, at least two-thirds of the credits must be in the natural sciences; mathematics, statistics or computer science; engineering; business administration; or health sciences.

<sup>5</sup> The Arts or Humanities Requirement must be a course in the Ohio Transfer Module.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your *required* General Education English, Mathematics, and Communications (Speech) requirements.**

## Social Science, Divisional PPE Track, BA

### Bachelor of Arts in Social Science, Philosophy, Political Science, and Economics (PPE) Track (390004BA)

More on the Social Science Divisional PPE major (<https://www.uakron.edu/philosophy/academics/>)

The Philosophy, Political Science, and Economics Departments have collaborated to create the Social Sciences Division PPE track. This interdisciplinary degree consists of courses from all 3 departments and can open the door to graduate study in any of these disciplines as well as law school.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Social Sciences PPE Requirements	54
	Additional Credits for Graduation <sup>*</sup>	18
<hr/>		
Total Hours		120

<sup>\*</sup> Bachelor's degrees require a minimum of 120 credit hours for graduation

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

Select one class from each of the following subcategories:

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

Review the General Education Requirements page for detailed course listings.

Total Hours 34

## College of Arts & Sciences Requirements

**Code Title Hours**

**Degree requirements in Arts & Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.**

*Foreign Language* 14

101 Beginning I

102 Beginning II

201 Intermediate I

202 Intermediate II

7700:222 Survey of Deaf Culture in America (American Sign Language option only)

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Social Sciences PPE Requirements

Social Sciences PPE Requirements 54 credits, which must include a minimum of 15 credits in each of the following 3 fields.

**Code Title Hours**

### Requirements

Select a minimum of 15 credits in each field below:

#### *Philosophy*

3600:120 Introduction to Ethics 3

3600:170 Introduction to Logic 3

3600:464 Philosophy of Science 3  
or 3600:421 Philosophy of Law

3600:3XX/4XX 300/400-level Philosophy Electives 6

#### *Political Science*

3700:301 Introduction to Political Research 3

3700:303 Introduction to Political Thought 3

3700:3XX/4XX 300/400-level Political Science Electives 9

#### *Economics*

3250:244 Introduction to Economic Analysis 3

3250:400 Intermediate Macroeconomics 3

3250:410 Intermediate Microeconomics 3

3250:3XX/4XX 300/400-level Economics Electives 6

### Social Science PPE Electives

Select nine credits <sup>1</sup> 9

Total Hours 54

<sup>1</sup> 9 credits can be taken in either Philosophy, Political Science, or Economics. It is recommended they be taken at the 300/400 level.

## Social Sciences, Divisional PSP Track, BA

### Bachelor of Arts in Social Science, Philosophy, Sociology, and Psychology (PSP) Track (390006BA)

More on the Social Science Divisional PSP major (<https://www.uakron.edu/philosophy/academics/>)

The Philosophy, Sociology, and Psychology Departments have collaborated to create the Social Sciences Division PSP track degree. This interdisciplinary degree consists of courses from all 3 departments.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	College of Arts & Sciences Requirements	14
	Social Sciences PSP Requirements	54
	Additional Credits for Graduation *	18
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation

## General Education Courses

**Code Title Hours**

Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

**Tier I: Academic Foundations 12**

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

**Tier II: Disciplinary Areas 22**

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

**Tier III: Tagged Courses**

Select one class from each of the following subcategories:

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## College of Arts & Sciences Requirements

Code	Title	Hours
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**Degree requirements in Arts & Sciences include the demonstration of ability to use another language by completion of the second year of a foreign language.**

<i>Foreign Language</i>		14
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101 Beginning I		
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102 Beginning II		
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201 Intermediate I		
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202 Intermediate II		
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7700:222	Survey of Deaf Culture in America (American Sign Language option only)	
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**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Social Sciences PSP Requirements

54 credits, which must include a minimum of 15 credits in each of the following 3 fields.

Code	Title	Hours
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### Requirements

#### *Philosophy*

3600:101	Introduction to Philosophy	3
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or 3600:120	Introduction to Ethics	
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3600:371	Philosophy of Mind	3
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3600:461	Neuroethics	3
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3600:464	Philosophy of Science	3
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Select three elective credits from the following:		3
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3600:333	Philosophy of Science and Religion	
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3600:340	Eastern Philosophy	
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3600:455	Philosophy of Feminism	
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3600:424	Existentialism	
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3600:426	Phenomenology	
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3600:480	Seminar in Philosophy	
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3600:481	Philosophy of Language	
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#### *Sociology*

3850:100	Introduction to Sociology	3
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3850:315	Sociological Social Psychology	3
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Select nine elective credits from the following:		9
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3850:320	Social Inequalities	
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3850:340	The Family	
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3850:421	Race & Ethnic Relations	
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3850:428	Victim in Society	
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3850:433	Sociology of Deviant Behavior	
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3850:435	Sociology of Love	
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3850:447	Sociology of Gender, Sex, and Sexualities	
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#### *Psychology Core*

3750:100	Introduction to Psychology	3
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3750:230	Developmental Psychology	4
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3750:340	Social Psychology	4
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Select four elective credits from the following:		4
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3750:320	Biopsychology	
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3750:335	Dynamics of Personality	
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3750:345	Cognitive Processes	
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3750:420	Abnormal Psychology	
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3750:435	Cross-Cultural Psychology	
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3750:474	Psychology of Women	
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#### **Social Science PSP Electives**

Select nine credits <sup>1</sup>		9
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Total Hours		54
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<sup>1</sup> 9 credits can be taken in either Philosophy, Sociology, or Psychology.

## Technical Studies, ATS

### Associate of Technical Studies (230000ATS)

More on the Technical Studies major (<https://www.uakron.edu/agts/degrees.dot>)

## Contact Information

*Assistant Dean*

*Kelly Herold*

*Polsky 215*

*330-972-8832*

*kherold@uakron.edu*

## Program Information

The Associate of Technical Studies enables students to combine certifications (state, national, vendor), earned through an educational entity or a place of employment, with general education courses to meet the associate degree requirements.

For information about the one-year Associate of Technical Studies degree, contact Assistant Dean Herold.

## Transfer to the College of Applied Science and Technology

To be admitted to the College of Applied Science and Technology, a student must have a GPA of 2.0. A student can complete the transfer process through an appointment with an Academic Advisor in the college in which they reside.

The following information has official approval of the **The Buchtel College of Arts and Sciences**, but is intended only as a supplemental guide.

Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class*

availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others. The transfer process is completed through an appointment with your academic advisor.

Transfer students should consult their Advisor to identify courses that are equivalent.

1st Year		Hours
<b>Fall Semester</b>		
2020:121	English	3
7750:230	Human Relations	3
2040:242	American Urban Society	3
or 7750:244	or Death & Dying	
or 3002:256	or Diversity in American Society	
	Math Requirement <sup>1</sup>	3
	Natural Science Requirement without Lab	3
Hours		15
<b>Spring Semester</b>		
2020:222	Technical Report Writing	3
2420:263	Professional Communications and Presentations	3
	Electives <sup>2,3</sup>	9
Hours		15
<b>2nd Year</b>		
<b>Fall Semester</b>		
	Electives <sup>2,3</sup>	15
Hours		15
<b>Spring Semester</b>		
	Electives <sup>2,3</sup>	15
Hours		15
Total Hours		60

<sup>1</sup> The mathematics requirement varies by department. Please consult an adviser for specific requirements. (Students enrolling in a higher-level mathematics course may use it to meet their General Education requirement.) See General Education requirements for listing of courses.

<sup>2</sup> In the technical studies program, a student is encouraged to complete general education requirements as electives.

<sup>3</sup> Block Credits and Elective Credits are subject to dean's office approval.

**Total University of Akron Credits = 30 minimum**

**Block Credits = minimum of 8 up to 30<sup>1</sup>**

**Electives = minimum of 9 up to 31 credits**

**Total Credits for Degree = 60 minimum**

<sup>1</sup> A student is eligible to receive up to 30 credits of block credit from licensure in a technical field including but not limited to: Automotive/ Collision Repair, Cosmetology, Dental Assisting, HVAC, Insurance, Massotherapy, Real Estate, US Military Service, Welding. Students interested in this degree must consult with Kelly Herold prior to admission to this program.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

## Workplace Communication, Certificate

### Certificate in Workplace Communication (202100CW)

The following information has official approval of **The Buchtel College of Arts & Sciences**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Workplace Communication" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

### Summary

Code	Title	Hours
Required Courses		9
Electives		3
Total Hours		12

### Required Courses

Code	Title	Hours
2020:222	Technical Report Writing	3
2420:301	Information Design	3
2420:302	Ethics and Law in Business	3
Total Hours		9

### Electives

Code	Title	Hours
<b>Select one of the following:</b>		<b>3</b>
7600:105	Introduction to Public Speaking	
7600:106	Effective Oral Communication	
Total Hours		3

## College of Business Administration Effective Instruction

The College of Business Administration (CBA) emphasizes effective teaching and participatory learning as the primary means to educate and prepare future business leaders. Faculty members are strongly committed to being involved with and accessible to CBA students. The CBA attempts to provide relatively small class sections throughout the curriculum.

Effective teaching and participatory learning includes challenging our students through a variety of teaching methods. The College relies upon the case method, seminar presentation, skills performance methods (oral and written), discussion method, and experiential learning in addition to traditional lectures in the classroom. Relevant learning experiences, such as internships and co-ops, are also important components of the CBA curriculum. These methods are used to:



1. involve students actively in their own education by requiring preparation and engagement;
2. instill in students the ability to educate themselves as a life-long habit; and
3. prepare students to more effectively and quickly bridge the gap to competent business leadership.

CBA students receive a well-rounded business education. Students acquire integrated business knowledge the following set of robust business skills:

- Quantitative
- Analytical
- Collaboration and teamwork
- Written communication and presentation
- Problem solving

CBA faculty are especially focused on preparing students to be data savvy and well-versed in business analytics.

Exposure to business practitioners - in and out of the classroom - assists in achieving these goals. The CBA introduces students to an understanding of professionalism, public service responsibilities and the role of business in society. This requires that students develop a respect for learning and a preference for solutions that advance the public good. Further, the CBA emphasizes creativity, open-mindedness, ethical behavior, and diverse cultural perspectives.

Since the College's inception, equal emphasis has been placed on broad basic theoretical principles and immediate applied practices within the curriculum. Classroom knowledge is supplemented with a strong professional development program, contact with business practitioners, the College's excellent tradition of vibrant student organizations, and invited speaker programs, to help students engage with the business community.

## College Requirements Requirements for Admission

To be admitted to a major in The College of Business Administration, students must have completed the courses listed below and have an overall grade-point average of 2.5 or higher:

Code	Title	Hours
3300:111 & 3300:112	English Composition I and English Composition II	6
7600:105 or 7600:106	Introduction to Public Speaking Effective Oral Communication	3
3250:200 or 3250:201	Principles of Microeconomics Principles of Macroeconomics	3
3450:145 or 3450:210	Algebra for Calculus Calculus with Business Applications	4

Select one of the following:

6200:201	Accounting Principles I
6200:250	Spreadsheet Modeling & Decision Analysis
6300:201	Introduction to Entrepreneurship
6400:220	Legal & Social Environment of Business
6600:205	Marketing Principles

## Other Admissions

Students accepted into the University Honors College as business majors are automatically admitted to a major in the College of Business Administration. Incoming freshmen with appropriate credentials may be admitted directly to a major in the College upon application to the University.

Freshmen who begin study in another major at the University, and would have met the requirements to be directly admitted to a major in the College of Business Administration, from high school, have until the last day of instruction in the first semester of their freshman year to be admitted to the major based upon the high school credentials. After this time, students can be admitted to the College of Business Administration based upon the above requirements.

## Transfer Student Admission

Transfer students from accredited two-year and four-year colleges are welcome. Students from outside the University must meet the same grade-point average, credit hours and coursework standards of University of Akron students. Transfer students who have not met the above coursework and academic performance standards will be admitted as pre-major to the College until all admission requirements are met.

## Transfer/Transient Course Work

Some courses taken out of the University may be accepted in lieu of college requirements. The College will consider transfer/transient coursework from regionally accredited community colleges and other AACSB accredited institutions in accordance with the State of Ohio transfer policies and requirements laid out in this Bulletin. Courses will be evaluated based on content, complexity, grading standards and an earned grade of "C" or higher.

If transferring from another regionally accredited community college, it is anticipated that students will have devoted the major share of their academic effort to the completion of basic requirements in the general education and pre-business areas. The College will evaluate courses from regionally accredited non-AACSB accredited colleges for course-to-course transfer/transient substitution for CBA 100 and 200 level course only.

## Continuation of the Baccalaureate Program

A CBA student shall be subject to academic probation if the accumulated grade-point average for all courses is less than 2.0. CBA students who are on academic probation for two consecutive semesters will be considered for academic dismissal. Probation and dismissal are decided by the Dean of the College in accordance with policies laid out in this Bulletin.

## Degrees

The College of Business Administration offers the following baccalaureate degrees: the Bachelor of Science in Accountancy, the Bachelor of Business Administration, and the Bachelor of Arts in Economics.

## Integrated Core Curriculum

The Integrated Core Curriculum is made of 39 credits and serves as the foundation of the business curriculum. The purpose of the Integrated Core Curriculum is to provide a basic understanding of the business disciplines, to contribute to a student's choice of major, and to fulfill prerequisites for courses in the major. See an advisor for more information on the core curriculum and related requirements.

The following learning goals form the foundation of the learning activities that occur within the Integrated Core Curriculum:

1. Demonstrate integrated business knowledge (accounting, business finance, marketing, business law, supply chain and operations management, management principles, business statistics and analytics, spreadsheet modeling, international business, and strategic management)
2. Analyze data using quantitative techniques
3. Be informed decision makers
4. Develop leadership and collaboration competencies
5. Use writing and oral communication skills to persuade and to mobilize action
6. Demonstrate a global perspective and cross-cultural awareness
7. Recognize and understand how to address ethical concerns

The Integrated Core Curriculum consists of 13 courses arranged in sequential order on which to build a foundation.

- Accountancy (p. 298)
- Economics (p. 302)
- Entrepreneurship (p. 310)
- Finance (p. 311)
- General Business (p. 324)
- International Business (p. 330)
- Management (p. 333)
- Marketing (p. 342)

## Accountancy

The George W. Daverio School of Accountancy prepares students to become competent and responsible accounting professionals and business leaders. Accounting is essential for planning, decision-making, control and performance evaluation in all types of organizations, including business, government and non-profit entities. Accounting also supports the need for accountability and transparency in every organization, regardless of size, complexity or location. Government and regulatory organizations (e.g. the Internal Revenue Service and the Securities & Exchange Commission) rely heavily on accountants to support compliance with various laws and regulations. A need for accounting exists whether an organization is small or large, global or domestic, for-profit or not-for-profit, listed or not listed on a stock exchange. Thus, an accounting major offers a wide range of opportunities for future success as a professional.

Students who major in accounting at The University of Akron are generally recruited for professional careers in financial reporting, cost management and control, financial management, financial analysis, internal auditing, external auditing, taxation, information systems audit and control, financial forensics and consultancy. Organizations that recruit accounting majors include public accounting firms, major corporations, small and medium-sized enterprises, government agencies and non-profit organizations. There are exceptional opportunities for professional advancement regardless of career path and the type of institution a graduate may choose.

Professional certification is vital for accounting professionals. We recommend the Certified Public Accountant (CPA) credential for all of our graduates. Ohio law requires 150 semester credit hours of college-level education as a requirement for the CPA certification. We strongly encourage our students to pursue the Accelerated BS/MS Accounting or

the Accelerated BS/Master of Taxation program as a path to obtain the 150 credits needed for the CPA certification.

CPA certification is needed for successful careers in public accounting; it is also highly valuable for careers in corporations, government agencies and other organizations. In addition to the CPA, other certifications that students may pursue include Certified Management Accountant (CMA), Certified Internal Auditor (CIA), Certified Information Systems Auditor (CISA) and Certified Fraud Examiner (CFE).

- Accounting, BS (p. 299)

## Accountancy (6200)

### 6200:201 Accounting Principles I (3 Credits)

Prerequisite: 24 hours of college credit. Introduction to accounting principles including accounting for revenues, expenses, assets, liabilities, equity, accounting standards and financial statements.

### 6200:202 Accounting Principles II (3 Credits)

Prerequisite: 6200:201. Information needs of management. Analysis of cash flow and financial statements. Study of product costing systems; standard costs; planning, budgeting, and control systems; overhead cost allocation; cost-volume-profit analysis; relevant costing; and capital budgeting.

### 6200:250 Spreadsheet Modeling & Decision Analysis (3 Credits)

Prerequisite: Spreadsheet proficiency. In-depth study of spreadsheet applications and databases to support decision-making and problem-solving in business and accounting.

### 6200:290 Specialized Study (1-3 Credits)

Prerequisite: Grade of C or better in 6200:201. Opportunity to study a specialized area in accounting at the sophomore or junior level (may be repeated with change of subject).

### 6200:301 Cost Management and Control (3 Credits)

Prerequisites: [3250:200 or 3250:244], grades of not less than "C" in 6200:201, 6200:202, and 6200:250, and admission to a major in the College of Business Administration. Product cost accumulation, cost management strategies, performance evaluation, and application of cost in business decisions.

### 6200:305 Cooperative Education in Accounting (0 Credits)

Prerequisites: 6200:201, 6200:202, 6200:250. Approved work experience in accounting and taxation. Performance evaluation and written report required.

### 6200:316 Financial Applications Development (3 Credits)

Prerequisite: 6200:201, 6500:315. Analysis, design and development of financial and control applications. Integration of intelligent agents into financial information systems for risk assessment, control, and assurance of businesses processes.

### 6200:320 Accounting Systems and Internal Control (3 Credits)

Prerequisites: A grade of not less than "C" in 6200:201 and 6200:250, and admission to a major in the College of Business Administration. Covers analysis design, implementation, governance and evaluation of accounting systems; business process modeling and accounting transaction cycles; and internal control.

**6200:321 Financial Reporting and Analysis I (3 Credits)**

Prerequisite: Admission to a major in the College of Business Administration, a grade of not less than a "C" for accounting majors in 6200:201 or permission. Financial reporting and analysis of cash, receivables, inventories, property, plant and equipment, intangibles and liabilities. Covers U.S. GAAP, IFRS, SEC reporting, and corporate financial reporting policy. Emphasizes professional accounting research.

**6200:322 Financial Reporting and Analysis II (3 Credits)**

Prerequisite: Admission to a major in the College of Business Administration and a grade of not less than a "C" in 6200:321 or permission. Financial reporting and analysis of owners' equity, investments, revenue recognition, tax allocations, pensions, leases, accounting changes, cash flows, segments, and interim periods. Covers U.S. GAAP, IFRS, SEC reporting, and corporate financial reporting policy. Emphasizes professional accounting research.

**6200:330 Contemporary Federal Taxation (3 Credits)**

Prerequisites: Admission to a major in the College of Business Administration and 6200:201 with a grade of C or better. Pre/Corequisite: 6200:321. Examines current federal tax practices with an emphasis on individual taxes.

**6200:405 Experiential Learning in Accounting (3 Credits)**

Corequisite: 6200:305. Approved experiential learning in accounting. Instructor approval required.

**6200:408 International Financial Reporting & Analysis (3 Credits)**

Prerequisites: Admission to a major in the College of Business Administration, a grade of not less than a "C" in 6200:201 and 6200:202, and [an international business major (6800) or 6200:321]. Covers international accounting standards, analysis of foreign financial statements, international tax issues, accounting for foreign currency, transfer pricing and international auditing standards.

**6200:410 Taxation for Financial Planning (3 Credits)**

Provides students preparing for careers in financial planning with the necessary knowledge of federal tax law as applied to individuals and businesses. Not to be used as an accounting elective.

**6200:420 Advanced Financial Reporting and Analysis (3 Credits)**

Prerequisite: Admission to a major in the College of Business Administration and 6200:322. Examination of accounting theory and financial reporting practices for business combinations, partnerships, foreign operations, nonprofit entities and consolidated statements. Covers U.S. GAAP, IFRS, SEC reporting, and corporate financial reporting policy. Emphasizes professional accounting research.

**6200:424 Business Law (3 Credits)**

Prerequisite: Completion of 64 credits. Understand business law and concepts dealing with the legal environment of business and their applications, including: business ethics, the American legal system, tort law, contracts, secured transactions, bankruptcy, real property, business entities, environmental law, antitrust.

**6200:431 Business Entity Taxation (3 Credits)**

Prerequisites: 6200: 330 and admission to a major in the College of Business Administration. Federal income tax law related to partnerships, corporations, trusts and estates; also includes an overview of federal estate and gift tax law.

**6200:440 Assurance Services and Professional Responsibilities (3 Credits)**

Prerequisites: 6200:320, 6200:322, 6200:330, and admission to a major in the College of Business Administration. Examines assurance services including external auditing and professional responsibilities. Focuses on standards, professional ethics and independence requirements, and procedures used in conducting assurance services.

**6200:441 Information Systems Audit & Control (3 Credits)**

Prerequisites: Admission to a major in the College of Business Administration, 6200:440 and 6200:454 or permission. Learn the fundamental concepts and practices of information systems audit control. Use of contemporary control frameworks, objectives and standards to discuss integrity, control, governance, assurance and effectiveness of financial information systems.

**6200:450 Advanced Spreadsheet Modeling & Decision Analysis (3 Credits)**

Prerequisites: Admission to a major in the College of Business Administration, 6200:202, 6200:250, 6200:322, 6400:301 and 6500:304 or permission. Study advanced topics in spreadsheet modeling and decision analysis in the context of accounting and finance, including security, control and quality assurance of spreadsheets.

**6200:454 Information Systems Security (3 Credits)**

Prerequisites: [6200:320 or 6500:310] and admission to a major in the College of Business Administration. Focus on information systems risk and security in distributed business environments; develop policies, practices and systems for security of computers and data in business with emphasis on financial information systems.

**6200:460 Advanced Managerial Accounting (3 Credits)**

Prerequisites: Admission to a major in the College of Business Administration, 6200:301, 6200:320, and [6500:330 or 6500:333]. The use of financial and non-financial information in decision making, performance evaluation of business units, strategy and governance, and management control.

**6200:470 Governmental Accounting (3 Credits)**

Prerequisites: 6200:321 or equivalent. Theory and procedures involved in application of fund accounting, budgetary control, appropriations and various accounting systems to governmental units, educational, medical and other non-profit institutions. Covers financial reporting for government and not for profit entities and GASB standards.

**6200:490 Special Topics in Accounting (1-3 Credits)**

Prerequisite: Permission of instructor. Opportunity to study special topics and current issues in accounting. May be repeated with a change of subject.

## Accounting, BS

### Bachelor of Science in Accounting (620000BS)

More on the Accounting major (<https://www.uakron.edu/cba/undergraduate/majors/accounting.dot>)

The George W. Daverio School of Accountancy prepares students to become competent and responsible accounting professionals and business leaders. Accounting is essential for planning, decision-making, control and performance evaluation in all types of organizations, including business, government and non-profit entities. An accounting major offers a wide range of opportunities for future success as a professional. Professional certification is vital for accounting professionals. The School of Accountancy's undergraduate accounting

degree prepares you to pursue certifications such as certified public accountant (CPA), certified management accountant (CMA), certified internal auditor, and certified information systems auditor.

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

The following information has official approval of **The George W. Daverio School of Accountancy** and **The College of Business Administration**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Additional Business Requirements	6-7
	College of Business Administration Core	39
	Accounting Required Courses	24
	Accounting Electives	12
	Free Elective	3
	Additional Major Electives *	10-9
	<b>Total Hours</b>	<b>128</b>

\* This major requires a minimum of 128 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages the completion of the following recommendations.

### Tier I: Academic Foundations **12**

*Quantitative Reasoning: 3 credit hours*

3450:210 Calculus with Business Applications  
 or 3450:221 Analytic Geometry-Calculus I

*Speaking: 3 credit hours*

7600:105 Introduction to Public Speaking  
 or 7600:106 Effective Oral Communication

*Writing: 6 credit hours*

3300:111 English Composition I

3300:112 English Composition II

### Tier II: Disciplinary Areas **22**

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

3250:200 Principles of Microeconomics

3850:100 Introduction to Sociology

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

3850:100 Introduction to Sociology

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

**Total Hours 34**

## Additional Business Requirements

Code	Title	Hours
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### General Education Tier 1 Requirement

3450:210 Calculus with Business Applications <sup>1</sup> 3-4  
 or 3450:221 Analytic Geometry-Calculus I

### Required Business Courses

3250:201 Principles of Macroeconomics 3  
 3250:244 Introduction to Economic Analysis

### Recommended Business Courses

6100:110 College of Business Administration Success Seminar <sup>2</sup>

6100:200 Personal Leadership Skills

**Total Hours 6-7**

<sup>1</sup> Replaces 3450:145 Algebra for Calculus as the Tier 1 Quantitative Reasoning General Education Requirement for all business majors.

<sup>2</sup> Required for some 1st year students

## College of Business Administration Core <sup>1</sup>

Code	Title	Hours
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6100:230 Business Communication 3

6200:201 Accounting Principles I <sup>4</sup> 3

6200:202 Accounting Principles II <sup>4</sup> 3

6200:250 Spreadsheet Modeling & Decision Analysis <sup>4</sup> 3

6400:220 Legal & Social Environment of Business <sup>2</sup> 3

6400:301 Principles of Finance 3

6500:304 Business Statistics 3

6500:301 Management: Principles & Concepts 3

6500:305 Business Analytics <sup>3</sup> 3

6500:330 Principles of Supply Chain and Operations Management 3

6500:490 Strategic Management 3

6600:205 Marketing Principles 3

6800:305	International Business	3
<b>Total Hours</b>		<b>39</b>

- <sup>1</sup> Student must also have a minimum cumulative GPA of 2.0 across the CBA Core.
- <sup>2</sup> Students majoring in Accountancy are required to take 6200:424 Business Law instead of 6400:220 Legal & Social Environment of Business.
- <sup>3</sup> Students majoring in Finance are strongly recommended to take 3250:325 Applied Econometrics I instead of 6500:305 Business Analytics.
- <sup>4</sup> Accounting majors must complete with a grade of C or better.

## Accounting Required Courses

Code	Title	Hours
<i>Must be admitted to the Accounting Major to take the courses below:</i>		
6200:301	Cost Management and Control	3
6200:320	Accounting Systems and Internal Control	3
6200:321	Financial Reporting and Analysis I <sup>1</sup>	3
6200:322	Financial Reporting and Analysis II	3
6200:330	Contemporary Federal Taxation	3
6200:431	Business Entity Taxation	3
6200:440	Assurance Services and Professional Responsibilities	3
6200:454	Information Systems Security	3
<b>Total Hours</b>		<b>24</b>

- <sup>1</sup> Accounting majors must complete with a grade of C or better.

## Accounting Electives

Code	Title	Hours
<b>Select four of the following:</b>		<b>12</b>
6200:408	International Financial Reporting & Analysis	
6200:420	Advanced Financial Reporting and Analysis	
6200:441	Information Systems Audit & Control	
6200:450	Advanced Spreadsheet Modeling & Decision Analysis	
6200:460	Advanced Managerial Accounting	
6200:470	Governmental Accounting	
6200:490	Special Topics in Accounting	
6200:405	Experiential Learning in Accounting <sup>1</sup>	
<b>Total Hours</b>		<b>12</b>

- <sup>1</sup> Eligibility for 6200:405 Experiential Learning in Accounting
  - Admitted to CBA and minimum 3.0 cumulative GPA
  - Completed or enrolled in 6200:320 Accounting Systems and Internal Control and 6200:321 Financial Reporting and Analysis I
  - Grade of B or better in 6200:201 Accounting Principles I and 6200:202 Accounting Principles II
  - Requires 6200:305 Cooperative Education in Accounting as a corequisite (0 credits)

## Free Elective

Code	Title	Hours
<b>Free Elective <sup>1</sup></b>		<b>3</b>
<b>Total Hours</b>		<b>3</b>

- <sup>1</sup> Students may take any course offered at The University of Akron to fulfill the 128 credit hour requirement.

## Graduation Requirements – Review DPR for Status

- 128 Credit Hours
- CBA residency = Last 15 credits earned in CBA
- Overall GPA = 2.3
- Major GPA = 2.0
- Business & Economics GPA = 2.0

## Recommended Sequence

<b>1st Year</b>		
<b>Fall Semester</b>		<b>Hours</b>
3300:111	English Composition I	3
3450:210 or 3450:221	Calculus with Business Applications or Analytic Geometry-Calculus I	3
	Social Science Requirement	3
6100:110	College of Business Administration Success Seminar (Required for some first year students)	1
6200:250	Spreadsheet Modeling & Decision Analysis	3
7600:105 or 7600:106	Introduction to Public Speaking or Effective Oral Communication	3
<b>Hours</b>		<b>16</b>
<b>Spring Semester</b>		
3250:200	Principles of Microeconomics	3
3300:112	English Composition II	3
	Humanities Requirement	3-4
	Natural Science with Lab	4
<b>Hours</b>		<b>13-14</b>
<b>2nd Year</b>		
<b>Fall Semester</b>		
3250:201	Principles of Macroeconomics	3
6100:230	Business Communication	3
6200:201	Accounting Principles I <sup>1</sup>	3
6500:304	Business Statistics	3
6600:205	Marketing Principles	3
<b>Hours</b>		<b>15</b>
<b>Spring Semester</b>		
6200:202	Accounting Principles II <sup>1</sup>	3
6200:320	Accounting Systems and Internal Control	3
6500:305	Business Analytics	3
	Arts Requirement	3
	Natural Science Requirement (no lab)	3
<b>Hours</b>		<b>15</b>

**3rd Year****Fall Semester**

6200:301	Cost Management and Control	3
6200:321	Financial Reporting and Analysis I <sup>1</sup>	3
6200:330	Contemporary Federal Taxation	3
6400:301	Principles of Finance	3
6500:301	Management: Principles & Concepts	3
	Hours	15

**Spring Semester**

6200:322	Financial Reporting and Analysis II	3
6200:431	Business Entity Taxation	3
6500:330	Principles of Supply Chain and Operations Management	3
6800:305	International Business	3
	Arts or Humanities Requirement	3-4
	Hours	15-16

**4th Year****Fall Semester**

6200:424	Business Law	3
6200:454	Information Systems Security	3
	Accounting Elective 1 of 4 <sup>2</sup>	3
	Accounting Elective 2 of 4 <sup>2</sup>	3
	Complex Systems Requirement	3
	Domestic Diversity Requirement	3
	Hours	18

**Spring Semester**

6200:440	Assurance Services and Professional Responsibilities	3
6500:490	Strategic Management	3
	Accounting Elective 3 of 4 <sup>2</sup>	3
	Accounting Elective 4 of 4 <sup>2</sup>	3
	Global Diversity Requirement	3
	Critical Thinking Requirement	3
	Free Elective	3
	Hours	21
	Total Hours	128-130

<sup>1</sup> Minimum grade of C required

<sup>2</sup> Students may choose their electives from the following list (12 credits total):

- 6200:405 Experiential Learning in Accounting (offered Spring & Summer) - 3 credits
- 6200:420 Advanced Financial Reporting and Analysis (offered Fall, Spring & Summer) - 3 credits
- 6200:450 Advanced Spreadsheet Modeling & Decision Analysis (offered Fall, Spring) - 3 credits
- 6200:470 Governmental Accounting (offered Spring) - 3 credits
- 6200:490 Special Topics in accounting - 3 credits
  - FanTaxtics (offered Fall)
  - Low-Income Tax Clinic - VITA (offered Spring)
  - Tax Colloquium (offered Spring)
- Independent Study

# Economics

Economics is the study of choice in a world with scarce resources. Students majoring in economics develop their analytical and problem-solving skills while exploring theories of economic systems and their application to a large number of fields. These fields range from finance and international trade to poverty reduction and environmental problems.

The BA program has core courses in theory and in quantitative and computer methods as well as a number of economics electives. If they wish, students can choose field electives relating to career tracks: business, banking and international economics, public policy or graduate school. In one of their final field courses, students develop and carry out a senior project that shows their ability to apply what they have learned, both analytically and quantitatively. For potential employers, it provides an important demonstration of what an economics graduate can do.

Graduates are employed in both the private and public sectors in a wide range of careers. For example they can be found as financial analysts, management trainees, human resource managers, city and state economists, bank examiners or health care administrators. An economics degree is an excellent background for entrance into professional programs such as law or the MBA. A joint major is a very useful option for students studying in other fields.

The BBA in Business Data Analytics degree is designed to meet the growing demand for professionals who can gather, sort and interpret large amounts of data to help businesses solve problems and operate more effectively.

This STEM-designated program combines coursework in business, economics and data analytics to provide students the knowledge, skills and hands-on experience needed to develop data-driven solutions in finance, insurance and other industries.

- Business Data Analytics, BBA (p. 306)
- Economics, BA (p. 307)
- Economics, Minor (p. 309)

**3250:100 Introduction to Economics (3 Credits)**

May not be substituted for 3250:200, 3250:201, or 3250:244. Economics primarily concerned in a broad social science context. Adequate amount of basic theory introduced. Cannot be used to satisfy major or minor requirements in economics.

**Gen Ed:** Tier 2 - Social Science

**3250:200 Principles of Microeconomics (3 Credits)**

Analysis of behavior of the firm and household, and their impact on resource allocation, output and market price. No credit if 3250:244 already taken.

**Gen Ed:** Tier 2 - Social Science

**3250:201 Principles of Macroeconomics (3 Credits)**

Prerequisite: 3250:200. Study of the economic factors which affect the price level, national income, employment, economic growth. No credit if 3250:244 already taken.

**3250:226 Computer Skills for Economic Analysis (3 Credits)**

Prerequisites: 3250:100 or 3250:200 or 3250:244. Application of word processing, spreadsheets, presentation packages, SAS, the Internet, library resources, and other computer tools in communicating economic analysis.

**Gen Ed:** Tier 3 - Critical Thinking

**3250:230 Economics of Social Policy Issues (3 Credits)**

Prerequisite: 3250:100, or 3250:200 and 3250:201, or 3250:244 or permission of the instructor. Investigation of selected labor and social policy issues. Examples include health care, economic demography, anti-poverty programs, immigration, discrimination, and the impact of unemployment and inflation.

**3250:244 Introduction to Economic Analysis (3 Credits)**

Recommended for engineering and mathematical science majors. Intensive introduction to analysis of modern industrial society and formulation of economic policy. Structure of economic theory and its relation to economic reality. No credit to a student who has completed 3250:200 and 3250:201.

**Gen Ed:** Tier 2 - Social Science

**3250:310 Managerial Economics (3 Credits)**

Prerequisites: 3250:200 or 3250:244, 3470:261, 3470:262. Application of economic analysis to management problems; the organization of enterprises and the allocation of their resources; decision making under uncertainty; strategic behavior.

**3250:325 Applied Econometrics I (3 Credits)**

Prerequisites: [3470:261 and 3470:262] or 6500:304. Students learn SAS coding and the foundations of data science. Course covers multiple regression estimation and inference analysis and concludes with a team-based research paper.

**3250:326 Applied Econometrics II (3 Credits)**

Prerequisite: 3250:325. Violations of the classical assumptions of the regression model and corrections are explored along with regression analysis of time series data. Culminates with a research paper.

**3250:330 Labor Problems (3 Credits)**

Prerequisites: [3250:200, or 3250:201, or 3250:244]. Labor economics, principles and public policy. Study of structure of labor market and impact unions have on labor management relations.

**3250:333 Labor Economics (3 Credits)**

Prerequisite: 3250:200 or 3250:244. Theoretical tools used in analysis of problems of labor in any modern economic system. Emphasis given to examination of determinants of demand for and supply of labor.

**3250:350 Women and the Economy (3 Credits)**

Prerequisite: 3250:100 or 3250:200 or 3250:244 or permission of the department. An economic analysis of the role gender plays in decisions (family formation, fertility, childcare, work) and outcomes (the gender wage gap, economic development).

**3250:360 Industrial Organization & Public Policy (3 Credits)**

Prerequisites: 3250:200 or 3250:244. Role of industrial structure and firm conduct in performance of industry and way in which antitrust policy is designed to provide remedies where performance is unsatisfactory.

**3250:380 Money & Banking (3 Credits)**

Prerequisite: 3250:201. Institutions of money, banking and credit, monetary expansion and contraction, public policies affecting this process, development of our money and banking system.

**Gen Ed:** Tier 3 - Critical Thinking

**3250:385 Economics of Natural Resources & the Environment (3 Credits)**

Prerequisites: [3250:100 or 3250:200 or 3250:244] or permission. Introduction to economic analysis of use of natural resources and economics of environment. Problems of water and air pollution, natural environments, natural resource scarcity, conservation, economic growth.

**Gen Ed:** Tier 3 - Complex Systems

**3250:400 Intermediate Macroeconomics (3 Credits)**

Prerequisites: 3250:201 and [3450:145 or higher math]. Changes in national income, production, employment, price levels, long-range economic growth, short-term fluctuations of economic activity.

**Gen Ed:** Tier 3 - Critical Thinking

**3250:405 Economics of the Public Sector (3 Credits)**

Prerequisites: [3250:200 and 3250:201] or 3250:244. Considers nature and scope of government activity, rationale for government intervention, problems of public choice, taxation and revenue-raising, cost-benefit analysis, program development and evaluation.

**3250:406 State & Local Public Finance (3 Credits)**

Prerequisite: 3250:410; recommended: 3250:405. Examines economic rationale and problems for provision of goods and services by different governmental units. Considers alternative revenue sources and special topics.

**3250:410 Intermediate Microeconomics (3 Credits)**

Prerequisites: [3250:200 or 3250:244] and [3450:145 or higher math]. Advanced analysis of consumer demand, production costs, market structures, determinants of factor income.

**Gen Ed:** Tier 3 - Critical Thinking

**3250:415 Cost-Benefit Analysis (3 Credits)**

Prerequisites: [3250:200 and 3250:201] or 3250:244. Introduction to tool for public project evaluation. Includes development of analytical framework and methods of determining benefits and costs over time. Stresses application of techniques.

**3250:423 Applied Game Theory (3 Credits)**

Prerequisite: 3250:200. Application of the basic concepts of game theory (analysis of strategic behavior) to relevant economics issues including bargaining, cartels, voting, conflict resolution and non-competitive pricing.

**3250:426 Applied Econometrics (3 Credits)**

Prerequisites: 3470:261, 3470:262, and [3250:200 and 3250:201] or 3250:244. Application of regression analysis to economic and social sciences data. Discusses typical problems from applied research, including estimation technique, hypothesis testing, and modeling framework.

**Gen Ed:** Tier 3 - Critical Thinking

**3250:427 Economic Forecasting (3 Credits)**

Prerequisites: 3470:261, 3470:262, and [3250:200 and 3250:201] or 3250:244. Methods for building, identifying, fitting and checking dynamic economic models and use of these models for forecasting. Emphasis on application of available computer software systems.

**3250:430 Labor Market and Social Policy (3 Credits)**

Prerequisite: [3250:200 and 3250:201] or 3250:244 or permission of instructor. Intensive study of current labor and social policy issues (e.g., discrimination, poverty, migration, education, demographic and labor market changes, impact of international trade on employment).

**Gen Ed:** Tier 3 - Complex Systems

**3250:432 Economics & Practice of Collective Bargaining (3 Credits)**

Prerequisite: 3250:200 or 3250:244. Principles and organization of collective bargaining, collective bargaining agreements, issues presented in labor disputes and settlements, union status and security, wage scales, technological change, production standards, etc.

**3250:434 Labor Market Analysis and Evaluation (3 Credits)**

Prerequisites: 3250:410, 3250:426, 3250:430. Applied labor market research using specialized techniques. Employment, health, education, and other current policy issues and programs analyzed and evaluated. Original research project required.

**3250:436 Health Economics (3 Credits)**

Prerequisites: 3250:100 or 3250:200 or 3250:244 or permission of instructor. Economic analysis of health care. Stresses health policy issues, includes study of demand and supply of medical services and insurance, analysis of health care industries.

**3250:438 Economics of Sports (3 Credits)**

Prerequisites: 3250:100 or 3250:200 or 3250:244 or permission of instructor. Sports franchises as profit maximizing firms; costs and benefits of a franchise to a city; labor markets in professional sports; the economics of college sports.

**3250:440 Special Topics in Economics (3 Credits)**

Prerequisite: [3250:200 and 3250:201] or 3250:244 or permission of department. Opportunity to study special topics and current issues in economics.

**3250:460 Economics of Developing Countries (3 Credits)**

Prerequisites: [3250:200 and 3250:201] or 3250:244. Basic problems in economic development. Theories of economic development, issues of political economy and institutions. Topics include poverty, population, migration, employment, finance, international trade and environment.

**Gen Ed:** Tier 3 - Global Diversity

**3250:461 Principles of International Economics (3 Credits)**

Prerequisites: [3250:200 and 3250:201] or 3250:244, or permission of the Economics department. International trade and foreign exchange, policies of free and controlled trade, international monetary problems.

**3250:475 Development of Economic Thought (3 Credits)**

Prerequisites: [3250:200 and 3250:201] or 3250:244, or permission of the Economics department. Evolution of theory and method, relation of ideas of economists contemporary to conditions.

**3250:481 Monetary & Banking Policy (3 Credits)**

Prerequisites: 3250:380, 3250:400; or permission of the Economics department. Control over currency and credit, policies of control by central banks and governments, United States Treasury and Federal Reserve System.

**3250:487 Urban Economics: Theory & Policy (3 Credits)**

Prerequisites: [3250:200 and 3250:201] or 3250:244, or permission of instructor. Analysis of urban issues from an economic perspective. Emphasis on urban growth, land-use patterns, housing, income distribution, poverty and urban fiscal policy.

**Gen Ed:** Tier 3 - Domestic Diversity

**3250:490 Individual Study in Economics (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission of instructor. Independent study in economics under supervision and evaluation of selected faculty member.

**3250:491 Workshop: Economics (1-3 Credits)**

(May be repeated) Prerequisite: Permission of the Economics department. Group studies of special topics in economics. May not be used to meet undergraduate or graduate major requirements in economics. May be used for elective credit only.

**3250:495 Internship in Economics (1-3 Credits)**

Prerequisites: 3250:200, 3250:201 and at least three additional courses in economics at the 300- or 400-level. Supervised placement in appropriate position in public or private sector organizations. Reports and written assignments required.

**3250:496 Senior Project in Economics (2 Credits)**

Prerequisites: 3250:400, 3250:410, 3250:426. Corequisites: 3250:405 or 3250:423 or 3250:430 or 3250:460 or 3250:461 or 3250:475 or 3250:481 or 3250:487. Taken concurrently with or following a 400-level field Economics course. Involves independent out-of-class work on a project designed in consultation with the designated 400-level course instructor.

**3250:497 Honors Project in Economics (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Senior standing in Honors College. Individual senior honors thesis on a creative project relevant to economics, approved and supervised by faculty member of the department.

**3250:506 State & Local Public Finance (3 Credits)**

Prerequisite: Admission to the master's program in Economics or permission. Examines economic rationale and problems for provision of goods and services by different governmental units. Considers alternative revenue sources and special topics.

**3250:515 Cost-Benefit Analysis (3 Credits)**

Prerequisites: Admission to the master's program in Economics or permission. Introduction to tool for public project evaluation. Includes development of analytical framework and methods of determining benefits and costs over time. Stresses application of techniques.

**3250:523 Applied Game Theory (3 Credits)**

Prerequisite: Admission to the master's program in Economics or permission. Application of the basic concepts of game theory (analysis of strategic behavior) to relevant economics issues including bargaining, cartels, voting, conflict resolution and non-competitive pricing.

**3250:527 Economic Forecasting (3 Credits)**

Prerequisite: Admission to the master's program in Economics or permission. Study of methods for building, identifying, fitting and checking dynamic economic models and use of these models for forecasting. Emphasis is on the application of available computer software systems.

**3250:530 Labor Market and Social Policy (3 Credits)**

Prerequisite: Admission to the master's program in Economics or permission. Intensive study of current labor and social policy issues (e.g., discrimination, poverty, migration, education, demographic and labor market changes, impact of international trade on employment).

**3250:536 Health Economics (3 Credits)**

Prerequisite: permission of instructor. Economic analysis of health care. Stresses health policy issues, includes study of demand and supply of medical services and insurance, analysis of health care industries.

**3250:538 Economics of Sports (3 Credits)**

Prerequisite: permission of instructor. Sports franchises as profit maximizing firms; costs and benefits of a franchise to a city; labor markets in professional sports; the economics of college sports.

**3250:540 Special Topics in Economics (3 Credits)**

Prerequisite: permission. Opportunity to study special topics and current issues in economics.

**3250:560 Economics of Developing Countries (3 Credits)**

Prerequisite: Admission to the master's program in Economics or permission. Basic problems of economic development. Theories of economic development, issues of political economy and institutions. Topics include poverty, population, migration, employment, finance, international trade, environment.



**3250:561 Principles of International Economics (3 Credits)**

Prerequisite: Admission to master's program in Economics or permission. International trade and foreign exchange, policies of free and controlled trade, international monetary problems.

**3250:575 Development of Economic Thought (3 Credits)**

Prerequisite: Admission to the master's program in Economics or permission. Evolution of theory and method, relation of ideas of economists contemporary to conditions.

**3250:581 Monetary & Banking Policy (3 Credits)**

Prerequisite: Admission to the master's program in Economics or permission. Control over currency and credit, policies of control by central banks and governments, United States Treasury and Federal Reserve System.

**3250:587 Urban Economics: Theory & Policy (3 Credits)**

Prerequisite: Admission to the master's program in Economics or permission. Analysis of urban issues from an economic perspective. Emphasis on urban growth, land-use patterns, housing, income distribution, poverty and urban fiscal policy.

**3250:591 Workshop in Economics (1-3 Credits)**

(May be repeated) Group studies of special topics in economics. May not be used to meet undergraduate or graduate major requirements in economics. May be used for elective credit only.

**3250:600 Foundations of Economic Analysis (3 Credits)**

Prerequisite: graduate standing. Determination of national income, employment and price level; aggregate consumption, investment and asset holding; decision problems faced by household and firm. Partial equilibrium and analysis of competition and monopoly and general equilibrium analysis. May not be substituted for 602, 603, 611, or applied toward the 30 graduate credits required for M.A. in economics.

**3250:601 Economic Decision Making for Business (3 Credits)**

Prerequisite: Graduate standing or permission of department. An application of microeconomic analysis to solving business problems and a macroeconomic perspective on national output, unemployment, and inflation.

**3250:602 Macroeconomic Analysis I (3 Credits)**

Prerequisite: Admission to the master's program in economics or permission of the department. Construction of static macroeconomic models. Analysis predominantly in terms of comparative statistics with only relatively brief mention of dynamic models.

**3250:606 Economics of the Public Sector (3 Credits)**

Prerequisite: Admission to the master's program in economics or permission of the department. Examination of public sector economies emphasizes public revenues, public expenditures. Develops objectives of taxation, welfare aspects of the public sector, theory of public goods. Considers specific taxes, cost-benefit analysis, expenditures analysis, fiscal federalism.

**3250:610 Framework of Economic Analysis (3 Credits)**

Prerequisite: graduate standing. Development of theoretical and analytical framework for decision making. Discussion of applications of the framework to situations concerning demand, cost, supply, production, price, employment and wage.

**3250:611 Microeconomic Theory I (3 Credits)**

Prerequisite: Admission to the master's program in economics or permission of the department. Modern theory of consumer behavior and of the firm. Determination of market prices. Optimization models, establishment of criteria for productive, allocative and distributive efficiency.

**3250:615 Industrial Organization (3 Credits)**

Prerequisite: 3250:611 or permission. Examines link between market structure, firm conduct and economic performance. Measurement and effects of monopoly power, industrial concentration and changes.

**3250:617 Economics of Regulation (3 Credits)**

Prerequisite: 3250:615 or permission of instructor. Examines rationale, methods and success of government regulation of public utility, transportation and communications industries.

**3250:620 Application of Mathematical Models to Economics (3 Credits)**

Prerequisite: Admission to the master's program in economics or permission of the department. Review of selected topics of differential and integral calculus and their application to economic analysis. Theory of optimization in production and consumption; static macroeconomic models. Analysis of growth and stability.

**3250:621 Application of Linear Models in Economic Analysis (3 Credits)**

Prerequisite: Admission to the master's program in economics or permission of the department. Review of selected topics of linear algebra application to economic theory. Static open and closed input-output tables, dynamic models, consumption technology and theory of demands, linear programming, general equilibrium analysis.

**3250:626 Applied Econometrics I (3 Credits)**

Prerequisite: Admission to the master's program in economics or permission of the department. Students will learn statistical methods and standard econometric tools by reading and conducting empirical research requiring problem articulation, data assembly and appropriate model specification.

**3250:627 Applied Econometrics II (3 Credits)**

Prerequisite: 3250:626 or equivalent. Students will learn advanced econometric topics, continuing to build on modeling, interpretation, and evaluation skills through economic problems, culminating in an empirical research paper.

**3250:628 Seminar in Research Methods (3 Credits)**

Prerequisite: Admission to the master's program in economics or permission of the department. A seminar in the research use of applied mathematical economics or econometrics. Emphasis is on individual development of a theoretical proposition or research statement, its empirical examination and policy implications.

**3250:633 Theory of Wages & Employment (3 Credits)**

Prerequisite: Admission to the master's program in economics or permission of the department. Analytical approach to integration of economic theory with observed labor market phenomena. Discussion of wage and employment theories, effects of unions, collective bargaining theories and effects of government regulation.

**3250:640 Special Topics in Economics (3 Credits)**

Prerequisite: Admission to the Master's Program in economics or permission of department. Opportunity to study special topics and current issues in economics at an advanced level. Repeatable with permission of instructor.

**3250:664 Seminar on Economic Growth & Development (3 Credits)**

Prerequisite: Admission to the master's program in economics or permission of the department. Review of main theories of economic growth since age of classical economics. Problems in development of emerging countries. Discussion of aggregative macro-models of capital formation, investment, technology and external trade.

**3250:666 Seminar on Regional Economic Analysis & Development (3 Credits)**

Prerequisite: Admission to the master's program in economics or permission of the department. Study of a particular national or international regional development. Any one or a combination of following regions may be considered: Middle East, North Africa, areas within Latin America, Southern Europe, Southeast Asia or Eastern Europe.

**3250:670 International Monetary Economics (3 Credits)**

Prerequisite: Admission to the master's program in economics or permission of the department. International financial relations. Foreign exchange market and exchange rate adjustments. Balance of payments adjustment policies. International monetary system.

**3250:671 International Trade (3 Credits)**

Prerequisite: Admission to the master's program in economics or permission of the department. Traditional trade theory. Recent developments in trade theory, policy implications in trade relations among developed and developing economics.

**3250:683 Monetary Economics (3 Credits)**

Prerequisite: Admission to the master's program in economics or permission of the department. Intensive study of important areas of monetary theory. Emphasis on integration of money and value theory among other areas, plus some pressing policy issues.

**3250:695 Graduate Internship in Economics (1-3 Credits)**

Prerequisites: Eighteen credit hours of economics graduate courses. Career application of student's graduate coursework. Supervisor reports and assignments required. May be repeated for a maximum of three credits.

**3250:697 Reading in Advanced Economics (1-4 Credits)**

(A maximum of six credits may be applied toward the master's degree in economics.) Prerequisite: Admission to the master's program in economics or permission of the department. Intensive investigation of selected problem area in advanced economics under supervision of instructor. Since the subject matter is decided upon in each case, the course may be taken repeatedly for credit.

**3250:698 Reading in Advanced Economics (1-4 Credits)**

(A maximum of six credits may be applied toward the master's degree in economics.) Prerequisite: Admission to the master's program in economics or permission of the department. Intensive investigation of selected problem area in advanced economics under supervision of instructor. Since the subject matter is decided upon in each case, the course may be taken repeatedly for credit.

**3250:699 Master's Thesis (3 Credits)**

(May be repeated for a total of six credits)

## Business Data Analytics, BBA Bachelor of Arts in Business Data Analytics (325005BBA)

More on the Business Data Analytics major (<https://www.uakron.edu/data-analytics/>)

The BBA Business Data Analytics major prepares students to answer important questions that arise in decision making in business and the public sector that can be informed by economics and analyzed using data. Core competencies include critical thinking skills, data acquisition skills, data analysis techniques, the application of economic theory to analyze economic data, communication skills, and proficiency in the use of data analytic computer software used in the workplace. Students gain

experience in applying economic theory in a wide variety of settings and round out that training with a cognate set of data analytic coursework from the College of Business and elsewhere. After completing the program students can expect job opportunities as an analyst in a wide variety of fields including general business, banking, financial services, federal, state and local government, consulting, and not-for-profit organizations

The following information has official approval of **The Department of Economics** and **The College of Business Administration**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Additional Business Requirements	6-7
	College of Business Administration Core	39
	Business Data Analytics Requirements	33-34
	Additional Credits for Graduation *	8-6
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

Tier I: Academic Foundations		12
<i>Quantitative Reasoning: 3 credit hours</i>		
3450:210	Calculus with Business Applications or 3450:221 Analytic Geometry-Calculus I	
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking or 7600:106 Effective Oral Communication	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	
3300:112	English Composition II	

**Tier II: Disciplinary Areas 22***Arts/Humanities: 9 credit hours**Natural Sciences: 7 credit hours**Social Sciences: 6 credit hours*

3230:251 Human Diversity

3250:200 Principles of Microeconomics

**Tier III: Tagged Courses***Select one class from each of the following subcategories:*

Complex Systems

3250:385 Economics of Natural Resources &amp; the Environment

Critical Thinking

3250:400 Intermediate Macroeconomics  
or 3250:410 Intermediate Microeconomics

Domestic Diversity

3250:487 Urban Economics: Theory &amp; Policy

Global Diversity

3250:460 Economics of Developing Countries

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

**Additional Business Requirements**

Code	Title	Hours
<b>Required Business Courses</b>		
3450:210 or 3450:221	Calculus with Business Applications Analytic Geometry-Calculus I	3-4
3250:201	Principles of Macroeconomics	3
<b>Recommended Business Courses</b>		
6100:110	College of Business Administration Success Seminar <sup>1</sup>	
6100:200	Personal Leadership Skills	
Total Hours		6-7

<sup>1</sup> Required for some 1st year students**College of Business Administration Core**

Code	Title	Hours
3250:325	Applied Econometrics I	3
6100:230	Business Communication	3
6200:201	Accounting Principles I	3
6200:202	Accounting Principles II	3
6200:250	Spreadsheet Modeling & Decision Analysis	3
6400:220	Legal & Social Environment of Business	3
6400:301	Principles of Finance	3
6500:301	Management: Principles & Concepts	3
6500:304	Business Statistics	3
6500:330	Principles of Supply Chain and Operations Management	3
6500:490	Strategic Management	3
6600:205	Marketing Principles	3

6800:305	International Business	3
Total Hours		39

**Business Data Analytics Requirements**

Code	Title	Hours
3250:326	Applied Econometrics II	3
3250:400	Intermediate Macroeconomics	3
3250:410	Intermediate Microeconomics	3
3250:427	Economic Forecasting	3
6500:324	Database Management for Information Systems	3

**Data Analytic Courses Outside of Economics <sup>1</sup> 9-10***Management - complete 9 credits from the list below*

6500:325	Systems, Analysis, & Design	
6500:333	Supply Chain and Operations Analysis	
6500:390	Supply Chain Modeling and Decision Making	
6500:425	Decision Support with Data Warehousing & Data Mining	

*Finance - complete 9 credits from the list below*

6400:302	Intermediate Corporate Finance	
6400:343	Investments	
6400:436	Commercial Bank Management	
6400:448	Advanced Portfolio Management	
6400:489	Advanced Financial Analytics	

*Marketing - complete 10 credits from the list below*

6600:335	Marketing Research	
6600:336	Marketing Research Lab	
6600:355	Consumer Behavior	
6600:375	Marketing & Sales Analytics	

**Economic Electives 9**

3250:xxx		
Total Hours		33-34

<sup>1</sup> Choose 9 credit hours of coursework in either Management or Finance in the list provided or 10 credit hours in Marketing.**Graduation Requirements – Review DPR for Status**

- 120 Credit Hours
- CBA residency = Last 15 credits earned in CBA
- Overall GPA = 2.3
- Major GPA = 2.0
- Business & Economics GPA = 2.0

**Economics, BA****Bachelor of Arts in Economics (325000BA)**More on the Economics major (<https://www.uakron.edu/economics/>)

The BA in economics is a classic liberal arts degree. It trains students in economic theory along with data analytic and critical thinking skills required to investigate real world economic problems. Hands-on application of these tools in the classroom is stressed throughout the

curriculum, culminating with the senior “capstone” research project. Graduates can apply these skills in the workplace in a wide variety of settings - in both the private and public sectors - to improve outcomes through better decision making. The degree can also be a stepping stone for graduate studies in a wide variety of areas including further study in economics and other business-related disciplines, law, and public policy.

You will earn a degree from a globally recognized business school where the programs are taught by an accomplished and dedicated faculty and are supported by a network of business executives. You can major in a wide variety of interesting disciplines that are attractive to prospective employers. As a graduate, you will have leadership and collaboration competencies and be a data savvy, globally aware, enterprise thinker.

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Additional Business Requirements	6-7
	Economics Requirements	33
	Math and Statistics Requirements	7
	Additional Economics Requirements	30
	Additional Credits for Graduation *	10-9
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## Recommended General Education Courses

Code	Title	Hours
	Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.	

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

<b>Tier I: Academic Foundations</b>	<b>12</b>
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### Quantitative Reasoning: 3 credit hours

3450:210	Calculus with Business Applications
or 3450:221	Analytic Geometry-Calculus I

### Speaking: 3 credit hours

7600:105	Introduction to Public Speaking
or 7600:106	Effective Oral Communication

### Writing: 6 credit hours

3300:111	English Composition I
3300:112	English Composition II

### Tier II: Disciplinary Areas 22

#### Arts/Humanities: 9 credit hours

#### Natural Sciences: 7 credit hours

#### Social Sciences: 6 credit hours

3250:200	Principles of Microeconomics
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### Tier III: Tagged Courses

Select one class from each of the following subcategories:

#### Complex Systems

3250:385	Economics of Natural Resources & the Environment
or 3250:430	Labor Market and Social Policy

#### Critical Thinking

3250:400	Intermediate Macroeconomics
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#### Domestic Diversity

3250:487	Urban Economics:Theory & Policy
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#### Global Diversity

3250:460	Economics of Developing Countries
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Review the General Education Requirements page for detailed course listings.

<b>Total Hours</b>	<b>34</b>
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## Additional Business Requirements

Code	Title	Hours
<b>Required Business Courses</b>		

3450:210	Calculus with Business Applications	3-4
or 3450:221	Analytic Geometry-Calculus I	
3250:201	Principles of Macroeconomics	3

### Recommended Business Courses

6100:110	College of Business Administration Success Seminar <sup>1</sup>
6100:200	Personal Leadership Skills

<b>Total Hours</b>	<b>6-7</b>
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<sup>1</sup> Required for some 1st year students

## Economics Requirements

Code	Title	Hours
3250:200	Principles of Microeconomics	3
3250:201	Principles of Macroeconomics	3
3250:325	Applied Econometrics I	3
3250:326	Applied Econometrics II	3
3250:400	Intermediate Macroeconomics	3
3250:410	Intermediate Microeconomics	3
3250:434	Labor Market Analysis and Evaluation	3

or 3250:496	Senior Project in Economics	
or 3250:497	Honors Project in Economics	
3250:xxx	Economics Electives <sup>1</sup>	12
Total Hours		33

<sup>1</sup> Selecting courses from General Education Tier III is recommended.

## Math and Statistics Requirements

Code	Title	Hours
3450:210	Calculus with Business Applications	3
or 3450:215	Concepts of Calculus	
or 3450:221	Analytic Geometry-Calculus I	
3470:261	Introductory Statistics I	2
3470:262	Introductory Statistics II	2
or 3470:461	Applied Statistics	
Total Hours		7

## Additional Business Requirements

Code	Title	Hours
<b>Upper Level Electives (see notes below)</b>		<b>16</b>
<b>Foreign Language</b>		<b>14</b>
101	Beginning Language I	
102	Beginning Language II	
201	Intermediate Language I	
202	Intermediate Language II	
Total Hours		30

## Upper Level Elective Notes

- It is strongly recommended that students use upper level (300/400) electives to pursue a minor or second major. See department advisor for suggestions.
- General electives can be any course not already required by your major and upper-level (300/400) elective can be any course in or outside your major, excluding general education courses and workshops.
- Students who wish to follow a particular career-oriented track in their economic electives can do so from the following: Business Career Track, Banking & International Track, Public Policy Track, & Graduate School Track. *Note that choosing a track is not required.*
  - Graduate School Track relates to professional degrees such as Law, MBA, or Public Policy as well as Economics.
  - Those wishing to become professional economists through graduate work in economics (MA or Ph.D.) are encouraged to take more Calculus (e.g., 3450:221 Analytic Geometry-Calculus I, 3450:222 Analytic Geometry-Calculus II, 3450:223 Analytic Geometry-Calculus III) and further mathematics (e.g., 3450:312 Linear Algebra).

## Graduation Requirements – Review DPR for Status

- 120 Credit Hours
- CBA residency = Last 15 credits earned in CBA
- Overall GPA = 2.3

- Major GPA = 2.0
- Business & Economics GPA = 2.0

## Economics, Minor Minor in Economics (325000M)

The economics minor is an 18-credit program with sufficient flexibility to complement any major at UA. Students are trained in basic economic theory along with critical thinking skills required to investigate real world economic problems. A wide variety of electives can be selected in consultation with your academic advisor to meet specific programmatic needs and to differentiate your resume from others to employers upon graduation. The minor in economics is typically paired with several business majors such as in the finance area, and with applied mathematics, and political science.

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The following information has official approval of the **Department of Economics** and the **College of Business Administration**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		6-9
Electives		12-9
Total Hours		18

## Required Courses

Code	Title	Hours
<b>Choose either {3250:200 &amp; 3250:201} OR 3250:244:</b>		<b>3-6</b>
3250:200 & 3250:201	Principles of Microeconomics and Principles of Macroeconomics	
3250:244	Introduction to Economic Analysis	
3250:410 or 3250:400	Intermediate Microeconomics and Intermediate Macroeconomics	3
Total Hours		6-9

## Electives

Code	Title	Hours
<b>Complete 9-12 credits of Economics electives: <sup>1</sup></b>		<b>12-9</b>
3250:xxx	Economics courses	
Total Hours		12-9

<sup>1</sup> All students are encouraged to consult with their Academic Advisor about the best choice of coursework.

## Entrepreneurship

- Entrepreneurship, Certificate (p. 310)
- Entrepreneurship, Minor (p. 310)

### Entrepreneurship (6300)

#### 6300:201 Introduction to Entrepreneurship (3 Credits)

Students are exposed to career options in entrepreneurship where they learn skills related to starting or buying a small business, working for a fast growth business or corporation, family business, and franchising. Open to all university students. 3 credits.

#### 6300:301 New Venture Creation (3 Credits)

Prerequisite: 6300:201 or by permission of instructor. Students work on the development of a business plan based on their chosen career path in the field of entrepreneurship (starting or buying a small business, working for a fast growth business or corporation, new product, family business, or franchising). Open to all university students.

#### 6300:360 Entrepreneurial Field Project (3 Credits)

Prerequisites: 6300:201 or permission of the instructor. A practical field experience where students work in a consulting role on an actual entrepreneurial project involving a small business development center, a small business incubator, or an existing small business.

#### 6300:450 Business Plan Development (3 Credits)

Prerequisite: 6300:301. Students will work independently, with mentoring from the instructor, on an entrepreneurial project. Students will gain hands-on experience in developing a business plan for starting, acquiring, or expanding a business.

## Entrepreneurship, Certificate Certificate in Entrepreneurship (630000C)

The 12 credit Certificate in Entrepreneurship program, which is open to all university students, allows students to learn different aspects of entrepreneurship (for example, starting a business, buying a business or franchise, running a family business, corporate entrepreneurship or working for a small business) from faculty who have been successful entrepreneurs. The innovative program allows students to interact with entrepreneurs from the business community through guest speaking engagements, field trips, internships, and small business consulting projects.

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The following information has official approval of the **College of Business Administration**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

#### College of Business Administration Policies for Certificates:

- Complete all certificate requirements prior to graduation.
- Earn a 2.0 GPA in all certificate coursework.
- Complete all pre-requisites for each course.
- Courses may not be taken as pass/ fail.

- Complete at least 6 additional credits not needed for any other major, minor, or certificate.
- Earn at least 9 credits at The University of Akron in the CBA.
- Declare the certificate in the Business Undergraduate Advising Office, CBA room 260.

### Summary

Code	Title	Hours
Required Courses		12
Total Hours		12

#### Required Courses

Code	Title	Hours
3700:333	Social Entrepreneurship	3
or 6300:301	New Venture Creation	
or 6300:360	Entrepreneurial Field Project	
6300:201	Introduction to Entrepreneurship	3
6400:200	Foundations of Personal Finance	3
or 6400:300	Introduction to Finance	
or 6400:301	Principles of Finance	
6600:275	Professional Selling	3
Total Hours		12

Note: Students admitted to the College of Engineering with 48 credit hours completed are not required to take 6200:250 Spreadsheet Modeling & Decision Analysis as a prerequisite.

## Entrepreneurship, Minor Minor in Entrepreneurship (630000M)

By completing the 18-credit Entrepreneurship minor, any student at The University of Akron can acquire entrepreneurial skills to help start or buy a small business, work for a fast-growth business, family business, franchise, or non-profit. This program already has produced several new and successful businesses and has assisted in the growth of a variety of small businesses. Numerous enterprises have been created and built through this nationally recognized program.

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<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

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Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		12
Electives		6
Total Hours		18

## Required Courses

Code	Title	Hours
6300:201	Introduction to Entrepreneurship	3
6300:301	New Venture Creation	3
6600:205	Marketing Principles	3
6400:200	Foundations of Personal Finance <sup>1</sup>	3
or 6400:300	Introduction to Finance	
or 6400:301	Principles of Finance	
Total Hours		12

## Electives

Code	Title	Hours
<b>Select two of the following:</b>		<b>6</b>
6100:201	Introduction to E-Business	
6100:495	Internship in Business Administration	
6100:499	Independent Study in Business Administration	
6200:301	Cost Management and Control <sup>2</sup>	
6200:330	Contemporary Federal Taxation <sup>2</sup>	
6200:431	Business Entity Taxation <sup>2</sup>	
6200:440	Assurance Services and Professional Responsibilities <sup>2</sup>	
6200:460	Advanced Managerial Accounting <sup>2</sup>	
6300:360	Entrepreneurial Field Project	
6400:343	Investments	
6400:390	Real Estate Principles: Value Approach	
6400:403	Real Estate Finance	
6400:415	Risk Management: Life and Health Insurance <sup>2</sup>	
6400:473	Financial Statement Analysis <sup>2</sup>	
6500:310	Business Information Systems	
6500:333	Supply Chain and Operations Analysis	
6500:334	Service Operations Management	
6500:341	Human Resource Management	
6500:435	Quality Management & Control	
6500:457	International Management <sup>2</sup>	
6600:275	Professional Selling	
6600:432	Integrated Marketing Communications <sup>2</sup>	
6600:436		
6600:440	Brand Management <sup>2</sup>	
6600:475	Business Negotiations <sup>2</sup>	
6800:421	Foreign Market Entry <sup>2</sup>	
Total Hours		6

<sup>1</sup> Students admitted to the College of Engineering with 48 credit hours completed are not required to take 6200:250 Spreadsheet Modeling & Decision Analysis as a prerequisite. 3450:145 Algebra for Calculus (or higher level courses 3450:149 Precalculus Mathematics, 3450:215 Concepts of Calculus or 3450:221 Analytic Geometry-Calculus I) is a required pre-requisite for this course. If 3450:145 has not already been taken, please consult with your academic advisor regarding placement into this course. If students do not place into 3450:145, they may be required to take additional courses in the Math sequence in order to take 3450:145. Statistics courses such as 3470:250 Statistics for Everyday Life and 3470:260 Basic Statistics are not appropriate substitutions or prerequisites for 3450:145. For more information on UA's placement testing services, please call 330.972.6511, email testing@uakron.edu or visit Schrank Hall North room 153.

<sup>2</sup> Must be admitted to 4 year degree granting major.

## Finance

The primary mission of the Department of Finance is to provide a quality education to students that will prepare them for leadership positions within the finance profession in business. Students acquire financial knowledge and skills that can be applied in a variety of environments.

UA's four-year finance degree provides students with the opportunity to acquire general business and financial problem-solving skills – with a concentrated study in Financial Management, Financial Planning, or Risk Management and Insurance (RMI).

Graduates in finance develop the skills to: Succeed in financial management of both businesses and not-for-profit organizations; Make effective decisions regarding financial analysis, cash management, raising capital, funding new products, and mergers and acquisitions; Advise people in planning their personal finances to enhance their standard of living during their working years and in retirement; and Identify, analyze, and manage financial and operational risks that are inherent in both personal and business settings.

Financial Management develops students' ability to apply the principle of finance to management of a firm. While the curriculum focuses on the corporation, the skills acquired apply to any organization requiring financial management. Career opportunities include: Chief financial officers; Bank loan officers, credit managers, operations managers and financial analysts; Corporate credit managers; and Participants in all phases of mergers and acquisitions

Financial Planners do what many people don't like doing for themselves: Figure out how to manage their money. By meeting with clients and then helping them determine budgeting plans, investing decisions, insurance needs and other financial to-do's, financial planners get clients on track and help them stay focused on meeting their financial goals. This major qualifies students to sit for the Certified Financial Planner™(CFP®) Exam. Career opportunities include: Financial Planner; Paraplanner; Customer Service Associate; Wealth Management; and Portfolio Manager

RMI prepares students to identify, analyze and manage financial and operational risks that are inherent in both personal and business settings. They study property, liability, health and life insurance, employee benefit programs and government insurance programs. The RMI industry is dynamic and changing rapidly and employment opportunities are high. Careers in this field encompass three broad categories: corporate risk management, corporate insurance professional and insurance sales.

Career opportunities include: Loss control specialist/underwriter; Risk analyst/auditor; Claims adjuster/manager; Agency sales/service; and Bank compliance officer.

- Finance, Minor (p. 313)
- Financial Management, BBA (p. 314)
- Financial Planning, BBA (p. 317)
- Financial Planning, Certificate (p. 319)
- Financial Planning, Minor (p. 320)
- Risk Management & Insurance, BBA (p. 320)
- Risk Management & Insurance, Certificate (p. 323)
- Risk Management & Insurance, Minor (p. 323)

## Finance (6400)

### 6400:200 Foundations of Personal Finance (3 Credits)

Explores application of finance concepts in personal finance with emphasis on the personal financial planning process.

**Gen Ed:** Tier 3 - Critical Thinking

### 6400:220 Legal & Social Environment of Business (3 Credits)

Prerequisite: A minimum academic standing of a Sophomore or greater. Explores the legal and social environment in which modern business must function. The legal system, public and private law, and contemporary social and ethical issues are addressed.

### 6400:300 Introduction to Finance (3 Credits)

Prerequisites: 3450:145 and [3250:200 or 3250:244]. Studies the sources and uses of funds for business. Students cannot get credit for this class and 6400:301. (For non-College of Business Administration students).

### 6400:301 Principles of Finance (3 Credits)

Prerequisites: [3250:200 or 3250:244], [3450:145 with a grade of C- or better or higher math], 6200:201, and completion of one of the following: 6200:250, admittance to the College of Engineering with 48 credit hours completed, or admittance to the Actuarial Sciences program with 48 credit hours completed. An overview of the financial system and the major decision areas of the financial manager such as capital budgeting, financing, and working capital management.

### 6400:302 Intermediate Corporate Finance (3 Credits)

Prerequisite: 6400:301 with a grade of C or better. This second course in corporate finance builds upon 6400:301 to provide students with an analytic foundation for careers in business.

### 6400:321 Business Law I (3 Credits)

Prerequisite: completion of 64 credits. Discussions designed to develop legal reasoning within substantive areas of contractual obligation, agency relationships, partnerships, corporations, accountant's legal responsibility, federal securities regulation and antitrust law.

### 6400:322 Business Law II (3 Credits)

Prerequisite: 6400:321 and completion of 60 credits. Applications of Uniform Commercial Code in sales, commercial paper and secured transactions. Additional discussions include property, wills, estates, trusts, bailments, insurance, suretyship, bankruptcy, and labor law.

### 6400:323 International Business Law (3 Credits)

The law and international commercial transactions. Among the subjects covered are sovereignty; treaties; agreements; antitrust practices; property rights; international arbitration.

### 6400:332 Foundations of Financial Planning (3 Credits)

Prerequisite: [6400:300 or 6400:301] with a grade of C or better. Introduction to financial planning, including goal setting, cash management, credit, housing, education planning, and selected professional issues.

### 6400:338 Financial Markets & Institutions (3 Credits)

Prerequisite: 6400:300 or 6400:301 with a grade of C- or better. Studies the flows of funds. Analyzes major financial intermediaries. Money and capital markets reviewed with emphasis on interest rates and their impact upon administration of specific financial intermediaries.

### 6400:341 Contemporary Investments (3 Credits)

Prerequisite: 6400:300 or 6400:301. Fundamentals of investing for the individual investor. Students cannot get credit for this class and 6400:343. (For non-College of Business Administration students.)

### 6400:343 Investments (3 Credits)

Prerequisites: [6400:300 or 6400:301 with a grade of C- or better] and [3470:262, 3470:461, or 6500:304]. Range of security investment media explored, alternative investment programs considered and role of securities markets through which goals can be achieved studied.

### 6400:390 Real Estate Principles: Value Approach (3 Credits)

A study of real estate: the profession, the process, and the product. Emphasis is on real estate as a product and the valuation process. The measurement of value requires tool abilities in accounting, statistics and finance.

### 6400:402 Income Property Appraisal (3 Credits)

Prerequisites: at a minimum must have been admitted to a major in a four-year degree granting college; 6400:301 or 6140:300; or permission of instructor. Advanced course in real property appraisal and valuation. Techniques and concepts will be covered along with the theory underlying such techniques.

### 6400:403 Real Estate Finance (3 Credits)

Prerequisites: at a minimum must have been admitted to a major in a four-year degree granting college, [6400:301 or 6140:300]. Advanced course in real estate covering financing of and investment in real property. Included are investment techniques, methods, institutions, instruments, valuation, appraisal and policy issues.

### 6400:411 Estate and Financial Planning (3 Credits)

Prerequisites: Admission to a major in a four-year degree granting college, [6400:300 or 6400:301] with a minimum grade of C- or better, or permission of Finance Department Chair. Application of estate planning methodologies and policies to financial planning.

### 6400:414 Risk Management: Property and Casualty (3 Credits)

Prerequisites: Admission to a major in a four-year degree granting college, [6400:300 or 6400:301] with a grade of C- or better, or permission of instructor. Addresses tools for managing risk, legal concepts of insurance contracts, personal insurance and commercial property and casualty insurance policies as well as other risk issues.

### 6400:415 Risk Management: Life and Health Insurance (3 Credits)

Prerequisites: Admission to a major in a four-year degree granting college, and [6400:300 or 6400:301] with a grade of C- or better. Concepts of life and health insurance and risk management are addressed.

### 6400:417 Retirement Planning (3 Credits)

Prerequisites: Admission to a major in a four-year degree granting college, and [6400:300 or 6400:301] with a grade of C- or better, or permission of the instructor. An in-depth examination of retirement and estate planning objectives, methods, and strategies including the study of employee benefits plans, public and private pension funds, and lifetime strategies for maximization of estate assets.



**6400:418 Insurance Operations (3 Credits)**

Prerequisites: 6400:414 or 6400:415 or permission. This course provides a detailed examination of the composition, financial structure, and operation of the property-casualty insurance industry.

**6400:424 Legal Concepts of Real Estate (3 Credits)**

Prerequisite: at a minimum must have been admitted to a major in a four-year degree granting college. Study of concepts of law governing the many interests in real estate including acquisition, encumbrance, transfer, rights and obligations of parties, and the various state and federal regulations. The legal concepts of the business of real estate are likewise examined. Emphasis is on a managerial approach utilizing the case method.

**6400:432 Seminar in Financial Planning (3 Credits)**

Prerequisites: Must have been admitted to a major in a four-year degree granting college, 6200:330, 6200:410, 6400:417, [6400:332 with a grade of C or better], and [6400:341 or 6400:343]. Pre/Corequisite: 6400:415. Explores financial planning function, including contact, data acquisition, plan development and implementation; addressing planning techniques and financial planning ethical issues.

**6400:436 Commercial Bank Management (3 Credits)**

Prerequisites: Admission to a major in a four-year degree granting college, 6200:250, [6400:300 or 6400:301], and 6400:338. Study of administrative policy determination and decision making within the commercial bank. Analysis of policy making in areas of liquidity, loan and security investment and sources of funds.

**6400:437 International Business Finance (3 Credits)**

Prerequisites: Admission to a major in a four-year degree granting college, and [6400:300 or 6400:301] with a grade of C- or better. Theory and practice of financial wealth maximization in the international business enterprise.

**6400:438 International Banking (3 Credits)**

Prerequisites: admission to a major in a four-year degree granting college and [3250:461 or 6400:437]. Examination of recent trends in the expansion of international banking activities and associated revenue maximizing strategies.

**6400:448 Advanced Portfolio Management (3 Credits)**

Prerequisites: 6400:343 and [3250:325 or 6500:305]. Advanced Portfolio Management is a semester long case course. The case is the management of the UA Student-Managed Investment Fund. This course's primary activity will be the active management of the Fund. Current and selected topics relating to investments and financial markets will be discussed as needed in the rapidly changing world economy. The course will give the student practical experience in portfolio construction, management and evaluation by managing real money on a real time basis.

**6400:461 Enterprise Risk Management (3 Credits)**

Prerequisites: admission to a major in a four-year degree granting college, 6400:414, 6400:415, and 6400:418. Explores risk issues at the firm level with emphasis upon identification and management of risk to enhance firm value.

**6400:473 Financial Statement Analysis (3 Credits)**

Prerequisites: Admitted to a major in a four-year degree granting college, [6400:301 with a grade of C- or better and 6200:321], or 6400:302. Analysis and interpretation of the financial position and performance of the business firm from the perspective of the credit and financial analyst. Emphasizes mechanics and art of financial analysis.

**6400:485 Financial Strategy (3 Credits)**

Prerequisites: 6400:302 with grade of C or better and admission to a major in a four-year degree granting college. Pre/Corequisite: 6400:473. Case study based course with applications of financial management theories and tools to make decisions in capital budgeting, capital structure, and working capital management.

**6400:489 Advanced Financial Analytics (3 Credits)**

Prerequisites: Admitted to a major in a four-year degree granting college, senior standing, [6400:302 with a grade of C or better], 6400:338, 6400:343 and [6500:305 or 3250:325]. Capstone course with analysis of financial models using advanced spreadsheet techniques. Models from personal finance, corporate finance and investments are incorporated, with applications in financial planning, forecasting, portfolio theory and security valuation, option valuation, capital investment and cost of capital.

**6400:490 Selected Topics in Finance (1-3 Credits)**

Prerequisites: admitted to a major in a four-year degree granting college, 6200:250, and 6400:301. Provides opportunity for study of special topics not covered in current finance courses.

**6400:492 Internship in Financial Management (3 Credits)**

Prerequisite: Permission of designated faculty member. On the job experience with public or private sector organizations in the financial services field. Individual assignments are approved and supervised by the designated member of the faculty in the student's major field. Periodic reports and term papers required.

**6400:493 Internship in Financial Planning (3 Credits)**

Prerequisite: Permission of designated faculty member. On the job experience with public or private sector organizations in the financial services field. Individual assignments are approved and supervised by the designated member of the faculty in the student's major field. Periodic reports and term papers required.

**6400:494 Internship in Risk Management and Insurance (3 Credits)**

Prerequisite: Permission of designated faculty member. On the job experience with public or private sector organizations in the financial services field. Individual assignments are approved and supervised by the designated member of the faculty in the student's major field. Periodic reports and term papers required.

**6400:495 Research Project in Finance (1-3 Credits)**

Prerequisites: 6400:302, 6400:338, 6400:343 and admission to a major in a 4-year degree granting college. Pre/Corequisite: 6400:411 or 6400:414 or 6400:415 or 6400:417 or 6400:418 or 6400:432 or 6400:436 or 6400:437 or 6400:438 or 6400:448 or 6400:461 or 6400:473 or 6400:485 or 6400:489. Taken concurrently with or following a 400-level field Finance course. Involves independent out-of-class work on a project designed in consultation with the designated 400-level course instructor.

**6400:499 Independent Study: Finance (1-3 Credits)**

Prerequisite: Permission of department head. Provides means for individualized in-depth study of finance problem or problems from which student can derive significant benefit.

## Finance, Minor

### Minor in Finance (640000M)

Today's business environment requires increasingly efficient management of a firm's assets and the financial implications of the different assets. The 18-credit Finance minor will help students use established financial principles to meet organizations' or individuals' financial goals. This minor complements several majors, such as

Marketing Management, Information Systems, Sales Management, and others.

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

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Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

## Required Courses

Code	Title	Hours
6400:302	Intermediate Corporate Finance	3
6400:338	Financial Markets & Institutions	3
6400:343	Investments	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Complete 9 credits of the following:</b>		<b>9</b>
3250:326	Applied Econometrics II	
3250:410	Intermediate Microeconomics	
3250:427	Economic Forecasting	
6200:321	Financial Reporting and Analysis I	
6200:322	Financial Reporting and Analysis II	
6400:323	International Business Law	
6400:414	Risk Management: Property and Casualty <sup>1</sup>	
6400:415	Risk Management: Life and Health Insurance <sup>1</sup>	
6400:417	Retirement Planning <sup>1</sup>	
6400:436	Commercial Bank Management <sup>1</sup>	
6400:437	International Business Finance <sup>1</sup>	
6400:438	International Banking <sup>1</sup>	
6400:448	Advanced Portfolio Management <sup>1</sup>	
6400:461	Enterprise Risk Management <sup>1</sup>	
6400:473	Financial Statement Analysis <sup>1</sup>	
6400:489	Advanced Financial Analytics <sup>1</sup>	
6400:490	Selected Topics in Finance <sup>1</sup>	
6400:499	Independent Study: Finance	
Total Hours		9

<sup>1</sup> Must be admitted to 4 year degree granting major.

# Financial Management, BBA

## Bachelor of Business Administration in Financial Management (640004BBA)

More on the Financial Management major (<https://www.uakron.edu/cba/undergraduate/majors/corporate-finance.dot>)

The Financial Management major prepares students to use established financial principles to meet organizations' financial goals. Students learn how to effectively manage a firm's assets by taking required finance and accounting courses, and electives to allow further study in such areas as firm asset management, investment management, and capital budgeting.

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

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## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Additional Business Requirements		6-7
College of Business Administration Core		39
Financial Management Requirements		33
Experiential Learning		6
Additional Credits for Graduation *		2-1
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

**Tier I: Academic Foundations**

**12**

**Quantitative Reasoning: 3 credit hours**

3450:210 Calculus with Business Applications <sup>1</sup>  
or 3450:221 Analytic Geometry-Calculus I

**Speaking: 3 credit hours**

7600:105 Introduction to Public Speaking  
or 7600:106 Effective Oral Communication

**Writing: 6 credit hours**

3300:111 English Composition I  
3300:112 English Composition II

**Tier II: Disciplinary Areas 22****Arts/Humanities: 9 credit hours**

3400:200 Empires of the Ancient World

**Natural Sciences: 7 credit hours****Social Sciences: 6 credit hours**

3250:200 Principles of Microeconomics  
3850:100 Introduction to Sociology

**Tier III: Tagged Courses**

Select one class from each of the following subcategories:

**Complex Systems****Critical Thinking**

6400:200 Foundations of Personal Finance

**Domestic Diversity**

3850:100 Introduction to Sociology

**Global Diversity**

3400:200 Empires of the Ancient World

Review the General Education Requirements page for detailed course listings.

Total Hours 34

<sup>1</sup> It is strongly recommended that Finance majors take 3450:221 Analytic Geometry-Calculus I

**Additional Business Requirements**

Code	Title	Hours
<b>General Education Tier 1 Requirement</b>		
3450:210 or 3450:221	Calculus with Business Applications <sup>1</sup> Analytic Geometry-Calculus I	3-4
<b>Required Business Courses</b>		
3250:201 3250:244	Principles of Macroeconomics Introduction to Economic Analysis	3
<b>Recommended Business Courses</b>		
6100:110 6100:200	College of Business Administration Success Seminar <sup>2</sup> Personal Leadership Skills	
Total Hours		6-7

<sup>1</sup> Replaces 3450:145 Algebra for Calculus as the Tier 1 Quantitative Reasoning General Education Requirement for all business majors.

<sup>2</sup> Required for some 1st year students

**College of Business Administration Core <sup>1</sup>**

Code	Title	Hours
6100:230	Business Communication	3
6200:201	Accounting Principles I <sup>4</sup>	3
6200:202	Accounting Principles II <sup>4</sup>	3
6200:250	Spreadsheet Modeling & Decision Analysis <sup>4</sup>	3
6400:220	Legal & Social Environment of Business <sup>2</sup>	3
6400:301	Principles of Finance	3
6500:304	Business Statistics	3
6500:301	Management: Principles & Concepts	3
6500:305	Business Analytics <sup>3</sup>	3
6500:330	Principles of Supply Chain and Operations Management	3
6500:490	Strategic Management	3
6600:205	Marketing Principles	3
6800:305	International Business	3
Total Hours		39

<sup>1</sup> Student must also have a minimum cumulative GPA of 2.0 across the CBA Core.

<sup>2</sup> Students majoring in Accountancy are required to take 6200:424 Business Law instead of 6400:220 Legal & Social Environment of Business.

<sup>3</sup> Students majoring in Finance are strongly recommended to take 3250:325 Applied Econometrics I instead of 6500:305 Business Analytics.

<sup>4</sup> Accounting majors must complete with a grade of C or better.

**Financial Management Requirements**

Code	Title	Hours
<b>Finance Core <sup>1</sup></b>		
6400:302	Intermediate Corporate Finance	3
6400:338	Financial Markets & Institutions	3
6400:343	Investments	3
<b>Required Courses</b>		
6200:321	Financial Reporting and Analysis I <sup>2</sup>	3
6200:322	Financial Reporting and Analysis II <sup>2</sup>	3
6400:448	Advanced Portfolio Management	3
6400:473	Financial Statement Analysis <sup>2</sup>	3
6400:485	Financial Strategy <sup>2</sup>	3
6400:489	Advanced Financial Analytics <sup>2</sup>	3
<b>Finance Electives</b>		
Select two of the following:		6
3250:326	Applied Econometrics II	
3250:400	Intermediate Macroeconomics	
3250:410	Intermediate Microeconomics	
3250:427	Economic Forecasting	
6400:492	Internship in Financial Management	
6100:497	Honors Project in Business Administration	
6400:200	Foundations of Personal Finance	
6400:323	International Business Law	
6400:414	Risk Management: Property and Casualty	
6400:415	Risk Management: Life and Health Insurance	

6400:417	Retirement Planning	
6400:436	Commercial Bank Management	
6400:437	International Business Finance	
6400:438	International Banking	
6400:490	Selected Topics in Finance	
6400:495	Research Project in Finance	
6400:499	Independent Study: Finance	
Total Hours		33

<sup>1</sup> Finance Majors must earn a C or better in each of these classes.

<sup>2</sup> Must be admitted to 4 year degree granting Major.

## Experiential Learning

Code	Title	Hours
<b>Finance Students are required to complete six hours of experiential learning</b>		
6100:110	College of Business Administration Success Seminar	
6100:220	Global Culture and Business Field Experience	
6100:497	Honors Project in Business Administration	
6000:301	Cooperative Education	
6400:432	Seminar in Financial Planning	
6400:448	Advanced Portfolio Management	
6400:461	Enterprise Risk Management	
6400:485	Financial Strategy	
6400:489	Advanced Financial Analytics	
6400:492	Internship in Financial Management	
6500:254	Global Experience	
6800:406	Travel Abroad	
Total Hours		6

## Graduation Requirements – Review DPR for Status

- 120 Credit Hours
- CBA residency = Last 15 credits earned in CBA
- Overall GPA = 2.3
- Major GPA = 2.0
- Business & Economics GPA = 2.0

## Recommended Sequence

1st Year		
Fall Semester		Hours
3300:111	English Composition I	3
3450:145	Algebra for Calculus <sup>1</sup>	4
6200:250	Spreadsheet Modeling & Decision Analysis	3
7600:105	Introduction to Public Speaking	3
or 7600:106	or Effective Oral Communication	
Social Science Requirement		3
Hours		16
Spring Semester		
3250:200	Principles of Microeconomics	3
3300:112	English Composition II	3

3450:210	Calculus with Business Applications <sup>2</sup>	3
or 3450:221	or Analytic Geometry-Calculus I	
Humanities Requirement		3-4
Natural Science Requirement with Lab		4
Hours		16-17

### 2nd Year

#### Fall Semester

3250:201	Principles of Macroeconomics	3
6200:201	Accounting Principles I	3
6500:304	Business Statistics	3
Arts Requirement		3
Critical Thinking Requirement		3
Hours		15

#### Spring Semester

3250:325	Applied Econometrics I <sup>3</sup>	3
6200:202	Accounting Principles II	3
6400:301	Principles of Finance	3
6600:205	Marketing Principles	3
Natural Science Requirement		3
Hours		15

### 3rd Year

#### Fall Semester

6200:321	Financial Reporting and Analysis I	3
6400:338	Financial Markets & Institutions	3
6400:343	Investments	3
6500:301	Management: Principles & Concepts	3
Arts or Humanities Requirement		4-3
Hours		16-15

#### Spring Semester

6200:322	Financial Reporting and Analysis II	3
6400:302	Intermediate Corporate Finance	3
6500:330	Principles of Supply Chain and Operations Management	3
6800:305	International Business	3
Complex Systems Requirement		3
Hours		15

### 4th Year

#### Fall Semester

6400:220	Legal & Social Environment of Business	3
6400:448	Advanced Portfolio Management	3
6400:473	Financial Statement Analysis	3
6400:485	Financial Strategy	3
Finance Elective		3
Hours		15

#### Spring Semester

6400:489	Advanced Financial Analytics	3
6500:490	Strategic Management	3
Global Diversity Requirement		3
Finance Elective		3
Hours		12
Total Hours		120

- <sup>1</sup> Minimum grade of C-; or higher level math
- <sup>2</sup> 3450:221 is strongly recommended for finance majors
- <sup>3</sup> Strongly recommended for finance majors

# Financial Planning, BBA

## Bachelor of Business Administration in Financial Planning (640006BBA)

More on the Financial Planning major (<https://www.uakron.edu/cba/undergraduate/majors/financial-planning.dot>)

Financial Planning majors must complete the 9 hour finance core, 18 hours of additional required coursework and 6 hours of electives in the program. Successful completion of this program qualifies the student to sit for the Certified Financial Planner Certification Examination (CFP®).

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

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### Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Additional Business Requirements	3
	College of Business Administration Core	39
	Financial Planning Requirements	33
	Experiential Learning	6
	Additional Credits for Graduation *	5
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

### Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

<b>Tier I: Academic Foundations</b>	<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>	
3450:210	Calculus with Business Applications <sup>1</sup> or 3450:221 Analytic Geometry-Calculus I
<i>Speaking: 3 credit hours</i>	
7600:105	Introduction to Public Speaking or 7600:106 Effective Oral Communication
<i>Writing: 6 credit hours</i>	
3300:111	English Composition I
3300:112	English Composition II
<b>Tier II: Disciplinary Areas</b>	<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>	
3400:200	Empires of the Ancient World
<i>Natural Sciences: 7 credit hours</i>	
<i>Social Sciences: 6 credit hours</i>	
3250:200	Principles of Microeconomics
3850:100	Introduction to Sociology
<b>Tier III: Tagged Courses</b>	
<i>Select one class from each of the following subcategories:</i>	
Complex Systems	
Critical Thinking	
6400:200	Foundations of Personal Finance
Domestic Diversity	
3850:100	Introduction to Sociology
Global Diversity	
3400:200	Empires of the Ancient World
<i>Review the General Education Requirements page for detailed course listings.</i>	
<b>Total Hours</b>	<b>34</b>

<sup>1</sup> Finance students are strongly encouraged to take 3450:221 Analytic Geometry-Calculus I

### Additional Business Requirements

Code	Title	Hours
<b>General Education Tier 1 Requirement</b>		
3450:210	Calculus with Business Applications <sup>1</sup> or 3450:221 Analytic Geometry-Calculus I	3-4
<b>Required Business Courses</b>		
3250:201	Principles of Macroeconomics	3
3250:244	Introduction to Economic Analysis	
<b>Recommended Business Courses</b>		
6100:110	College of Business Administration Success Seminar <sup>2</sup>	
6100:200	Personal Leadership Skills	
<b>Total Hours</b>		<b>6-7</b>

- <sup>1</sup> Replaces 3450:145 Algebra for Calculus as the Tier 1 Quantitative Reasoning General Education Requirement for all business majors.
- <sup>2</sup> Required for some 1st year students

## College of Business Administration Core <sup>1</sup>

Code	Title	Hours
6100:230	Business Communication	3
6200:201	Accounting Principles I <sup>4</sup>	3
6200:202	Accounting Principles II <sup>4</sup>	3
6200:250	Spreadsheet Modeling & Decision Analysis <sup>4</sup>	3
6400:220	Legal & Social Environment of Business <sup>2</sup>	3
6400:301	Principles of Finance	3
6500:304	Business Statistics	3
6500:301	Management: Principles & Concepts	3
6500:305	Business Analytics <sup>3</sup>	3
6500:330	Principles of Supply Chain and Operations Management	3
6500:490	Strategic Management	3
6600:205	Marketing Principles	3
6800:305	International Business	3
Total Hours		39

- <sup>1</sup> Student must also have a minimum cumulative GPA of 2.0 across the CBA Core.
- <sup>2</sup> Students majoring in Accountancy are required to take 6200:424 Business Law instead of 6400:220 Legal & Social Environment of Business.
- <sup>3</sup> Students majoring in Finance are strongly recommended to take 3250:325 Applied Econometrics I instead of 6500:305 Business Analytics.
- <sup>4</sup> Accounting majors must complete with a grade of C or better.

## Financial Planning Requirements

Code	Title	Hours
<b>Finance Core <sup>1</sup></b>		
6400:302	Intermediate Corporate Finance	3
6400:338	Financial Markets & Institutions	3
6400:343	Investments	3
<b>Required Courses</b>		
6200:330	Contemporary Federal Taxation <sup>2,3</sup>	3
6400:332	Foundations of Financial Planning	3
6400:411	Estate and Financial Planning	3
6400:415	Risk Management: Life and Health Insurance <sup>2</sup>	3
6400:417	Retirement Planning <sup>2</sup>	3
6400:432	Seminar in Financial Planning <sup>2</sup>	3
<b>Electives</b>		
Select six credits of the following:		6
3600:362	Business Ethics	
6100:497	Honors Project in Business Administration	
6400:414	Risk Management: Property and Casualty	
6400:418	Insurance Operations	
6400:436	Commercial Bank Management	
6400:437	International Business Finance	

6400:438	International Banking
6400:448	Advanced Portfolio Management
6400:461	Enterprise Risk Management
6400:473	Financial Statement Analysis
6400:485	Financial Strategy
6400:489	Advanced Financial Analytics
6400:490	Selected Topics in Finance
6400:493	Internship in Financial Planning <sup>4</sup>
6400:495	Research Project in Finance
6400:499	Independent Study: Finance
6500:341	Human Resource Management
6600:275	Professional Selling

Total Hours 33

- <sup>1</sup> Finance Majors must earn a C or better in each of these classes.
- <sup>2</sup> Must be admitted to 4 year degree granting Major.
- <sup>3</sup> 6200:321 Financial Reporting and Analysis I, corequisite for 6200:330 Contemporary Federal Taxation, can be waived for Financial Planning majors.
- <sup>4</sup> Students are strongly encouraged to complete 6400:493 Internship in Financial Planning.

## Experiential Learning

Code	Title	Hours
<i>Finance Students are required to complete six hours of experiential learning</i>		6
6100:110	College of Business Administration Success Seminar	
6100:220	Global Culture and Business Field Experience	
6100:497	Honors Project in Business Administration	
6000:301	Cooperative Education	
6400:432	Seminar in Financial Planning	
6400:448	Advanced Portfolio Management	
6400:461	Enterprise Risk Management	
6400:485	Financial Strategy	
6400:489	Advanced Financial Analytics	
6400:493	Internship in Financial Planning	
6500:254	Global Experience	
6800:406	Travel Abroad	
Total Hours		6

## Graduation Requirements – Review DPR for Status

- 120 Credit Hours
- CBA residency = Last 15 credits earned in CBA
- Overall GPA = 2.3
- Major GPA = 2.0
- Business & Economics GPA = 2.0

## Recommended Sequence

### 1st Year

Fall Semester		Hours
3300:111	English Composition I	3
3450:145	Algebra for Calculus <sup>1</sup>	4
6200:250	Spreadsheet Modeling & Decision Analysis	3
7600:105 or 7600:106	Introduction to Public Speaking or Effective Oral Communication	3
	Social Science Requirement	3
Hours		16

### Spring Semester

3250:200	Principles of Microeconomics	3
3300:112	English Composition II	3
3450:210 or 3450:221	Calculus with Business Applications <sup>2</sup> or Analytic Geometry-Calculus I	3
	Humanities Requirement	3-4
	Natural Science Requirement with Lab	4
Hours		16-17

### 2nd Year

Fall Semester		Hours
3250:201	Principles of Macroeconomics	3
6200:201	Accounting Principles I	3
6500:304	Business Statistics	3
	Arts Requirement	3
	Critical Thinking Requirement	3
Hours		15

### Spring Semester

3250:325	Applied Econometrics I <sup>3</sup>	3
6200:202	Accounting Principles II	3
6400:301	Principles of Finance	3
6600:205	Marketing Principles	3
	Natural Science Requirement	3
Hours		15

### 3rd Year

Fall Semester		Hours
6200:410	Taxation for Financial Planning	3
6400:302	Intermediate Corporate Finance	3
6400:332	Foundations of Financial Planning	3
6500:301	Management: Principles & Concepts	3
	Arts or Humanities Requirement	4-3
Hours		16-15

### Spring Semester

6200:330	Contemporary Federal Taxation	3
6400:338	Financial Markets & Institutions	3
6400:343	Investments	3
6500:330	Principles of Supply Chain and Operations Management	3
6800:305	International Business	3
Hours		15

### 4th Year

Fall Semester		Hours
6400:220	Legal & Social Environment of Business	3

6400:415	Risk Management: Life and Health Insurance	3
6400:417	Retirement Planning	3
	Complex Systems Requirement	3
	Finance Elective	3
Hours		15

### Spring Semester

6400:432	Seminar in Financial Planning	3
6500:490	Strategic Management	3
	Global Diversity Requirement	3
	Finance Elective	3
Hours		12
Total Hours		120

<sup>1</sup> Minimum grade of C-; or a higher level math

<sup>2</sup> 3450:221 is recommended for finance majors

<sup>3</sup> Strongly recommended for finance majors

## Financial Planning, Certificate Certificate in Financial Planning (640006C)

The 24 credit Certificate in Financial Planning will help students acquire the educational foundation for a career in financial planning and will qualify them to take the Certified Financial Planner Certification Examination.

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

The following information has official approval of the **Department of Finance** and the **College of Business Administration**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

### College of Business Administration Policies for Certificates:

- Complete all certificate requirements prior to graduation.
- Earn a 2.0 GPA in all certificate coursework.
- Complete all prerequisites for each course.
- Courses may not be taken as pass/fail.
- Complete at least 6 additional credits not needed for any other major, minor, or certificate.
- Earn at least 9 credits at The University of Akron in the CBA.
- Declare the certificate in the Business Undergraduate Advising Office, CBA room 260.

## Summary

Code	Title	Hours
Required Courses		24
Total Hours		24

## Required Courses

Code	Title	Hours
6400:300 or 6400:301	Introduction to Finance (non-Bus majors) <sup>1</sup> Principles of Finance	3
6400:332	Foundations of Financial Planning	3
6200:330	Contemporary Federal Taxation <sup>2,3</sup>	3
6400:341 or 6400:343	Contemporary Investments (non-Bus majors) Investments	3
6400:411	Estate and Financial Planning	3
6400:415	Risk Management: Life and Health Insurance <sup>2</sup>	3
6400:417	Retirement Planning <sup>2</sup>	3
6400:432	Seminar in Financial Planning <sup>2</sup>	3
Total Hours		24

<sup>1</sup> Students admitted to the College of Engineering with 48 credit hours completed are not required to take 6200:250 Spreadsheet Modeling & Decision Analysis.

<sup>2</sup> Must be admitted to 4 year degree granting major.

<sup>3</sup> 6200:321 Financial Reporting and Analysis I, the corequisite for 6200:330 Contemporary Federal Taxation, can be waived for Financial Planning Certificates.

## Financial Planning, Minor Minor in Financial Planning (640006M)

Financial planning prepares you to assist individuals to develop short and long term financial goals and to utilize financial strategies and products to reach those goals. The 24 credit minor in Financial Planning helps students start acquiring the educational foundation for a career in financial planning and will qualify them to take the Certified Financial Planner Certification Examination

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

The following information has official approval of the **Department of Finance** and the **College of Business Administration**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		24
Total Hours		24

## Required Courses

Code	Title	Hours
6400:300 or 6400:301	Introduction to Finance (non-Bus majors) Principles of Finance	3
6400:332	Foundations of Financial Planning	3

6200:330	Contemporary Federal Taxation <sup>1,2</sup>	3
6400:341 or 6400:343	Contemporary Investments (non-Bus majors) Investments	3
6400:411	Estate and Financial Planning	3
6400:415	Risk Management: Life and Health Insurance <sup>1</sup>	3
6400:417	Retirement Planning <sup>1</sup>	3
6400:432	Seminar in Financial Planning <sup>1</sup>	3
Total Hours		24

<sup>1</sup> Must be admitted to 4 year degree granting Major.

<sup>2</sup> 6200:321 Financial Reporting and Analysis I, the corequisite for 6200:330 Contemporary Federal Taxation, can be waived for Financial Planning minors.

## Risk Management & Insurance, BBA Bachelor of Business Administration in Risk Management and Insurance (640003BBA)

More on the Risk Management and Insurance major (<https://www.uakron.edu/cba/undergraduate/majors/risk-management-and-insurance.dot>)

The professional opportunities in risk management and insurance are expanding rapidly. The Management and Insurance degree provides students with the educational foundation for a career in the risk management and insurance fields.

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

The following information has official approval of **The Department of Finance** and **The College of Business Administration**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Additional Business Requirements		3
College of Business Administration Core		39
Risk Management & Insurance Requirements		33
Experiential Learning		6
Additional Credits for Graduation *		5
Total Hours		120



\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

3450:210 Calculus with Business Applications <sup>1</sup>  
or 3450:221 Analytic Geometry-Calculus I

*Speaking: 3 credit hours*

7600:105 Introduction to Public Speaking  
or 7600:106 Effective Oral Communication

*Writing: 6 credit hours*

3300:111 English Composition I  
3300:112 English Composition II

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

3400:200 Empires of the Ancient World

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

3250:200 Principles of Microeconomics  
3850:100 Introduction to Sociology

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

6400:200 Foundations of Personal Finance

Domestic Diversity

3850:100 Introduction to Sociology

Global Diversity

3400:200 Empires of the Ancient World

*Review the General Education Requirements page for detailed course listings.*

Total Hours	34
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<sup>1</sup> Finance majors are strongly encouraged to take 3450:221 Analytic Geometry-Calculus I

## Additional Business Requirements

Code	Title	Hours
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### General Education Tier 1 Requirement

3450:210 or 3450:221	Calculus with Business Applications <sup>1</sup> Analytic Geometry-Calculus I	3-4
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### Required Business Courses

3250:201	Principles of Macroeconomics	3
3250:244	Introduction to Economic Analysis	

### Recommended Business Courses

6100:110	College of Business Administration Success Seminar <sup>2</sup>	
6100:200	Personal Leadership Skills	
Total Hours		6-7

<sup>1</sup> Replaces 3450:145 Algebra for Calculus as the Tier 1 Quantitative Reasoning General Education Requirement for all business majors.

<sup>2</sup> Required for some 1st year students

## College of Business Administration Core <sup>1</sup>

Code	Title	Hours
6100:230	Business Communication	3
6200:201	Accounting Principles I <sup>4</sup>	3
6200:202	Accounting Principles II <sup>4</sup>	3
6200:250	Spreadsheet Modeling & Decision Analysis <sup>4</sup>	3
6400:220	Legal & Social Environment of Business <sup>2</sup>	3
6400:301	Principles of Finance	3
6500:304	Business Statistics	3
6500:301	Management: Principles & Concepts	3
6500:305	Business Analytics <sup>3</sup>	3
6500:330	Principles of Supply Chain and Operations Management	3
6500:490	Strategic Management	3
6600:205	Marketing Principles	3
6800:305	International Business	3
Total Hours		39

<sup>1</sup> Student must also have a minimum cumulative GPA of 2.0 across the CBA Core.

<sup>2</sup> Students majoring in Accountancy are required to take 6200:424 Business Law instead of 6400:220 Legal & Social Environment of Business.

<sup>3</sup> Students majoring in Finance are strongly recommended to take 3250:325 Applied Econometrics I instead of 6500:305 Business Analytics.

<sup>4</sup> Accounting majors must complete with a grade of C or better.

## Risk Management & Insurance Requirements

Code	Title	Hours
<b>Finance Core <sup>1</sup></b>		
6400:302	Intermediate Corporate Finance	3
6400:338	Financial Markets & Institutions	3
6400:343	Investments	3

### Required Courses

6400:414	Risk Management: Property and Casualty <sup>2</sup>	3
6400:415	Risk Management: Life and Health Insurance <sup>2</sup>	3
6400:418	Insurance Operations <sup>2</sup>	3
6400:461	Enterprise Risk Management <sup>2</sup>	3

6400:489	Advanced Financial Analytics <sup>2</sup>	3
<b>Finance Electives</b>		
Select nine credits of the following:		9
3250:326	Applied Econometrics II	
3250:400	Intermediate Macroeconomics	
3250:410	Intermediate Microeconomics	
3250:427	Economic Forecasting	
3470:471	Introduction to Actuarial Science	
3470:472	Actuarial Models	
6100:497	Honors Project in Business Administration	
6200:320	Accounting Systems and Internal Control	
6200:454	Information Systems Security	
6400:323	International Business Law	
6400:417	Retirement Planning	
6400:432	Seminar in Financial Planning	
6400:436	Commercial Bank Management	
6400:437	International Business Finance	
6400:438	International Banking	
6400:448	Advanced Portfolio Management	
6400:485	Financial Strategy	
6400:490	Selected Topics in Finance	
6400:494	Internship in Risk Management and Insurance	
6400:495	Research Project in Finance	
6400:499	Independent Study: Finance	
6500:341	Human Resource Management	
6600:275	Professional Selling	
Total Hours		33

<sup>1</sup> Finance Majors must earn a C or better in each of these classes.

<sup>2</sup> Must be admitted to 4 year degree granting Major.

## Experiential Learning

Code	Title	Hours
<b>Finance Students are required to complete six hours of experiential learning</b>		
6100:110	College of Business Administration Success Seminar	
6100:220	Global Culture and Business Field Experience	
6100:497	Honors Project in Business Administration	
6000:301	Cooperative Education	
6400:432	Seminar in Financial Planning	
6400:448	Advanced Portfolio Management	
6400:461	Enterprise Risk Management	
6400:485	Financial Strategy	
6400:489	Advanced Financial Analytics	
6400:494	Internship in Risk Management and Insurance	
6500:254	Global Experience	
6800:406	Travel Abroad	
Total Hours		6

## Graduation Requirements – Review DPR for Status

- 120 Credit Hours
- CBA residency = Last 15 credits earned in CBA
- Overall GPA = 2.3
- Major GPA = 2.0
- Business & Economics GPA = 2.0

## Recommended Sequence

1st Year		Hours
<b>Fall Semester</b>		
3300:111	English Composition I	3
3450:145	Algebra for Calculus <sup>1</sup>	4
6200:250	Spreadsheet Modeling & Decision Analysis	3
7600:105 or 7600:106	Introduction to Public Speaking or Effective Oral Communication	3
Social Science Requirement		3
Hours		16
<b>Spring Semester</b>		
3250:200	Principles of Microeconomics	3
3300:112	English Composition II	3
3450:210 or 3450:221	Calculus with Business Applications <sup>2</sup> or Analytic Geometry-Calculus I	3
Humanities Requirements		3-4
Natural Science Requirement with Lab		4
Hours		16-17
<b>2nd Year</b>		
<b>Fall Semester</b>		
3250:201	Principles of Macroeconomics	3
6200:201	Accounting Principles I	3
6500:304	Business Statistics	3
Arts Requirement		3
Critical Thinking Requirement		3
Hours		15
<b>Spring Semester</b>		
3250:325	Applied Econometrics I <sup>3</sup>	3
6200:202	Accounting Principles II	3
6400:301	Principles of Finance	3
6600:205	Marketing Principles	3
Natural Science Requirement		3
Hours		15
<b>3rd Year</b>		
<b>Fall Semester</b>		
6400:302	Intermediate Corporate Finance	3
6400:338	Financial Markets & Institutions	3
6400:414	Risk Management: Property and Casualty	3
6500:301	Management: Principles & Concepts	3
Arts or Humanities Requirement		4-3
Hours		16-15
<b>Spring Semester</b>		
6400:343	Investments	3

6400:415	Risk Management: Life and Health Insurance	3
6500:330	Principles of Supply Chain and Operations Management	3
6800:305	International Business	3
	Finance Elective	3
	Hours	15
<b>4th Year</b>		
<b>Fall Semester</b>		
6400:220	Legal & Social Environment of Business	3
6400:418	Insurance Operations	3
6400:489	Advanced Financial Analytics	3
	Complex Systems Requirement	3
	Finance Elective	3
	Hours	15
<b>Spring Semester</b>		
6400:461	Enterprise Risk Management	3
6500:490	Strategic Management	3
	Global Diversity Requirement	3
	Finance Elective	3
	Hours	12
	Total Hours	120

<sup>1</sup> Minimum grade of C; or a higher level math

<sup>2</sup> 3450:221 is recommended for finance majors

<sup>3</sup> Recommended for finance majors

## Risk Management & Insurance, Certificate

### Certificate in Risk Management & Insurance (640005C)

The professional opportunities in risk management and insurance are expanding rapidly. The Risk Management and Insurance certificate helps students acquire the educational foundation for a career in the risk management and insurance fields.

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

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#### College of Business Administration Policies for Certificates:

- Complete all certificate requirements prior to graduation.
- Earn a 2.0 GPA in all certificate coursework.
- Complete all prerequisites for each course.
- Courses may not be taken as pass/fail.
- Complete at least 6 additional credits not needed for any other major, minor, or certificate.

- Earn at least 9 credits at The University of Akron in the CBA.
- Declare the certificate in the Business Undergraduate Advising Office, CBA room 260.

## Summary

Code	Title	Hours
Required Courses		12
Electives		6
Total Hours		18

## Required Courses

Code	Title	Hours
6400:414	Risk Management: Property and Casualty <sup>1</sup>	3
6400:415	Risk Management: Life and Health Insurance <sup>1</sup>	3
6400:418	Insurance Operations <sup>1</sup>	3
6400:461	Enterprise Risk Management <sup>1</sup>	3
Total Hours		12

## Electives

Code	Title	Hours
<b>Select two of the following:</b>		
3250:380	Money & Banking	3
3250:410	Intermediate Microeconomics	3
3250:427	Economic Forecasting	3
3470:471	Introduction to Actuarial Science	3
3470:472	Actuarial Models	3
6200:320	Accounting Systems and Internal Control	3
6200:454	Information Systems Security	3
6400:200	Foundations of Personal Finance	3
6400:300	Introduction to Finance (non-Bus majors) <sup>2</sup>	3
	or 6400:301 Principles of Finance	3
6400:338	Financial Markets & Institutions	3
6400:343	Investments	3
6500:341	Human Resource Management	3
6600:275	Professional Selling	3
Total Hours		6

<sup>1</sup> Must be admitted to 4 year degree granting major.

<sup>2</sup> Students admitted to the College of Engineering with 48 credit hours completed are not required to take 6200:250 Spreadsheet Modeling & Decision Analysis. Allows actuarial science students with 48 credit hours (including courses in progress) to waive the 6200:250 Spreadsheet Modeling & Decision Analysis prerequisite for 6400:301 Principles of Finance.

## Risk Management & Insurance, Minor Minor in Risk Management & Insurance (640003M)

The professional opportunities in risk management and insurance are expanding rapidly. This program provides an opportunity for students to earn a recognized credential in RMI while completing another major at the University.

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

The following information has official approval of the **Department of Finance** and the **College of Business Administration**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		12
Electives		6
Total Hours		18

## Required Courses

Code	Title	Hours
6400:414	Risk Management: Property and Casualty <sup>1</sup>	3
6400:415	Risk Management: Life and Health Insurance <sup>1</sup>	3
6400:418	Insurance Operations (Fall only) <sup>1</sup>	3
6400:461	Enterprise Risk Management (Spring only)	3
Total Hours		12

## Electives

Code	Title	Hours
<b>Select two of the following:</b>		
3250:380	Money & Banking	6
or 6400:338	Financial Markets & Institutions	
3250:410	Intermediate Microeconomics	6
3250:427	Economic Forecasting	
3470:471	Introduction to Actuarial Science	6
3470:472	Actuarial Models	
6400:200	Foundations of Personal Finance	6
6400:300	Introduction to Finance <sup>2</sup>	
or 6400:301	Principles of Finance	6
6400:302	Intermediate Corporate Finance	
6400:323	International Business Law (Spring only)	6
6400:341	Contemporary Investments	
or 6400:343	Investments	6
6400:436	Commercial Bank Management <sup>1</sup>	
6400:437	International Business Finance <sup>1</sup>	6
6400:438	International Banking <sup>1</sup>	
6400:448	Advanced Portfolio Management	6
6400:473	Financial Statement Analysis <sup>1</sup>	
6400:489	Advanced Financial Analytics	6
6400:490	Selected Topics in Finance <sup>1</sup>	
6400:495	Research Project in Finance <sup>1</sup>	6
6400:499	Independent Study: Finance <sup>1</sup>	
6500:341	Human Resource Management	6

6600:275	Professional Selling	6
Total Hours		6

- <sup>1</sup> Must be admitted to 4 year degree granting major.
- <sup>2</sup> 3450:145 Algebra for Calculus (or higher level courses 3450:149 Precalculus Mathematics, 3450:215 Concepts of Calculus or 3450:221 Analytic Geometry-Calculus I is a required prerequisite for this course. If 3450:145 has not already been taken, please consult with your academic advisor regarding placement into this course. If students do not place into 3450:145, they may be required to take additional courses in the Math sequence in order to take 3450:145. Statistics courses such as 3470:250 Statistics for Everyday Life and 3470:260 Basic Statistics are not appropriate substitutions or prerequisites for 3450:145.
- For more information on UA's placement testing services, please call 330.972.6511, email [testing@uakron.edu](mailto:testing@uakron.edu) or visit Schrank Hall North room 153.

## General Business

The general Business Administration majors and minors are designed to enrich a student's academic and professional experience.

The Business Administration major is intended to offer flexibility to the student. Some students who intend to pursue careers in small business management, whether by creating or acquiring a business, or perhaps taking over a family business enterprise, may find the flexibility of this degree program best for them. Other students with more full-time professional experience may also prefer the broader course selection available in this degree program.

The Business Administration major requires students to complete the CBA core curriculum and 27 credit hours from specified courses. Students majoring in general business must complete an approved College of Business Administration minor.

The General Business Administration minors are designed for students in a major outside of the College of Business Administration to enrich their academic experience and increase their potential career opportunities. Due to pre-requisites, students should allow two years to complete a minor in the College of Business Administration. Some courses include 3450:145 Algebra for Calculus as a pre-requisite.

The Undecided Business major is designed for students in the College of Business Administration who are uncertain about which major in the College of Business Administration to declare. Ideally, students should select a major by the start of their Sophomore year of college.

To declare a major or minor, please make an appointment with a College of Business Administration Academic Advisor by calling 330.972.7042 or scheduling an appointment online at [www.uakron.edu/cba/undergraduate/current-students/academic-advising.dot](http://www.uakron.edu/cba/undergraduate/current-students/academic-advising.dot) (<https://www.uakron.edu/cba/undergraduate/current-students/academic-advising.dot>).

- Business Administration for Non-Majors, Minor (p. 325)
- Business Administration, BBA (p. 326)
- Business Essentials for Engineering Majors, Minor (p. 327)
- Business Undecided, BBA (p. 328)
- Pre-MBA for Non-Business Majors, Minor (p. 329)

## Business Studies (6100)

### 6100:100 Career Planning in Business Administration (1 Credit)

Examines the academic, professional, and personal skills required for a successful business career. Develops student career plan. Provides exposure to the variety of career opportunities available in public and private sector organizations.

### 6100:101 Business Issues in a Connected World (3 Credits)

An introductory course that examines the 'forces' that are changing how business will be conducted in the 21st century, the 'factors' that determine the success of firms and the impact of both on individuals as consumers and professionals.

### 6100:110 College of Business Administration Success Seminar (1-3 Credits)

This course is designed to help new CBA students transition from high school or work to the college environment and begin the career development process.

### 6100:200 Personal Leadership Skills (1 Credit)

Prerequisite: Must have completed 32 credit hours. An introductory course that will expose students to leadership theory and practice in organizations. Students will have an opportunity to self-reflect and investigate leadership styles, ethical issues and influence methods.

### 6100:201 Introduction to E-Business (3 Credits)

Prerequisite: 24 credits. Provides a broad overview of e-business strategies, products and technologies. Discusses transformation of marketing, production and other business functions; and related legal, political, ethical and cultural issues.

### 6100:220 Global Culture and Business Field Experience (1-3 Credits)

Prerequisite: Sophomore standing. Students travel on faculty led trips and study international business practices. Global business practices are examined and aspects of local culture are explored.

### 6100:230 Business Communication (3 Credits)

Prerequisites: 3300:111, 3300:112, and [7600:105 or 7600:106]. Students will obtain the knowledge and ability use writing and oral communication skills in a professional environment to effectively persuade others and to mobilize action among various organizational stakeholders.

### 6100:350 Special Topics in Business (1-3 Credits)

Opportunity to study special topics and current issues in business. May be repeated with a change of subject.

### 6100:495 Internship in Business Administration (3 Credits)

Prerequisite: Permission of designated faculty member. On-the-job experience with public or private sector organizations in the student's major field of study. Individual assignments are approved and supervised by the designated member of the faculty in the student's major field. Periodic reports and term papers are required.

### 6100:497 Honors Project in Business Administration (1-3 Credits)

Prerequisite: senior standing in Honors Program. Individual directed research relevant to the student's major. Group integrated symposium or an individualized study format available.

### 6100:499 Independent Study in Business Administration (3 Credits)

Prerequisite: Permission of designated faculty member. Provides a means for individualized study of a problem(s) or issue in the student's major field of study.

## Business Administration for Non-Majors, Minor

### Minor in Business Administration for Non-Business Majors (602000M)

The 18-credit Business Administration Minor for Non-Business Majors is a way for a student in any major to gain a practical understanding of business.

To declare the minor, meet with an academic advisor in the College of Business Administration.

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

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Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		12
Electives		6
Total Hours		18

## Required Courses

Code	Title	Hours
6200:201	Accounting Principles I	3
6400:300	Introduction to Finance <sup>1</sup>	3
or 6400:200	Foundations of Personal Finance	
6500:301	Management: Principles & Concepts	3
6600:205	Marketing Principles	3
Total Hours		12

<sup>1</sup> 3450:145 Algebra for Calculus (or higher level courses 3450:149 Precalculus Mathematics, 3450:215 Concepts of Calculus or 3450:221 Analytic Geometry-Calculus I) is a required prerequisite for this course. If 3450:145 has not already been taken, please consult with your academic advisor regarding placement into this course. If students do not place into 3450:145, they may be required to take additional courses in the Math sequence in order to take 3450:145. Statistics courses such as 3470:250 Statistics for Everyday Life and 3470:260 Basic Statistics are not appropriate substitutions or a prerequisites for 3450:145.

For more information on UA's placement testing services, please call 330.972.6511, email [testing@uakron.edu](mailto:testing@uakron.edu) or visit Schrank Hall North room 153.

## Electives

Code	Title	Hours
<b>Select two of the following:</b>		<b>6</b>
6400:220	Legal & Social Environment of Business	
6800:305	International Business	
6200:xxx	Accountancy Class	
6300:xxx	Entrepreneurship Class	
6500:3xx/4xx	Management Upper Level Class	
Total Hours		6

## Business Administration, BBA Bachelor of Business Administration (602000BBA)

More on the Business Administration major (<https://www.uakron.edu/cba/undergraduate/majors/business-administration.dot>)

You will earn a degree from a globally recognized business school where the programs are taught by an accomplished and dedicated faculty and are supported by a network of business executives. You can major in a wide variety of interesting disciplines that are attractive to prospective employers. As a graduate, you will have leadership and collaboration competencies and be a data savvy, globally aware, enterprise thinker.

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Additional Business Requirements	6-7
	College of Business Administration Core	39
	Business Administration Requirements	45
Total Hours		124-125

## Recommended General Education Courses

Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

#### *Quantitative Reasoning: 3 credit hours*

3450:210 Calculus with Business Applications  
or 3450:221 Analytic Geometry-Calculus I

#### *Speaking: 3 credit hours*

7600:105 Introduction to Public Speaking  
or 7600:106 Effective Oral Communication

#### *Writing: 6 credit hours*

3300:111 English Composition I  
3300:112 English Composition II

### Tier II: Disciplinary Areas 22

#### *Arts/Humanities: 9 credit hours*

#### *Natural Sciences: 7 credit hours*

#### *Social Sciences: 6 credit hours*

3250:200 Principles of Microeconomics  
3850:100 Introduction to Sociology

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems  
Critical Thinking  
6400:200 Foundations of Personal Finance  
Domestic Diversity  
3850:100 Introduction to Sociology  
Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## Additional Business Requirements

Code	Title	Hours
<b>General Education Tier 1 Requirement</b>		
3450:210 or 3450:221	Calculus with Business Applications <sup>1</sup> Analytic Geometry-Calculus I	3-4

### Required Business Courses

3250:201	Principles of Macroeconomics	3
3250:244	Introduction to Economic Analysis	

### Recommended Business Courses

6100:110 College of Business Administration Success Seminar <sup>2</sup>

6100:200	Personal Leadership Skills	
Total Hours		6-7

- <sup>1</sup> Replaces 3450:145 Algebra for Calculus as the Tier 1 Quantitative Reasoning General Education Requirement for all business majors.
- <sup>2</sup> Required for some 1st year students

## College of Business Administration Core <sup>1</sup>

Code	Title	Hours
6100:230	Business Communication	3
6200:201	Accounting Principles I <sup>4</sup>	3
6200:202	Accounting Principles II <sup>4</sup>	3
6200:250	Spreadsheet Modeling & Decision Analysis <sup>4</sup>	3
6400:220	Legal & Social Environment of Business <sup>2</sup>	3
6400:301	Principles of Finance	3
6500:304	Business Statistics	3
6500:301	Management: Principles & Concepts	3
6500:305	Business Analytics <sup>3</sup>	3
6500:330	Principles of Supply Chain and Operations Management	3
6500:490	Strategic Management	3
6600:205	Marketing Principles	3
6800:305	International Business	3
Total Hours		39

- <sup>1</sup> Student must also have a minimum cumulative GPA of 2.0 across the CBA Core.
- <sup>2</sup> Students majoring in Accountancy are required to take 6200:424 Business Law instead of 6400:220 Legal & Social Environment of Business.
- <sup>3</sup> Students majoring in Finance are strongly recommended to take 3250:325 Applied Econometrics I instead of 6500:305 Business Analytics.
- <sup>4</sup> Accounting majors must complete with a grade of C or better.

## Business Administration Requirements

Code	Title	Hours
<b>Business Systems Course</b>		
<i>Select one of the following:</i> <sup>1</sup>		
6200:320	Accounting Systems and Internal Control	
6200:454	Information Systems Security	
6500:310	Business Information Systems	
<b>Business Elective</b>		<b>3</b>
<i>Select one of the following:</i>		
6100:495	Internship in Business Administration <sup>2</sup>	
6300:201	Introduction to Entrepreneurship	
6600:275	Professional Selling	
<b>Accounting Courses</b>		<b>6</b>
<i>Select two 300-400 level Accounting courses</i>		
6200:320	Accounting Systems and Internal Control (Recommended)	
6200:454	Information Systems Security (Recommended)	
<b>Finance Courses</b>		<b>6</b>
6400:200	Foundations of Personal Finance (Required)	

Select one 300-400 level Finance course

6400:338	Financial Markets & Institutions (Recommended) or 6400:343 Investments	
<b>Management Courses</b>		<b>6</b>
<i>Select two 300-400 level Management courses</i>		
<b>Marketing Courses</b>		<b>6</b>
<i>Select two 300-400 level Marketing courses</i>		
<b>Approved Business Minor <sup>3</sup></b>		<b>18</b>
Total Hours		45

- <sup>1</sup> This course can be fulfilled through other major requirements (not an additional course).
- <sup>2</sup> Students must be admitted to a CBA major and meet requirements.
- <sup>3</sup> Approved List of Business Minors: Financial Planning, Finance for Business Majors, Human Resource Management, Information Systems, Supply Chain Management, Consumer Marketing, Professional Selling

## Graduation Requirements – Review DPR for Status

- 120 Credit Hours
- CBA residency = Last 15 credits earned in CBA
- Overall GPA = 2.3
- Major GPA = 2.0

## Business Essentials for Engineering Majors, Minor

### Minor in Business Essentials for Engineering Majors (602002M)

The 18-credit Business Minor for Engineering Majors is designed to help prepare students in the College of Engineering to interact with general managers in their engineering careers, as well as to pursue advanced study in business or engineering management.

To declare the minor, meet with an academic advisor in the College of Business Administration.

College of Business Administration Undergraduate Programs <http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

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Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		15
Electives		3
Total Hours		18

## Required Courses

Code	Title	Hours
3250:244	Introduction to Economic Analysis	3
6200:201	Accounting Principles I	3
6400:220	Legal & Social Environment of Business	3
6400:301	Principles of Finance <sup>1</sup>	3
6500:301 or 6600:205	Management: Principles & Concepts Marketing Principles	3
Total Hours		15

## Electives

Code	Title	Hours
<b>Select one of the following:</b>		<b>3</b>
4100:400	Engineering Management and Leadership	
4200:110	Project Management and Teamwork I	
or 4200:210	Project Management and Teamwork II	
or 4200:310	Project Management and Teamwork III	
or 4200:410	Project Management and Teamwork IV	
6400:302	Intermediate Corporate Finance	
6600:275	Professional Selling	
Total Hours		3

<sup>1</sup> 3450:145 Algebra for Calculus (or higher level courses 3450:149 Precalculus Mathematics, 3450:215 Concepts of Calculus or 3450:221 Analytic Geometry-Calculus I) is a required prerequisite for this course. If 3450:145 has not already been taken, please consult with your academic advisor regarding placement into this course. If students do not place into 3450:145, they may be required to take additional courses in the Math sequence in order to take 3450:145. Statistics courses such as 3470:250 Statistics for Everyday Life and 3470:260 Basic Statistics are not appropriate substitutions or a prerequisites for 3450:145. For more information on UA's placement testing services, please call 330.972.6511, email testing@uakron.edu or visit Schrank Hall North room 153.

## Business Undecided, BBA

### Business Undecided Major (601000BBA)

You will earn a degree from a globally recognized business school where the programs are taught by an accomplished and dedicated faculty and are supported by a network of business executives. You can major in a wide variety of interesting disciplines that are attractive to prospective employers. As a graduate, you will have leadership and collaboration competencies and be a data savvy, globally aware, enterprise thinker.

The Business Undecided major is designed for students who would like to study business, but are still exploring their options for majors within

business. Students should declare their major prior to earning 32 credit hours.

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

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## Requirements

### Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		

#### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

3450:210 Calculus with Business Applications  
or 3450:221 Analytic Geometry-Calculus I

*Speaking: 3 credit hours*

7600:105 Introduction to Public Speaking  
or 7600:106 Effective Oral Communication

*Writing: 6 credit hours*

3300:111 English Composition I  
3300:112 English Composition II

#### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

3250:200 Principles of Microeconomics  
3850:100 Introduction to Sociology

#### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

3850:100 Introduction to Sociology

Global Diversity



Review the General Education Requirements page for detailed course listings.

Total Hours 34

## Additional Business Requirements

Code	Title	Hours
<b>General Education Tier 1 Requirement</b>		
3450:210 or 3450:221	Calculus with Business Applications <sup>1</sup> Analytic Geometry-Calculus I	3-4
<b>Required Business Courses</b>		
3250:201 3250:244	Principles of Macroeconomics Introduction to Economic Analysis	3
<b>Recommended Business Courses</b>		
6100:110 6100:200	College of Business Administration Success Seminar <sup>2</sup> Personal Leadership Skills	
Total Hours		6-7

<sup>1</sup> Replaces 3450:145 Algebra for Calculus as the Tier 1 Quantitative Reasoning General Education Requirement for all business majors.

<sup>2</sup> Required for some 1st year students

## College of Business Administration Core <sup>1</sup>

Code	Title	Hours
6100:230	Business Communication	3
6200:201	Accounting Principles I <sup>4</sup>	3
6200:202	Accounting Principles II <sup>4</sup>	3
6200:250	Spreadsheet Modeling & Decision Analysis <sup>4</sup>	3
6400:220	Legal & Social Environment of Business <sup>2</sup>	3
6400:301	Principles of Finance	3
6500:304	Business Statistics	3
6500:301	Management: Principles & Concepts	3
6500:305	Business Analytics <sup>3</sup>	3
6500:330	Principles of Supply Chain and Operations Management	3
6500:490	Strategic Management	3
6600:205	Marketing Principles	3
6800:305	International Business	3
Total Hours		39

<sup>1</sup> Student must also have a minimum cumulative GPA of 2.0 across the CBA Core.

<sup>2</sup> Students majoring in Accountancy are required to take 6200:424 Business Law instead of 6400:220 Legal & Social Environment of Business.

<sup>3</sup> Students majoring in Finance are strongly recommended to take 3250:325 Applied Econometrics I instead of 6500:305 Business Analytics.

<sup>4</sup> Accounting majors must complete with a grade of C or better.

## Business Undecided Courses

Students should declare a major by 32 credit hours

Code	Title	Hours
<b>If you choose:</b>		
	Business Administration (with approved minor)	27
	Accounting	33
	Finance	33
	International Business (with approved minor)	38+
	Management	30-37
	Marketing	31

Once you decide on a major, please meet with a College of Business Administration advisor located in CBA room 260.

## Pre-MBA for Non-Business Majors, Minor

### Minor in Pre-MBA for Non-Business Majors (602001M)

The 18-credit Pre-MBA minor is a fast track for any undergraduate non-business major who wants to continue their studies and earn a Master's of Business Administration (MBA) at The University of Akron's College of Business Administration. The courses serve as a foundation for the MBA program and can reduce that program by up to 18 credit hours.

To declare the minor, meet with an academic advisor in the College of Business Administration.

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

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Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		15-18
Electives		3
Total Hours		18-21

## Required Courses

Code	Title	Hours
6200:201	Accounting Principles I	3
6200:250	Spreadsheet Modeling & Decision Analysis <sup>1</sup>	3
6400:220	Legal & Social Environment of Business	3
6400:301	Principles of Finance <sup>2</sup>	3
3250:200 & 3250:201 or 3250:244	Principles of Microeconomics and Principles of Macroeconomics Introduction to Economic Analysis	3-6
Total Hours		15-18

## Electives

Code	Title	Hours
<b>Select one of the following:</b>		<b>3</b>
6400:302	Intermediate Corporate Finance	
6500:301	Management: Principles & Concepts	
6600:205	Marketing Principles	
Total Hours		3

<sup>1</sup> Students admitted to a College of Engineering major or an Actuarial Science major with 48 credit hours are not required to take 6200:250 Spreadsheet Modeling & Decision Analysis.

<sup>2</sup> 3450:145 Algebra for Calculus (or higher level courses 3450:149 Precalculus Mathematics, 3450:215 Concepts of Calculus or 3450:221 Analytic Geometry-Calculus I) is a required prerequisite for this course. If 3450:145 has not already been taken, please consult with your academic advisor regarding placement into this course. If students do not place into 3450:145, they may be required to take additional courses in the Math sequence in order to take 3450:145. Statistics courses such as 3470:250 Statistics for Everyday Life and 3470:260 Basic Statistics are not appropriate substitutions or a prerequisites for 3450:145.

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## International Business

Rapid globalization of business creates new challenges and opportunities for businesses, large and small. Our curriculum is designed to prepare students to effectively understand and manage the complexity that globalization brings. Special emphasis is placed on the process of foreign market entry.

Students take the traditional business core classes in accounting, finance, management, marketing and technology, and then go on to take specialized classes in **Foreign Market Entry, International Finance, and International Management.**

Notable highlights include a study abroad program, proficiency in a foreign language and an **18 credit minor specialization.** The areas that can be used for the minor include: in the **College of Business Administration** – Marketing, Economics, Entrepreneurship, Finance, Financial Planning, Human Resource Management, Management Information Systems, Supply Chain/Operations Management and Sales Management; in the **College of Arts & Sciences** – English, Mathematics/ Applied Mathematics and General Philosophy.

All International Business majors must also participate in an approved study abroad program which includes the completion of 6800:406 Travel Abroad <https://www.uakron.edu/education-abroad/To> satisfy the study abroad program, foreign students must choose a country other than their home country.

To receive a Bachelor in Business Administration degree with a **major in International Business**, each student must successfully complete the

1. General Education program requirements,
2. College of Business Administration Core Classes
3. required courses within the International Business major,
4. Foreign Language Sequence (11 credits)

5. Specialization in a minor (18 credits)
6. Participate in a study abroad program.

- International Business, BBA (p. 330)
- International Business, Certificate (p. 332)
- International Business, Minor (p. 333)

## International Business (6800)

### 6800:305 International Business (3 Credits)

Prerequisites: 48 hours of college credit. A basic course in international business which can also provide a platform for more specialized business courses.

### 6800:406 Travel Abroad (0 Credits)

Prerequisite: Must have been admitted to a major in a four-year degree granting college. Approved travel to a foreign country per the requirements of the International Business major.

### 6800:421 Foreign Market Entry (3 Credits)

Prerequisites: Must have been admitted to a major in a four-year degree granting college and 6800:305. A study of the business processes and procedures associated with successful foreign market entry. International Business practices around the world related to successful and unsuccessful entry are compared and contrasted. Letters of Credit, Import/Export Documentation and Global Shipping Standards are examined.

### 6800:422 Foreign Market Distance Analysis (3 Credits)

Prerequisites: Must have been admitted to a major in a four-year degree granting college, 6800:305, and 6800:406. The cultural, administrative, geographic, and economic difference between home and host countries can dramatically impact the success of foreign market entry by the home country. Students will learn how to successfully identify and respond to these differences.

### 6800:492 Internship in International Business (3 Credits)

Prerequisite: Permission of department chair. On-the-job experience with public or private sector organizations in the field of marketing. On-the-job learning objectives are established by the sponsoring organization and approved by the department chair. Field experiences are augmented by a weekly diary and a term paper, which are supervised and evaluated by the department chair.

### 6800:496 Special Topics: International Business (1-3 Credits)

(May be repeated for a total of three credits) Prerequisite: Permission of instructor. Provides the opportunity to study special topics and current issues in international business. Note: Other international business courses are offered under departmental course numbers. They are 6200:408, 6400:323, 6400:481, 6500:457, 6500:459 and 6600:385.

## International Business, BBA

Bachelor of Business Administration in International Business (680002BBA)

More on the International Business major (<https://www.uakron.edu/cba/undergraduate/majors/international-business.dot>)

You will earn a degree from a globally recognized business school where the programs are taught by an accomplished and dedicated faculty and are supported by a network of business executives. You can major in a wide variety of interesting disciplines that are attractive to prospective employers. As a graduate, you will have leadership and collaboration competencies and be a data savvy, globally aware, enterprise thinker.

College of Business Administration Undergraduate Programs

<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

The following information has official approval of **The Department of Marketing** and **The College of Business Administration**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Additional Business Requirements	6-7
	College of Business Administration Core	39
	International Business Requirements	46
	Additional Major Electives *	3-2
	<b>Total Hours</b>	<b>128</b>

\* This major requires a minimum of 128 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

3450:210 Calculus with Business Applications  
or 3450:221 Analytic Geometry-Calculus I

*Speaking: 3 credit hours*

7600:105 Introduction to Public Speaking  
or 7600:106 Effective Oral Communication

*Writing: 6 credit hours*

3300:111 English Composition I  
3300:112 English Composition II

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

3250:200 Principles of Microeconomics  
3850:100 Introduction to Sociology

### Tier III: Tagged Courses

Select one class from each of the following subcategories:

Complex Systems

Critical Thinking

Domestic Diversity

3850:100 Introduction to Sociology

Global Diversity

Review the General Education Requirements page for detailed course listings.

Total Hours 34

## Additional Business Requirements

Code	Title	Hours
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### General Education Tier 1 Requirement

3450:210	Calculus with Business Applications <sup>1</sup>	3-4
or 3450:221	Analytic Geometry-Calculus I	

### Required Business Courses

3250:201	Principles of Macroeconomics	3
3250:244	Introduction to Economic Analysis	

### Recommended Business Courses

6100:110	College of Business Administration Success Seminar <sup>2</sup>	
6100:200	Personal Leadership Skills	

Total Hours 6-7

<sup>1</sup> Replaces 3450:145 Algebra for Calculus as the Tier 1 Quantitative Reasoning General Education Requirement for all business majors.

<sup>2</sup> Required for some 1st year students

## College of Business Administration Core <sup>1</sup>

Code	Title	Hours
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6100:230	Business Communication	3
6200:201	Accounting Principles I <sup>4</sup>	3
6200:202	Accounting Principles II <sup>4</sup>	3
6200:250	Spreadsheet Modeling & Decision Analysis <sup>4</sup>	3
6400:220	Legal & Social Environment of Business <sup>2</sup>	3
6400:301	Principles of Finance	3
6500:304	Business Statistics	3
6500:301	Management: Principles & Concepts	3
6500:305	Business Analytics <sup>3</sup>	3
6500:330	Principles of Supply Chain and Operations Management	3
6500:490	Strategic Management	3
6600:205	Marketing Principles	3
6800:305	International Business	3

Total Hours 39

<sup>1</sup> Student must also have a minimum cumulative GPA of 2.0 across the CBA Core.

<sup>2</sup> Students majoring in Accountancy are required to take 6200:424 Business Law instead of 6400:220 Legal & Social Environment of Business.

<sup>3</sup> Students majoring in Finance are strongly recommended to take 3250:325 Applied Econometrics I instead of 6500:305 Business Analytics.

<sup>4</sup> Accounting majors must complete with a grade of C or better.

## International Business Requirements

Code	Title	Hours
<b>International Business Core</b>		
6800:406	Travel Abroad <sup>1,4</sup>	0
6800:421	Foreign Market Entry <sup>1</sup>	3
6800:422	Foreign Market Distance Analysis <sup>1</sup>	3
<b>International Business Functional Specialties</b>		
6200:408	International Financial Reporting & Analysis <sup>1</sup>	3
6400:437	International Business Finance <sup>1</sup>	3
6500:457	International Management <sup>1</sup>	3
<b>International Capstone</b>		<b>2</b>
<i>Select a minimum of two credits of the following:</i>		
6100:495	Internship in Business Administration	
6100:497	Honors Project in Business Administration	
6100:499	Independent Study in Business Administration	
6400:323	International Business Law	
6400:438	International Banking	
6500:459	Selected Topics: International Management	
6800:492	Internship in International Business	
6800:496	Special Topics: International Business	
<b>Foreign Language Option <sup>2</sup></b>		
101	Beginning I	4
102	Beginning II	4
201	Intermediate I	3
<b>Approved Minor <sup>3</sup></b>		<b>18</b>
Total Hours		46

<sup>1</sup> Must be admitted to 4 year degree granting major.

<sup>2</sup> Must be the same language.

<sup>3</sup> **Minors:** A minor should be selected by year 2. Please meet with your advisor for a list of approved academic minors and to adjust your course sequencing based upon your minor.

<sup>4</sup> **Travel Abroad:** International study/travel abroad is required for IB majors. Meet with your advisor to determine options, time period and required coursework for going abroad.

## Graduation Requirements – Review DPR for Status

- 128 Credit Hours
- CBA residency = Last 15 credits earned in CBA
- Overall GPA = 2.3
- Major GPA = 2.0
- Business & Economics GPA = 2.0

## International Business, Certificate Certificate in International Business (680000C)

The wave of rapid change in the physical, political, economic, and cultural landscapes around the world is creating new opportunities and challenges for businesses and individuals that need to be managed effectively. The interdisciplinary 15-credit International Business (IB) Certificate is for students who are not enrolled in the College of Business Administration. It provides students with an opportunity to better understand the global business environment and potential responses to these forces.

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### College of Business Administration Policies for Certificates:

- Complete all certificate requirements prior to graduation.
- Earn a 2.0 GPA in all certificate coursework.
- Complete all pre-requisites for each course.
- Courses may not be taken as pass/ fail.
- Complete at least 6 additional credits not needed for any other major, minor, or certificate.
- Earn at least 9 credits at The University of Akron in the CBA.
- Declare the certificate in the Business Undergraduate Advising Office, CBA room 260.

## Summary

Code	Title	Hours
Required Courses		9
Electives		6
Total Hours		15

## Required Courses

Code	Title	Hours
6800:305	International Business	3
6100:101	Business Issues in a Connected World	3
6800:421	Foreign Market Entry (Fall only) <sup>1</sup>	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select two of the following:</b>		
2235:360	Introduction to Terrorism	
3004:201	Introduction to International Development	
3250:460	Economics of Developing Countries	
3250:461	Principles of International Economics	

3350:460	Political Geography
3600:329	Philosophy of International Law
3700:150	World Politics & Government
3700:300	Comparative Politics
3700:310	International Politics & Institutions
3700:414	Wealth and Power Among Nations
6400:323	International Business Law (Spring only)
7600:325	Intercultural Communication <sup>1</sup>
Total Hours 6	

<sup>1</sup> Must be admitted to 4 year degree granting major.

## International Business, Minor Minor in International Business (680000M)

The rapid globalization of business is creating dynamic changes in the business environment. As a result, significant opportunities for graduates with academic backgrounds in international business are available. The 18-19 credit International Business minor provides students with a basic understanding of international business and its environments and is a useful complement for many majors. The University of Akron has exchange agreements with leading universities throughout the world, enabling students to study and gain valuable business experience in such locales as the United Kingdom, France, Germany, Denmark, Japan and the Netherlands.

Globalization and international business have become the norm in today's world. Many businesses are involved in international business either directly or indirectly. Globalization has created significant opportunities for graduates with an academic background in international business. This minor provides students with a basic understanding of international business and its environments and is a useful complement for many majors.

This minor is best suited for College of Business Administration (CBA) Majors, but may be taken by all students. Non-CBA majors are encouraged to consider the International Business Certificate. The rapid globalization of business is creating dynamic changes in the business environment. This unprecedented wave of change creates new opportunities and challenges that must be managed effectively. The IB minor is designed to prepare graduates to manage the change and complexity that globalization brings with it.

Special emphasis is placed on the process of foreign market entry.

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Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

## Required Courses

Code	Title	Hours
6800:305	International Business	3
6400:323	International Business Law (Spring only)	3
6800:421	Foreign Market Entry (Fall only) <sup>1</sup>	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select three of the following:</b>		<b>9</b>
3250:461	Principles of International Economics <sup>1</sup>	
3700:300	Comparative Politics	
3700:310	International Politics & Institutions	
6200:408	International Financial Reporting & Analysis (Spring only) <sup>1</sup>	
6400:437	International Business Finance <sup>1</sup>	
6400:438	International Banking <sup>1</sup>	
6500:433	Supply Chain Logistics Planning (Spring only) <sup>1</sup>	
6500:457	International Management <sup>1</sup>	
6500:459	Selected Topics: International Management <sup>1</sup>	
6500:460	Special Topics in Management <sup>1</sup>	
6800:422	Foreign Market Distance Analysis (Fall only) <sup>1</sup>	
6800:496	Special Topics: International Business <sup>1</sup>	
Total Hours		9

<sup>1</sup> Must be admitted to 4 year degree granting major.

## Management

The Department of Management provides opportunities for students to prepare for three different majors: Human Resources Management, Supply Chain/Operations Management and Information Systems Management. Each major provides a solid foundation of general management skills needed by organizations today. Businesses, as well as non-profit institutions, face complex environments with multiple challenges and opportunities. The Department of Management faculty members interact regularly with business leaders to ensure that our students are prepared with the cutting-edge knowledge and skills required to obtain the best jobs.

The Human Resource Management major prepares students for jobs as Human Resource Management (HRM) professionals, as well as general managers. It is generally the people with talent that make one organization more successful than another. HRM professionals are the keys to the acquisition and use of talent in organizations to support strategy. HRM professionals oversee the recruitment, hiring, training and compensation of employees. They also design systems for performance management, guide labor relations, ensure legal compliance and monitor employee safety.

The Supply Chain/Operations Management major is central for the success of almost every business. Supply Chain/Operations deals with getting the right product, to the right place, at the right time, in the right condition, at the right price. It is a growing interdisciplinary field that involves building relationships with organizations around the world. Professionals in this area must understand procurement and sourcing, inventory control, logistics and transportation, import and export management, manufacturing and service operations, and negotiation and customer satisfaction skills. This major prepares students to be professionals in the broad supply chain field.

The Information Systems Management major prepares students to be business professionals that direct the technology-related activities of organizations. Graduates understand how to design and access computer systems in order to ensure good business decisions. Information Systems (IS) professionals work with executives to define, plan and achieve the technical goals of the company. IS professionals understand databases, networks, data analytics and system analysis. Students graduate from this program with the combination of technical and business expertise that organizations need for success.

A graduate with a degree in a management discipline will have many employment opportunities with firms in staff, supervisory and other professional positions. In addition, the graduate has the fundamental preparations to undertake advanced studies leading to a graduate degree.

- Human Resource Management, Minor (p. 336)
- Human Resources Management, BBA (p. 337)
- Information Systems Management, Minor (p. 338)
- Information Systems, BBA (p. 339)
- Supply Chain Management, Minor (p. 340)
- Supply Chain/Operations Management, BBA (p. 341)

## Management (6500)

### 6500:254 Global Experience (1-3 Credits)

Prerequisite: 28 credit hours completed. Provides an opportunity for students to learn from faculty expertise in the context of a foreign country. International management practices are examined and aspects of local culture are studied.

### 6500:301 Management: Principles & Concepts (3 Credits)

Prerequisites: 48 completed credit hours. An interdisciplinary approach to the study of the basic principles of general management theory and practice.

### 6500:302 Organizational Behavior & Leadership Skills (3 Credits)

Prerequisite: 6500:301. Investigation of applications of behavioral and social sciences as they relate to individual, group behavior in organizations.

### 6500:304 Business Statistics (3 Credits)

Prerequisites: [3450:145 with a grade of C- or better or higher math] and 6200:250. Introduces statistical methods to support quantitative decision analysis for solving business problems. Includes probability, sampling, estimation, hypothesis testing, analysis of variance. Utilizes case studies.

### 6500:305 Business Analytics (3 Credits)

Prerequisites: 6500:304. Studies core statistical techniques; data retrieval, analysis and mining; and decision modeling to effectively persuade in the project-oriented world of data-driven decisions.

### 6500:310 Business Information Systems (3 Credits)

Prerequisites: Completion of 48 credit hours and [6200:250 or admission to the Computer Science major]. Provides a technical and organizational foundation for understanding the use and importance of information systems and information technology in today's business environment.

### 6500:315 Applications Development for Business Processes (3 Credits)

Prerequisites: 6200:250 and 48 completed hours. Analysis and automation of business operations and processes. Development of applications based on a simulated enterprise-wide database.

### 6500:324 Database Management for Information Systems (3 Credits)

Prerequisites: 6200:250 and 48 completed hours. An introduction to database design and management, including data modeling, relational theory, Structured Query Language, and database applications, development, using database management systems.

### 6500:325 Systems, Analysis, & Design (3 Credits)

Prerequisites: 6500:315. An introduction to the techniques of business modeling, systems design, and implementation, including the application of software engineering tools in support of modeling and code generation.

### 6500:330 Principles of Supply Chain and Operations Management (3 Credits)

Prerequisites: Completion of 32 credit hours. An overview of the terminology, fundamental concepts and scope of responsibility encountered in the fields of supply chain and operations management.

### 6500:333 Supply Chain and Operations Analysis (3 Credits)

Prerequisites: [6500:222 or 6500:304] and 6500:330. Application of quantitative models in the analysis and design of systems in the supply chain and in manufacturing and service operations environments.

### 6500:334 Service Operations Management (3 Credits)

Prerequisite: 6500:330. An overview of the fundamental terminology, principles, concepts and problem solving methods encountered in the contemporary field of service operations management.

### 6500:341 Human Resource Management (3 Credits)

Prerequisite: one course in psychology or sociology. Pre/Corequisite: 6500:301. Principles, policies, and practices in administering functions of recruiting, selecting, training, compensating, and appraising human resources of organizations.

### 6500:342 Employee and Labor Relations (3 Credits)

Prerequisite: 64 completed credit hours. Pre/Corequisite: 6500:341. Analysis of management, union and employee objectives, attitudes and strategy, as they affect conduct of business and economy. Stress placed on group assigned readings and reports.

### 6500:350 Fundamentals of Enterprise Resource Planning (3 Credits)

Prerequisites: 6200:250 Computer Applications for Business and 48 completed credit hours. The enterprise wide process of decreasing operating costs, rationalizing the supply chain, improving management control, and decreasing cycle time by implementing ERP based solutions.

### 6500:390 Supply Chain Modeling and Decision Making (3 Credits)

Prerequisites: 6200:250, [6500:304 or 6500:221], and 6500:330. Spreadsheet based, example-driven approach to develop models and methodologies for supply chain analysis and decision making.

### 6500:410 Selected Topics in Entrepreneurship (1-3 Credits)

Prerequisites: Must be admitted to a major in a four-year degree granting college, upper-college or graduate standing, and [6500:301 or 6500:600] or equivalent. Facilitates comparative international study of entrepreneurship, introduction of entrepreneurship to large organizations, or application of student's entrepreneurial skills. Six hour limit.

**6500:420 Data Networks and Security (3 Credits)**

Prerequisites: Must be admitted to a major in a four-year degree granting college, 6500:310, and upper level standing. Principles of the design and management of data networks for business communications.

**6500:421 Operations Research (3 Credits)**

Prerequisites: Must be admitted to a major in a four-year degree granting college and 6500:330. Examines the use of operations research techniques in managerial decision-making processes; constrained linear optimization, non-linear optimization, network analysis, queuing theory, simulation.

**6500:425 Decision Support with Data Warehousing & Data Mining (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, [6500:324 and 6500:305] or [6500:221 and 6500:222]. Examines managerial and technical aspects of business decision-making based on the use of data warehouses, on-line analytical processing (OLAP) and data mining.

**6500:426 E-Business Application Development (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, 6200:250, and upper level standing. Students will gain an understanding of issues and skills related to web application design and development.

**6500:427 Systems Integration (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college and 6500:315. The course provides an understanding of issues and underlying application integration. Topics include coverage of middleware technologies, B2B standards and XML.

**6500:428 Systems Development Project (3 Credits)**

Prerequisites: 6500:324 and 6500:325. Pre/Corequisite: 6500:427. Implementing business objects and use cases in projects. Object persistence, object collaboration, and controller and UI designs are discussed.

**6500:433 Supply Chain Logistics Planning (3 Credits)**

Prerequisites: Upper level standing, admission to a major in a 4-year degree granting college, and 6500:330. Emphasizes the importance of planning in the development of the domestic and global supply chain logistics system that includes transportation, inventory, warehousing and procurement.

**6500:434 Production Planning & Control (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, upper level standing, and 6500:333. Coverage of materials management, production planning, scheduling and control. Integrates material from previous courses, provides overall framework including use of computer and quantitative methods.

**6500:435 Quality Management & Control (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, upper level standing, and 6500:330. Emphasis on statistical techniques essential to controlling product quality for both measurement and attribute data. Includes control chart methods and acceptance sampling plans.

**6500:441 Training and Development (3 Credits)**

Prerequisites: Admission to a major in a 4-year degree granting college and 6500:341. Comprehensive study of employee training and development methods and practices including performance analysis, design, development, implementation and evaluation.

**6500:442 Compensation Management and Reward Systems (3 Credits)**

Prerequisites: Admission to a major in a 4-year degree granting college, junior standing and 6500:341. This course focuses on the development, implementation, and assessment of a business firm's compensation and reward system.

**6500:443 Human Resources Selection & Staffing (3 Credits)**

Prerequisites: Upper level standing, admission to a major in a 4-year degree granting college, and 6500:341. Advanced study of selection and staffing within business organizations. Emphasis on current research and practice. Activities include projects, case studies, interaction with human resource professionals.

**6500:457 International Management (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college; upper level standing and 6500:301 or equivalent. Management practices and techniques of international business organizations. Focus on structure and processes of resource allocation, design and technology, and the impact of culture.

**6500:458 Special Topics in Managerial Arbitration, Mediation & Conciliation (1-3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, upper level or graduate standing and [6500:301 or 6500:600 or equivalent]. Study of the various methods and mechanisms by which management can understand and deal with internal and external conflict. Six hour limit.

**6500:459 Selected Topics: International Management (1-3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, upper level standing, 6500:301 or equivalent, and 6500:457. Selected topics in international management focus on historical or contemporary managerial, production and organizational issues. Includes international simulation game. Six hour limit.

**6500:460 Special Topics in Management (3 Credits)**

Prerequisite: Must be admitted to a major in a 4-year degree granting college. Exploration of advanced topics of interest both to the student and professor. Many special applications, case studies, outside speakers, projects in conjunction with local industries.

**6500:471 Management Consulting Project (3 Credits)**

Prerequisites: Admitted to the Human Resources Management major, 6500:302, 6500:310, 6500:342, 6500:442, and 6500:443. Students develop skills in field-based management problem solving, project management, and requirements analysis under conditions of uncertainty in a collaborative interdisciplinary team environment.

**6500:475 Supply Chain Operations Strategy (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, 6500:302, 6500:310, 6500:333, and 6500:390. Pre/Corequisites: 6500:433 and 6500:476. Capstone course integrating supply chain concepts to solve real world supply chain problems primarily using a case study approach.

**6500:476 Supply Chain Sourcing (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college and 6500:330. Introduces the student to fundamental sourcing concepts as well as the scope of responsibility and critical roles of the sourcing function within the principal organization in a supply chain network.

**6500:477 Management Simulation (1 Credit)**

Prerequisite: 6500:301. Simulation of management practices through computerized game or experiential exercise.

**6500:478 Human Resource Simulation (1 Credit)**

Prerequisite: 6500:341. Simulation of human resource practices through computerized or experiential exercises.

**6500:479 Operations Simulation (1 Credit)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college and 6500:333. Simulation of operations management practices through computerized or experiential exercises.

**6500:480 Introduction to Health-Care Management (3 Credits)**

Prerequisites: Must be admitted to a 4-year degree granting college and hold at minimum a junior standing or higher (Students who are required to take 6500:301 or have completed 6500:301 or equivalent are ineligible to take this course for credit). Introductory course for health professionals covering principles and concepts of management applied to health services organizations. For those registered for graduate credit, a major paper is required.

**6500:482 Health Services Operations Management (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, [upper level standing and 6500:301 or 6500:480 or equivalents], or [graduate standing and 6500:580 or equivalent]. (Students who have completed 6500:330 are ineligible to take this course for credit). Application of production and operations management concepts and techniques in health services organizations.

**6500:485 Special Topics: Health Services Administration (1-3 Credits)**

Prerequisite: Must be admitted to a major in a 4-year degree granting college. Special topics in health services administration (e.g., management) focusing on historical and/or contemporary managerial organizational and/or policy/strategy issues as related to health-care organizations and health-care systems. Separate topics may be repeated for a maximum of six credits. For those registered for graduate credit, a major research paper is required.

**6500:486 Internship in Supply Chain/Ops (3 Credits)**

Prerequisite: Permission of department chair or designated faculty member. On the job experiences with public or private sector organizations.

**6500:487 Internship in Human Resources (3 Credits)**

Prerequisite: Permission of department chair or designated faculty member. On the job experiences with public or private sector organizations.

**6500:488 Internship in Information Systems (3 Credits)**

Prerequisite: Permission of department chair or designated faculty member. On the job experience with public or private sector organizations.

**6500:490 Strategic Management (3 Credits)**

Prerequisites: Admission to a major in the CBA, 97 credits in which 15 crd hrs, or half of major credits must be completed, 6100:230, 6200:201, 6200:202, 6200:250, [6400:220 or 6400:321 or 6200:424], 6400:301, 6500:301, 6500:304, [6500:305 or 3250:325], 6500:330, 6600:205, and 6800:305. Capstone course. Integrates the core business disciplines (accounting, economics, finance, management, marketing) through the use of case analysis. Objective and strategy formulation from an administrative viewpoint and international dimension. Emphasis on oral and written communications.

**6500:491 Workshop in Management (1-3 Credits)**

Prerequisite: Must be admitted to a major in a 4-year degree granting college. (May be repeated with permission of instructor or department) Group studies of special topics in management. May not be used to meet undergraduate major requirements in management. May be used for elective credits only.

## Human Resource Management, Minor Minor in Human Resource Management (650005M)

Managing human resource (HR) functions has evolved to become a key to an organization's management process. It is widely recognized that a well-functioning HR group significantly contributes to an organization's bottom-line and overall success. The 18-credit Human Resource Management (HRM) minor focuses on the systems and programs that effectively manage an organization's employees.

Human resource management (HRM) includes the set of tasks directed at effectively managing an organization's human resources. HRM professionals create and oversee the talent management systems related to compensation, benefits, career development, training, staffing and other functions. The overall objective of HRM practitioners is to structure staffing systems to recruit and retain the best talent by making an organization an employer of choice.

Human Resource Management will prepare you to pursue an exciting career as an HR professional.

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Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

### Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

### Required Courses

Code	Title	Hours
6500:301	Management: Principles & Concepts	3
6500:310	Business Information Systems	3
6500:341	Human Resource Management	3
Total Hours		9

### Electives

Code	Title	Hours
<b>Select three of the following:</b>		
6500:302	Organizational Behavior & Leadership Skills	3
6500:342	Employee and Labor Relations	3
6500:442	Compensation Management and Reward Systems <sup>1</sup>	3
6500:443	Human Resources Selection & Staffing <sup>1</sup>	3



6500:457	International Management <sup>1</sup>	
Total Hours		9

<sup>1</sup> Must be admitted to 4 year degree granting major.

## Human Resources Management, BBA Bachelor of Business Administration in Human Resources Management (650005BBA)

More on the Human Resources Management major (<https://www.uakron.edu/cba/undergraduate/majors/human-resources.dot>)

You will earn a degree from a globally recognized business school where the programs are taught by an accomplished and dedicated faculty and are supported by a network of business executives. You can major in a wide variety of interesting disciplines that are attractive to prospective employers. As a graduate, you will have leadership and collaboration competencies and be a data savvy, globally aware, enterprise thinker.

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Additional Business Requirements	6-7
	College of Business Administration Core	39
	Human Resources Management Requirements	30
	Additional Credits for Graduation *	11-10
Total Hours		120

\* This major requires a minimum of 120 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
3450:210	Calculus with Business Applications or 3450:221 Analytic Geometry-Calculus I	
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking or 7600:106 Effective Oral Communication	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	
3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
3250:200	Principles of Microeconomics	
3850:100	Introduction to Sociology or 3750:100 Introduction to Psychology	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
3850:100	Introduction to Sociology	
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## Additional Business Requirements

Code	Title	Hours
<b>General Education Tier 1 Requirement</b>		
3450:210	Calculus with Business Applications <sup>1</sup> or 3450:221 Analytic Geometry-Calculus I	3-4
<b>Required Business Courses</b>		
3250:201	Principles of Macroeconomics	3
3250:244	Introduction to Economic Analysis	
<b>Recommended Business Courses</b>		
6100:110	College of Business Administration Success Seminar <sup>2</sup>	
6100:200	Personal Leadership Skills	
Total Hours		6-7

<sup>1</sup> Replaces 3450:145 Algebra for Calculus as the Tier 1 Quantitative Reasoning General Education Requirement for all business majors.

<sup>2</sup> Required for some 1st year students

## College of Business Administration Core <sup>1</sup>

Code	Title	Hours
6100:230	Business Communication	3
6200:201	Accounting Principles I <sup>4</sup>	3
6200:202	Accounting Principles II <sup>4</sup>	3
6200:250	Spreadsheet Modeling & Decision Analysis <sup>4</sup>	3
6400:220	Legal & Social Environment of Business <sup>2</sup>	3
6400:301	Principles of Finance	3
6500:304	Business Statistics	3
6500:301	Management: Principles & Concepts	3
6500:305	Business Analytics <sup>3</sup>	3
6500:330	Principles of Supply Chain and Operations Management	3
6500:490	Strategic Management	3
6600:205	Marketing Principles	3
6800:305	International Business	3
Total Hours		39

<sup>1</sup> Student must also have a minimum cumulative GPA of 2.0 across the CBA Core.

<sup>2</sup> Students majoring in Accountancy are required to take 6200:424 Business Law instead of 6400:220 Legal & Social Environment of Business.

<sup>3</sup> Students majoring in Finance are strongly recommended to take 3250:325 Applied Econometrics I instead of 6500:305 Business Analytics.

<sup>4</sup> Accounting majors must complete with a grade of C or better.

## Human Resources Management Requirements

Code	Title	Hours
<b>Management Core</b>		
6500:302	Organizational Behavior & Leadership Skills	3
6500:310	Business Information Systems	3
6500:471	Management Consulting Project (Fall and Spring Only)	3
<b>Concentration Requirements</b>		
6500:341	Human Resource Management	3
6500:342	Employee and Labor Relations (Spring Only)	3
6500:441	Training and Development (Fall Only) <sup>1</sup>	3
6500:442	Compensation Management and Reward Systems (Fall Only) <sup>1</sup>	3
6500:443	Human Resources Selection & Staffing (Spring Only) <sup>1</sup>	3
<b>Electives</b>		<b>6</b>
<i>Select two courses of the following:</i>		
6x00:3xx/4xx <sup>2</sup>		
<i>The following courses do not satisfy this requirement:</i>		
6400:300	Introduction to Finance	
6400:321	Business Law I	
6400:322	Business Law II	
Total Hours		30

<sup>1</sup> Must be admitted to 4 year degree granting major.

<sup>2</sup> 6500:487 Internship in Human Resources can count towards one of the electives. Students must meet requirements for HR internship to be eligible.

## Graduation Requirements – Review DPR for Status

- 120 Credit Hours
- CBA residency = Last 15 credits earned in CBA
- Overall GPA = 2.3
- Major GPA = 2.0
- Business & Economics GPA = 2.0

## Information Systems Management, Minor

### Minor in Information Systems Management (650004M)

The 18-credit Management of Information Systems minor enables students to develop information technology knowledge and skills that will complement any major. A MIS minor is a useful addition to any career path in private industry, government, or non-profit sectors.

The Management of Information Systems minor enables students to develop knowledge and skills in information systems that will complement their major. A MIS minor is a useful addition to any career path in private industry, government, or non-profit sectors.

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Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		12
Electives		6
Total Hours		18

## Required Courses

Code	Title	Hours
6500:301	Management: Principles & Concepts	3
6500:310	Business Information Systems	3
6500:324	Database Management for Information Systems	3
6500:325	Systems, Analysis, & Design	3
Total Hours		12

## Electives

Code	Title	Hours
<b>Select two of the following:</b>		
6200:250	Spreadsheet Modeling & Decision Analysis	6
6500:315	Applications Development for Business Processes <sup>1</sup>	
or 3460:210 Computer Science II		
6500:350	Fundamentals of Enterprise Resource Planning	
6500:420	Data Networks and Security <sup>2</sup>	
6500:425	Decision Support with Data Warehousing & Data Mining <sup>2</sup>	
Total Hours		6

<sup>1</sup> Or AP Computer Science Exam with grade 3.0 or better

<sup>2</sup> Must be admitted to 4 year degree granting major.

## Information Systems, BBA Bachelor of Business Administration in Information Systems (650004BBA)

More on the Information Systems major (<https://www.uakron.edu/cba/undergraduate/majors/information-systems.dot>)

You will earn a degree from a globally recognized business school where the programs are taught by an accomplished and dedicated faculty and are supported by a network of business executives. You can major in a wide variety of interesting disciplines that are attractive to prospective employers. As a graduate, you will have leadership and collaboration competencies and be a data savvy, globally aware, enterprise thinker.

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## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Additional Business Requirements		6-7
College of Business Administration Core		39
Information Systems Requirements		30-31
Additional Credits for Graduation *		11-9
Total Hours		120

\* This major requires a minimum of 120 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

3450:210 Calculus with Business Applications  
or 3450:221 Analytic Geometry-Calculus I

*Speaking: 3 credit hours*

7600:105 Introduction to Public Speaking  
or 7600:106 Effective Oral Communication

*Writing: 6 credit hours*

3300:111 English Composition I  
3300:112 English Composition II

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

3250:200 Principles of Microeconomics  
3850:100 Introduction to Sociology

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

3850:100 Introduction to Sociology

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## Additional Business Requirements

Code	Title	Hours
<b>General Education Tier 1 Requirement</b>		
3450:210 or 3450:221	Calculus with Business Applications <sup>1</sup> Analytic Geometry-Calculus I	3-4
<b>Required Business Courses</b>		
3250:201 3250:244	Principles of Macroeconomics Introduction to Economic Analysis	3
<b>Recommended Business Courses</b>		
6100:110	College of Business Administration Success Seminar <sup>2</sup>	

6100:200	Personal Leadership Skills	
Total Hours		6-7

<sup>1</sup> Replaces 3450:145 Algebra for Calculus as the Tier 1 Quantitative Reasoning General Education Requirement for all business majors.

<sup>2</sup> Required for some 1st year students

## College of Business Administration Core <sup>1</sup>

Code	Title	Hours
6100:230	Business Communication	3
6200:201	Accounting Principles I <sup>4</sup>	3
6200:202	Accounting Principles II <sup>4</sup>	3
6200:250	Spreadsheet Modeling & Decision Analysis <sup>4</sup>	3
6400:220	Legal & Social Environment of Business <sup>2</sup>	3
6400:301	Principles of Finance	3
6500:304	Business Statistics	3
6500:301	Management: Principles & Concepts	3
6500:305	Business Analytics <sup>3</sup>	3
6500:330	Principles of Supply Chain and Operations Management	3
6500:490	Strategic Management	3
6600:205	Marketing Principles	3
6800:305	International Business	3
Total Hours		39

<sup>1</sup> Student must also have a minimum cumulative GPA of 2.0 across the CBA Core.

<sup>2</sup> Students majoring in Accountancy are required to take 6200:424 Business Law instead of 6400:220 Legal & Social Environment of Business.

<sup>3</sup> Students majoring in Finance are strongly recommended to take 3250:325 Applied Econometrics I instead of 6500:305 Business Analytics.

<sup>4</sup> Accounting majors must complete with a grade of C or better.

## Information Systems Requirements

Code	Title	Hours
<b>Management Core</b>		
6500:302	Organizational Behavior & Leadership Skills	3
6500:310	Business Information Systems	3
<b>Concentration Requirements</b>		
6500:315	Applications Development for Business Processes	3-4
or 3460:210	Computer Science II	
6500:324	Database Management for Information Systems	3
6500:325	Systems, Analysis, & Design	3
6500:420	Data Networks and Security <sup>1</sup>	3
6500:425	Decision Support with Data Warehousing & Data Mining <sup>1</sup>	3
6500:427	Systems Integration <sup>1</sup>	3
6500:428	Systems Development Project <sup>1</sup>	3
<b>Information Systems Electives</b>		<b>3</b>
<i>Select one of the following:</i>		
3460:316	Data Structures	
3460:389	Intermediate Topics in Computer Science	

3460:4xx		
6100:495	Internship in Business Administration	
6200:454	Information Systems Security	
6500:333	Supply Chain and Operations Analysis	
6500:341	Human Resource Management	
6500:488	Internship in Information Systems	
Total Hours		30-31

<sup>1</sup> Must be admitted to 4 year degree granting major.

## Graduation Requirements – Review DPR for Status

- 120 Credit Hours
- CBA residency = Last 15 credits earned in CBA
- Overall GPA = 2.3
- Major GPA = 2.0
- Business & Economics GPA = 2.0

## Supply Chain Management, Minor Minor in Supply Chain Management (650203M)

Supply Chain Management is the coordination and integration of the activities that procure materials and services, transform them into intermediate and final products, and deliver them to the customer. It involves the management of:

- the flow of materials and products;
- the flow of money;
- the flow of information;
- relationships among the organizations comprising the supply chain.

The overall goal of supply chain/operations management is to impact the organization's bottom-line in a positive way while delivering the best services to customers at the lowest possible cost.

The 18-credit Supply Chain/Operations Management Minor helps students begin to understand the is the coordination and integration of the activities that procure materials and services, transform them into intermediate and final products, and deliver them to the customer – processes at the heart of the discipline. The overall goal of supply chain/operations management is to impact an organization's bottom-line in a positive way while delivering the best services to customers at the lowest possible cost.

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Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		18
Total Hours		18

## Required Courses

Code	Title	Hours
6500:301	Management: Principles & Concepts	3
6500:304	Business Statistics	3
6500:330	Principles of Supply Chain and Operations Management	3
6500:390	Supply Chain Modeling and Decision Making	3
6500:433	Supply Chain Logistics Planning <sup>1</sup>	3
6500:476	Supply Chain Sourcing <sup>1</sup>	3
Total Hours		18

<sup>1</sup> Must be admitted to 4 year degree granting major.

## Supply Chain/Operations Management, BBA Bachelor of Business Administration in Supply Chain/Operations Management (650203BBA)

More on the supply Chain/Operations Management major (<https://www.uakron.edu/cba/undergraduate/majors/supply-chain.dot>)

You will earn a degree from a globally recognized business school where the programs are taught by an accomplished and dedicated faculty and are supported by a network of business executives. You can major in a wide variety of interesting disciplines that are attractive to prospective employers. As a graduate, you will have leadership and collaboration competencies and be a data savvy, globally aware, enterprise thinker.

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## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Additional Business Requirements		6-7

College of Business Administration Core	39
Supply Chain/Operations Requirements	30
Additional Credits for Graduation *	11-10
Total Hours	120

\* This major requires a minimum of 120 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

3450:210 Calculus with Business Applications  
or 3450:221 Analytic Geometry-Calculus I

*Speaking: 3 credit hours*

7600:105 Introduction to Public Speaking  
or 7600:106 Effective Oral Communication

*Writing: 6 credit hours*

3300:111 English Composition I  
3300:112 English Composition II

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

3250:200 Principles of Microeconomics  
3850:100 Introduction to Sociology

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

3850:100 Introduction to Sociology

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## Additional Business Requirements

Code	Title	Hours
<b>General Education Tier 1 Requirement</b>		
3450:210	Calculus with Business Applications <sup>1</sup>	3-4
	or 3450:221 Analytic Geometry-Calculus I	
<b>Required Business Courses</b>		
3250:201	Principles of Macroeconomics	3

3250:244	Introduction to Economic Analysis	
<b>Recommended Business Courses</b>		
6100:110	College of Business Administration Success Seminar <sup>2</sup>	
6100:200	Personal Leadership Skills	
Total Hours		6-7

<sup>1</sup> Replaces 3450:145 Algebra for Calculus as the Tier 1 Quantitative Reasoning General Education Requirement for all business majors.

<sup>2</sup> Required for some 1st year students

## College of Business Administration Core<sup>1</sup>

Code	Title	Hours
6100:230	Business Communication	3
6200:201	Accounting Principles I <sup>4</sup>	3
6200:202	Accounting Principles II <sup>4</sup>	3
6200:250	Spreadsheet Modeling & Decision Analysis <sup>4</sup>	3
6400:220	Legal & Social Environment of Business <sup>2</sup>	3
6400:301	Principles of Finance	3
6500:304	Business Statistics	3
6500:301	Management: Principles & Concepts	3
6500:305	Business Analytics <sup>3</sup>	3
6500:330	Principles of Supply Chain and Operations Management	3
6500:490	Strategic Management	3
6600:205	Marketing Principles	3
6800:305	International Business	3
Total Hours		39

<sup>1</sup> Student must also have a minimum cumulative GPA of 2.0 across the CBA Core.

<sup>2</sup> Students majoring in Accountancy are required to take 6200:424 Business Law instead of 6400:220 Legal & Social Environment of Business.

<sup>3</sup> Students majoring in Finance are strongly recommended to take 3250:325 Applied Econometrics I instead of 6500:305 Business Analytics.

<sup>4</sup> Accounting majors must complete with a grade of C or better.

## Supply Chain/Operations Requirements

Code	Title	Hours
<b>Management Core</b>		
6500:302	Organizational Behavior & Leadership Skills	3
6500:310	Business Information Systems	3
<b>Concentration Requirements</b>		
6500:333	Supply Chain and Operations Analysis (Fall Only)	3
6500:390	Supply Chain Modeling and Decision Making (Fall Only)	3
6500:433	Supply Chain Logistics Planning (Spring Only) <sup>1</sup>	3
6500:475	Supply Chain Operations Strategy <sup>1</sup>	3
6500:476	Supply Chain Sourcing (Spring Only) <sup>1</sup>	3
<b>Supply Chain Electives</b>		
6		
<i>Select two of the following:</i>		
6200:301	Cost Management and Control	

6500:315	Applications Development for Business Processes (Fall)	
6500:324	Database Management for Information Systems (Fall)	
6500:325	Systems, Analysis, & Design (Spring)	
6500:334	Service Operations Management	
6500:341	Human Resource Management	
6500:342	Employee and Labor Relations (Spring)	
6500:350	Fundamentals of Enterprise Resource Planning	
6500:457	International Management	
6500:459	Selected Topics: International Management	
6600:475	Business Negotiations	
<b>Business Elective</b>		
6500:3xx/4xx <sup>2</sup>		3
Total Hours		30

<sup>1</sup> Must be admitted to 4 year degree granting major.

<sup>2</sup> 6500:486 Internship in Supply Chain/Ops can count towards the Business Elective. Students must meet requirements for Supply Chain internship to be eligible.

## Graduation Requirements – Review DPR for Status

- 120 Credit Hours
- CBA residency = Last 15 credits earned in CBA
- Overall GPA = 2.3
- Major GPA = 2.0
- Business & Economics GPA = 2.0

## Marketing

### Marketing is about the creation of value

Ultimately, great marketing is about creating customer commitment to the products, services, causes or ideas that one produces. The discipline is built on learning the core practices associated with bringing a product, service, or idea to market including product design and development, distribution, promotion and pricing. It also focuses on how to keep products competitive through market research, branding, customer service, innovation and promotion, including digital, social media and traditional advertising. A well developed marketing strategy, which puts the customer first, will improve any organization, including for profit firms, not-for-profit organizations and government agencies.

Individuals with a marketing degree, may become marketing managers responsible for all marketing related activities of the firm. Still others may specialize in one specific area such as sales, digital marketing, advertising and promotion, brand management, product development, marketing research & analytics, customer relationship management, or media management.

### Focus on Experiential Learning

Through strong connections with alumni, advisory board members and local businesses, students are provided experiential learning that will allow them to "hit the ground running". This may include developing and analyzing a customer survey, conducting a focus group on a new product, running an eye tracking study to determine the best promotion campaign or designing a social media campaign, to introduce a new product.

Students are given multiple classroom opportunities to help solve real marketing issues. Thus students are exposed to both theory and practice through courses that focus on “what to do,” and “how to do it”. The program also includes a semester long senior capstone experience with a firm, and internships and professionally taught specialty courses on state-of-the-art marketing practices taught by local experts.

## State of the Art Facilities

The Marketing Department has state of the art facilities through the Suarez Behavioral Research Laboratory, Fisher Institute for Professional Selling (p. 557) and the Gary and Karen Taylor Institute for Direct Marketing (p. 558). These facilities provide students opportunities for putting into practice their classroom learning. For example, sales students practice and receive feedback through video taping of sales role plays and sales negotiations, while marketing research classes utilize the focus group facilities, eye tracking equipment and survey software in the computer laboratories to conduct marketing research.

## Requirements

Students must meet all requirements of:

1. General Education Program
2. College of Business Administration Core Program
3. Foundation courses within the Marketing program
4. Professional experiences component of the program
5. All other requirements of the major

Students may also pursue a dual major or a minor. By adding a limited number of credit hours, students could for example, pursue a double major in sales and marketing, or add a minor in international business. Check with your CBA advisor to determine the specific requirements for the double major or minor of your choice.

- Health Care Selling, Certificate (p. 344)
- Integrated Marketing Communications, BBA (p. 345)
- Marketing, BBA (p. 346)
- Marketing, Minor (p. 349)
- Professional Selling for Engineering Majors, Certificate (p. 349)
- Professional Selling, Certificate (p. 350)
- Professional Selling, Minor (p. 350)
- Sales Management, BBA (p. 351)

## Marketing (6600)

### 6600:205 Marketing Principles (3 Credits)

Prerequisite: 24 hours of college credit. Pre/Corequisite: 3250:200. A general survey of marketing activities including analysis of markets, competition, consumer behavior, information systems, and the assessment of product, price, distribution, and promotion strategies.

### 6600:275 Professional Selling (3 Credits)

Prerequisite: 25 credits or permission from instructor. Builds communication skills while learning about buyer needs, persuasion and social influence, prospecting, making sales presentations, persuading, overcoming sales resistance, closing sales and building relationships.

### 6600:335 Marketing Research (3 Credits)

Prerequisites: 6500:304 and [6600:205 with a grade of C or better]. Corequisite: 6600:336. Student will gain hands-on experience in the understanding and use of appropriate tools and techniques for analyzing and presenting information derived from marketing databases. Includes problem definition and solution approach to marketing research decisions.

Gen Ed: Tier 3 - Critical Thinking

### 6600:336 Marketing Research Lab (1 Credit)

Prerequisites: 6500:304 and 6600:205. Corequisite: 6600:335. Students will gain hands-on experience in the understanding and use of appropriate tools and techniques for analyzing and presenting information derived from marketing databases. Includes problem definition and solution approach to marketing research decisions.

### 6600:355 Consumer Behavior (3 Credits)

Prerequisite: 6600:205 with a grade of C or better. Interdisciplinary approach to the analysis of the nature of consumer buying behavior. Economical, social, and psychological influences on consumers' decision-making processes are examined.

### 6600:375 Marketing & Sales Analytics (3 Credits)

Prerequisite: 6600:335. Develop the skills to provide clients with actionable marketing intelligence gleaned from the customer, sales force, channel, promotion and competitor databases that are now pervasive in the business world.

### 6600:432 Integrated Marketing Communications (3 Credits)

Prerequisites: Must be admitted to a 4 year major, 6600:205 with a grade of C or better, and 6600:355. This course stresses the need for marketers to create consistent coordinated communication programs using all elements of the promotion mix including advertising, public relations, sales promotion, social media and personal selling.

### 6600:434 Digital Marketing (3 Credits)

Prerequisites: Must be admitted to a major in a four-year degree granting college, 6600:205, and 6600:432. Focuses on the planning and execution of the promotion mix in the digital environment through online and mobile advertising, sales promotion, social media, blogging, website design and SEO.

### 6600:440 Brand Management (3 Credits)

Prerequisites: Must be admitted to a major in a four-year degree granting college, 6600:205, and 6600:355. This course studies the process of building and evolving successful brands. It focuses on brand equity development by creating a distinct brand identity, impeccable brand integrity and emotional resonance. It also emphasizes brand evolution through incremental and radical innovation.

### 6600:446 Social Media Marketing (3 Credits)

Prerequisites: Must be admitted to a four-years degree granting college, 6600:205, 6600:355, and 6600:432. Examines strategies used for marketing within social media. Topics include analytics and tactics to design, manage and optimize consumer engagement and commerce.

### 6600:460 B2B Marketing (3 Credits)

Prerequisites: Must be admitted to a four year degree granting program and 6600:205 with a grade of C or better. This course provides a thorough grounding in industrial and business-to-business marketing. While many of the concepts are similar to those used in consumer marketing, there are major differences. This course will explore both the similarities and the differences.

**6600:475 Business Negotiations (3 Credits)**

Prerequisites: Must be admitted to a major in a four-year degree granting college, 25 credits, and 6600:275. Examines business negotiation principles and practices, and builds skills in the process of negotiating business agreements within a global environment.

**6600:478 Advanced Professional Selling (3 Credits)**

Prerequisites: Must be admitted to a major in a four-year degree granting college and 6600:275. Broadens students understanding of the sales process looking at complex sales and solutions selling. Intense lab work focusing on communication skills, asking the right questions to fully understand needs, helping client turn implicit needs into explicit needs, conducting B2B and complex negotiations, and understanding how to create win-win solutions.

**6600:480 Sales Management (3 Credits)**

Prerequisites: Must be admitted to a major in a four-year degree granting college and [2520:101 or 6600:205]. Develops analytical and managerial skills through case studies and other learning activities relating to the organization, selection, training, motivation, and control of a domestic or global sales force.

**6600:486 Internship in Marketing (3 Credits)**

Prerequisites: Must be admitted to a 4-year degree granting major and permission of department chair. On-the-job experience with public or private sector organizations in the field of marketing. On-the-job learning objectives are established by the sponsoring organization and approved by the department chair. Field experiences are augmented by a weekly diary, two reflection papers, and an oral presentation of their experiences, which are supervised and evaluated by the department chair.

**6600:487 Internship in Sales Management (3 Credits)**

Prerequisite: Permission of department chair. On-the-job experience with public or private sector organizations in the field of marketing. On-the-job learning objectives are established by the sponsoring organization and approved by the department chair. Field experiences are augmented by a weekly diary and a term paper, which are supervised and evaluated by the department chair.

**6600:488 Internship in Integrated Marketing Communications (3 Credits)**

Prerequisite: Permission of department chair. On the job experience with public or private sector organizations in the field of marketing. On the job learning objectives are established by the sponsoring organization and approved by the department chair. Field experiences are augmented by the weekly diary and term paper, which are supervised and evaluated by the department chair.

**6600:491 Professional Workshops in Marketing (1-3 Credits)**

Prerequisites: Sophomore status and be admitted to a 4 year degree granting college. Special topics in marketing taught primarily by professionals with the objective of adding depth and an applied perspective to marketing concepts, issues, software & databases, problem solving and career planning. Special emphasis is given to timely issues and new technologies required by the rapidly changing marketplace. (May be repeated for up to six credits.)

**6600:493 Professional Insights: Sales Management (1 Credit)**

Prerequisites: Junior standing or higher and admission into a 4 year degree program. Sales Management is designed to link sales management majors' academic learning to professional practice. Guest speakers, recognized experts in their field, share important lessons in professional selling and sales management and challenge students to address key issues in their profession as preparation for an internship and career.

**6600:494 Professional Insights: Marketing Management (1 Credit)**

Prerequisites: Junior status and be admitted into a four year degree granting college. Marketing Management is designed to link marketing management majors' academic learning to professional practice. Guest speakers, recognized experts in their field, share important lessons in marketing management and challenge students to address key issues in their profession.

**6600:495 Professional Insights: IMC (1 Credit)**

Prerequisites: Junior status and be admitted into a four year degree granting program. IMC is designed to link Integrated Marketing Communication majors' academic learning to professional practice. Guest speakers, recognized experts in their field, share important lessons in IMC and challenge students to address key issues in their profession.

**6600:496 Special Topics: Marketing (1-3 Credits)**

Prerequisites: Must be admitted to a major in a four-year degree granting college and 6600:205. (May be repeated for a total of three credits) Provides an opportunity to examine special topics and/or current issues in the fields of marketing, sales retailing or advertising.

**6600:499 Marketing Capstone Project (3 Credits)**

Prerequisites: Must be admitted to a major in a four-year, degree granting college and for all Marketing majors: 6600:275, 6600:335, 6600:355, 6600:375. PLUS for Sales Management majors: 6600:475, 6600:480; For IMC majors: 6600:432, 6600:438; For Marketing Management majors: 6600:440, 6600:460. Student teams comprised of members from each marketing major will refine a live Client marketing strategy (product, price, distribution and promotion) and develop complementary integrated marketing communication and sales force plans.

## Health Care Selling, Certificate

### Certificate in Health Care Selling (660108C)

The 15-credit Certificate in Health Care Selling program provides students an opportunity to develop and document an understanding of selling within the health care industry, an important industry that accounts for approximately 12 percent of U.S. economic activity. This certificate is ideally suited for students in **Allied Health Administration**, those in Sports Science and Wellness Education, Nursing, or any other allied health area. This certificate will prepare those interested in pursuing careers in selling pharmaceutical, medical supplies and home health care equipment, or those interested in pursuing administrative roles in which they would be selling other health care products and services.

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**College of Business Administration Policies for Certificates:**

- Complete all certificate requirements prior to graduation.
- Earn a 2.0 GPA in all certificate coursework.



- Complete all pre-requisites for each course.
- Courses may not be taken as pass/ fail.
- Complete at least 6 additional credits not needed for any other major, minor, or certificate.
- Earn at least 9 credits at The University of Akron in the CBA.
- Declare the certificate in the Business Undergraduate Advising Office, CBA room 260.

## Summary

Code	Title	Hours
Required Courses		6
Electives		9
Total Hours		15

## Required Courses

Code	Title	Hours
6600:275	Professional Selling	3
6600:478	Advanced Professional Selling <sup>1</sup>	3
Total Hours		6

## Electives

Code	Title	Hours
<b>Select three of the following:</b>		<b>9</b>
2750:120	Medical Terminology	
2750:121	Study of Disease Processes	
2750:230	Basic Pharmacology	
2780:206	Applied Human Anatomy & Physiology I	
	or 3100:200 Human Anatomy & Physiology I	
2780:207	Applied Human Anatomy & Physiology II	
	or 3100:202 Human Anatomy & Physiology II	
3100:265	Introductory Human Physiology	
3150:100	Chemistry & Society	
3230:309	Medicine & the Humanities	
3230:457	Medical Anthropology	
3600:361	Biomedical Ethics	
3850:342	Sociology of Health & Illness	
5550:150	Concepts in Health & Fitness	
5570:101	Personal Health	
6500:480	Introduction to Health-Care Management <sup>1</sup>	
7700:295	Direct Experiences in the Hospital	
7700:484	Hospital Settings, Children and Families	
7600:438	Health Communication <sup>1</sup>	
7750:456	Social Work in Health Services	
8200:100	Introduction to Nursing	
Total Hours		9

<sup>1</sup> Must be admitted to 4 year degree granting major.

## Integrated Marketing Communications, BBA

### Bachelor of Business Administration in Integrated Marketing Communications (660002BBA)

More on the integrated Marketing Communications major (<https://www.uakron.edu/cba/departments/marketing/marketingprogramoverview.dot>)

You will earn a degree from a globally recognized business school where the programs are taught by an accomplished and dedicated faculty and are supported by a network of business executives. You can major in a wide variety of interesting disciplines that are attractive to prospective employers. As a graduate, you will have leadership and collaboration competencies and be a data savvy, globally aware, enterprise thinker.

College of Business Administration Undergraduate Programs  
<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Additional Business Requirements	6
	College of Business Administration Core	36
	Integrated Marketing Communications Requirements	32
	Additional Credits for Graduation *	12
Total Hours		120

\* This major requires a minimum of 120 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

#### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

3450:210 Calculus with Business Applications  
or 3450:221 Analytic Geometry-Calculus I

*Speaking: 3 credit hours*

7600:105 Introduction to Public Speaking  
or 7600:106 Effective Oral Communication

*Writing: 6 credit hours*

3300:111 English Composition I  
3300:112 English Composition II

#### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

3250:200 Principles of Microeconomics  
3850:100 Introduction to Sociology

#### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

6600:335 Marketing Research

Domestic Diversity

3850:100 Introduction to Sociology

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## Additional Business Requirements

Code	Title	Hours
<b>Required Business Courses</b>		
3450:210	Calculus with Business Applications	3
3250:201	Principles of Macroeconomics	3
<b>Recommended Business Course</b>		
6100:200	Personal Leadership Skills	
Total Hours		6

## College of Business Administration Core

Code	Title	Hours
6200:201	Accounting Principles I	3
6200:202	Accounting Principles II	3
6200:250	Spreadsheet Modeling & Decision Analysis	3
6400:220	Legal & Social Environment of Business	3
6400:301	Principles of Finance	3
6500:301	Management: Principles & Concepts	3
6500:304	Business Statistics	3
6500:305	Business Analytics	3

6500:330	Principles of Supply Chain and Operations Management	3
6500:490	Strategic Management	3
6600:205	Marketing Principles	3
6800:305	International Business	3
Total Hours		36

## Integrated Marketing Communications Requirements

Code	Title	Hours
<b>Foundation Core</b>		
6600:275	Professional Selling	3
6600:335	Marketing Research	3
6600:336	Marketing Research Lab	1
6600:355	Consumer Behavior	3
6600:375	Marketing & Sales Analytics	3
<b>Core Competencies Courses</b>		
6600:432	Integrated Marketing Communications <sup>1</sup>	3
6600:434	Digital Marketing <sup>1</sup>	3
6600:438	Media Strategy <sup>1</sup>	3
6600:446	Social Media Marketing <sup>1</sup>	3
<b>Professional Courses</b>		
6600:488	Internship in Integrated Marketing Communications <sup>1</sup>	3
or 6600:491	Professional Workshops in Marketing	
6600:495	Professional Insights: IMC <sup>1</sup>	1
6600:499	Marketing Capstone Project (Fall and Spring Only) <sup>1</sup>	3
Total Hours		32

<sup>1</sup> Must be admitted to 4 year degree granting major.

## Graduation Requirements – Review DPR for Status

- 120 Credit Hours
- CBA residency = Last 15 credits earned in CBA
- Overall GPA = 2.3
- Major GPA = 2.0
- Business & Economics GPA = 2.0

## Marketing, BBA

### Bachelor of Business Administration in Marketing (660100BBA)

More on the Marketing major (<https://www.uakron.edu/cba/undergraduate/majors/marketing.dot>)

Marketing majors must meet all requirements of 1) the General Education Program, 2) the 6 Credit Business Courses, 3) the College of Business Administration Core Program, 4) the required foundation courses within each program, 5) the electives within each program, and 6) the professional experiences component of the program.

College of Business Administration Undergraduate Programs

<http://www.uakron.edu/cba/uadvising> (<http://www.uakron.edu/cba/uadvising/>) \* (330) 972-7042 \* CBA 260

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Additional Business Requirements	6-7
	College of Business Administration Core	39
	Marketing Requirements	34
	Additional Credits for Graduation *	7-6
	<b>Total Hours</b>	<b>120</b>

\* This major requires a minimum of 120 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

3450:210 Calculus with Business Applications  
or 3450:221 Analytic Geometry-Calculus I

*Speaking: 3 credit hours*

7600:105 Introduction to Public Speaking  
or 7600:106 Effective Oral Communication

*Writing: 6 credit hours*

3300:111 English Composition I  
3300:112 English Composition II

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

3250:200 Principles of Microeconomics  
3850:100 Introduction to Sociology

### Tier III: Tagged Courses

Select one class from each of the following subcategories:

Complex Systems

Critical Thinking

6600:335 Marketing Research

Domestic Diversity

3850:100 Introduction to Sociology

Global Diversity

Review the General Education Requirements page for detailed course listings.

Total Hours 34

## Additional Business Requirements

Code	Title	Hours
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### General Education Tier 1 Requirement

3450:210	Calculus with Business Applications <sup>1</sup>	3-4
or 3450:221	Analytic Geometry-Calculus I	

### Required Business Courses

3250:201	Principles of Macroeconomics	3
3250:244	Introduction to Economic Analysis	

### Recommended Business Courses

6100:110	College of Business Administration Success Seminar <sup>2</sup>	
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6100:200	Personal Leadership Skills	
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Total Hours 6-7

<sup>1</sup> Replaces 3450:145 Algebra for Calculus as the Tier 1 Quantitative Reasoning General Education Requirement for all business majors.

<sup>2</sup> Required for some 1st year students

## College of Business Administration Core <sup>1</sup>

Code	Title	Hours
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6100:230	Business Communication	3
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6200:201	Accounting Principles I <sup>4</sup>	3
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6200:202	Accounting Principles II <sup>4</sup>	3
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6200:250	Spreadsheet Modeling & Decision Analysis <sup>4</sup>	3
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6400:220	Legal & Social Environment of Business <sup>2</sup>	3
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6400:301	Principles of Finance	3
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6500:304	Business Statistics	3
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6500:301	Management: Principles & Concepts	3
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6500:305	Business Analytics <sup>3</sup>	3
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6500:330	Principles of Supply Chain and Operations Management	3
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6500:490	Strategic Management	3
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6600:205	Marketing Principles	3
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6800:305	International Business	3
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Total Hours 39

<sup>1</sup> Student must also have a minimum cumulative GPA of 2.0 across the CBA Core.

<sup>2</sup> Students majoring in Accountancy are required to take 6200:424 Business Law instead of 6400:220 Legal & Social Environment of Business.

<sup>3</sup> Students majoring in Finance are strongly recommended to take 3250:325 Applied Econometrics I instead of 6500:305 Business Analytics.

<sup>4</sup> Accounting majors must complete with a grade of C or better.

## Marketing Requirements

Code	Title	Hours
<b>Foundation Core</b>		
6600:275	Professional Selling	3
6600:335	Marketing Research	3
6600:336	Marketing Research Lab	1
6600:355	Consumer Behavior	3
6600:375	Marketing & Sales Analytics	3
<b>Core Competencies Courses</b>		
6600:432	Integrated Marketing Communications <sup>1</sup>	3
6600:434	Digital Marketing	3
6600:440	Brand Management <sup>1</sup>	3
6600:446	Social Media Marketing	3
6600:460	B2B Marketing <sup>1</sup>	3
<b>Professional Courses</b>		
6600:499	Marketing Capstone Project (Fall and Spring Only) <sup>1</sup>	3
6600:486	Internship in Marketing <sup>1,2</sup>	3
or 6600:491	Professional Workshops in Marketing	
<b>Total Hours</b>		<b>34</b>

<sup>1</sup> Must be admitted to 4 year degree granting major.

<sup>2</sup> Students not taking 6600:486 Internship in Marketing must take 3 Professional Workshops in Marketing, as each are 1 credit.

## Graduation Requirements – Review DPR for Status

- 120 Credit Hours
- CBA residency = Last 15 credits earned in CBA
- Overall GPA = 2.3
- Major GPA = 2.0
- Business & Economics GPA = 2.0

## Recommended Sequence

<b>1st Year</b>		
<b>Fall Semester</b>		<b>Hours</b>
3300:111	English Composition I	3
3450:145	Algebra for Calculus <sup>1</sup>	4
6100:110	College of Business Administration Success Seminar <sup>2</sup>	1
6200:250	Spreadsheet Modeling & Decision Analysis	3
7600:105	Introduction to Public Speaking	3
or 7600:106	or Effective Oral Communication	
Social Science Requirement		3
<b>Hours</b>		<b>17</b>
<b>Spring Semester</b>		
3300:112	English Composition II	3
3450:210	Calculus with Business Applications	3

3250:200	Principles of Microeconomics	3
Arts Requirement		3
Natural Science Requirement with Lab		4
<b>Hours</b>		<b>16</b>

### 2nd Year

#### Fall Semester

3250:201	Principles of Macroeconomics	3
6200:201	Accounting Principles I	3
6500:304	Business Statistics	3
6600:205	Marketing Principles	3
6600:275	Professional Selling	3
<b>Hours</b>		<b>15</b>

#### Spring Semester

6200:202	Accounting Principles II	3
6500:305	Business Analytics	3
6600:355	Consumer Behavior	3
Humanities Requirement		3-4
Natural Science Requirement		3
<b>Hours</b>		<b>15-16</b>

### 3rd Year

#### Fall Semester

6400:301	Principles of Finance	3
6500:301	Management: Principles & Concepts	3
6600:335	Marketing Research <sup>3</sup>	3
6600:336	Marketing Research Lab	1
6600:432	Integrated Marketing Communications	3
Arts or Humanities Requirement		4-3
<b>Hours</b>		<b>17-16</b>

#### Spring Semester

6400:220	Legal & Social Environment of Business	3
6500:330	Principles of Supply Chain and Operations Management	3
6600:375	Marketing & Sales Analytics	3
6600:440	Brand Management	3
Complex Systems Requirement		3
<b>Hours</b>		<b>15</b>

### 4th Year

#### Fall Semester

6600:434	Digital Marketing	3
6600:460	B2B Marketing	3
6600:486	Internship in Marketing	3
6800:305	International Business	3
Domestic Diversity Requirement		3
<b>Hours</b>		<b>15</b>

#### Spring Semester

6500:490	Strategic Management	3
6600:446	Social Media Marketing	3
6600:499	Marketing Capstone Project	3
Global Diversity Requirement		3
<b>Hours</b>		<b>12</b>
<b>Total Hours</b>		<b>122</b>

- <sup>1</sup> Minimum grade of C-  
<sup>2</sup> Required for some first year students  
<sup>3</sup> Counts as Critical Thinking General Education course

## Marketing, Minor Minor in Marketing (660104M)

This 18 credit minor will provide an introduction into the diverse and dynamic field of marketing by providing the student with additional skills, including insights into marketing research, business to business, consumer behavior, social media and digital marketing. Students are required to take 9 credits of required marketing courses, and then select an additional 9 credits among courses that explore specific areas of interest in marketing.

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Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

### Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

### Required Courses

Code	Title	Hours
6600:205	Marketing Principles <sup>2</sup>	3
or 2520:101	Essentials of Marketing Technology	
6600:355	Consumer Behavior	3
6600:460	B2B Marketing	3
Total Hours		9

### Electives

Code	Title	Hours
<b>Select three of the following:</b>		<b>9</b>
6600:335	Marketing Research	
6600:375	Marketing & Sales Analytics	
6600:432	Integrated Marketing Communications <sup>1</sup>	
6600:434	Digital Marketing <sup>1</sup>	
6600:440	Brand Management <sup>1</sup>	
6600:446	Social Media Marketing	
7100:132	Introduction to Design	
7100:189	Production I	
Total Hours		9

- <sup>1</sup> Must be admitted to 4 year degree granting major.  
<sup>2</sup> Students wishing to take 6600:205 Marketing Principles must have earned 24 credit hours and must take 3250:200 Principles of Microeconomics as a pre/corequisite.

## Professional Selling for Engineering Majors, Certificate

### Certificate in Professional Selling for Engineering Majors (660111C)

This **9-credit Certificate** in Professional Selling for Engineering majors provides students an opportunity to develop and document an understanding of professional selling skills. The course work will provide additional development of selling and negotiation skills allowing for enhanced opportunities for career advancement. The **combination of technical knowledge and selling skills** is highly sought after by some of the top national and international firms, providing unique opportunities for employment.

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#### College of Business Administration Policies for Certificates:

- Complete all certificate requirements prior to graduation.
- Earn a 2.0 GPA in all certificate coursework.
- Complete all pre-requisites for each course.
- Courses may not be taken as pass/ fail.
- Complete at least 6 additional credits not needed for any other major, minor, or certificate.
- Earn at least 9 credits at The University of Akron in the CBA.
- Declare the certificate in the Business Undergraduate Advising Office, CBA room 260.

To be granted this certificate, the student must take at least 6 credit hours of 6600 courses in addition to the requirements for any other major, minor, or certificate that has been earned.

### Summary

Code	Title	Hours
Required Courses		6
Electives		3
Total Hours		9

## Required Courses

Code	Title	Hours
6600:275	Professional Selling	3
6600:478	Advanced Professional Selling <sup>1</sup>	3
Total Hours		6

## Electives

Code	Title	Hours
<b>Select one of the following:</b>		<b>3</b>
6600:475	Business Negotiations <sup>1</sup>	
4100:400	Engineering Management and Leadership	
4300:471	Construction Administration	
4200:110 & 4200:210 & 4200:310	Project Management and Teamwork I and Project Management and Teamwork II and Project Management and Teamwork III	
Total Hours		3

<sup>1</sup> Must be admitted to 4 year degree granting major.

## Professional Selling, Certificate Certificate in Professional Selling (660103C)

The 15-credit Certificate in Professional Selling is designed for students who are outside the College of Business Administration. This certificate provides the student an opportunity to develop and document an understanding of professional selling skills. Opportunities for further career advancement become available to students who major in communications, sports management, arts and science, and numerous others when they combine their area of study with a sales certificate.

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### College of Business Administration Policies for Certificates:

- Complete all certificate requirements prior to graduation.
- Earn a 2.0 GPA in all certificate coursework.
- Complete all pre-requisites for each course.
- Courses may not be taken as pass/ fail.
- Complete at least 6 additional credits not needed for any other major, minor, or certificate.
- Earn at least 9 credits at The University of Akron in the CBA.
- Declare the certificate in the Business Undergraduate Advising Office, CBA room 260.

To be granted this certificate, the student must take at least 6 credit hours of 6600 courses in addition to the requirements for any other major, minor, or certificate that has been earned.

## Summary

Code	Title	Hours
Required Courses		9
Electives		6
Total Hours		15

## Required Courses

Code	Title	Hours
6600:205	Marketing Principles	3
6600:275	Professional Selling	3
6600:478	Advanced Professional Selling <sup>1</sup>	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select two of the following:</b>		<b>6</b>
6100:101	Business Issues in a Connected World	
6600:355	Consumer Behavior	
6600:480	Sales Management <sup>1</sup>	
6600:475	Business Negotiations <sup>1</sup>	
3300:390	Professional Writing I	
3460:101	Essentials of Computer Science	
3600:362	Business Ethics	
3750:380	Industrial/Organizational Psychology	
3750:443	Human Resource Management	
4100:400	Engineering Management and Leadership	
7600:345	Advanced Presentational Communication	
7600:227	Non-Verbal Communication	
7600:245	Argumentation	
7350:139	The Fashion & Furnishings Industries	
3250:100	Introduction to Economics	
Total Hours		6

<sup>1</sup> Must be admitted to 4 year degree granting major.

## Professional Selling, Minor Minor in Professional Selling (660101M)

The Minor in Professional is designed for students that are non-marketing majors, who want to add an additional skill set for career options. Regardless of one's major, developing sales and negotiation skills are likely to help advance one's career. This minor requires an additional **18 credits** that provide students with the tools and skills to pursue a career in professional selling as a **complement to their major area of study**. There is high market demand for students who can combine a deep knowledge in one area/major with the additional skills of professional selling and business negotiations.

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factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

To be granted this minor, the student must complete at least 9 credit hours of 6600 courses in addition to the requirements for any other major, minor, or certificate that has been earned.

## Summary

Code	Title	Hours
Required Courses		12
Electives		6
Total Hours		18

## Required Courses

Code	Title	Hours
6600:205	Marketing Principles <sup>2</sup>	3
6600:275	Professional Selling	3
6600:475	Business Negotiations <sup>1</sup>	3
6600:478	Advanced Professional Selling <sup>1</sup>	3
Total Hours		12

## Electives

Code	Title	Hours
<b>Select two of the following:</b>		<b>6</b>
6600:480	Sales Management <sup>1</sup>	
6300:201	Introduction to Entrepreneurship	
6400:200	Foundations of Personal Finance	
6400:343	Investments	
6400:417	Retirement Planning <sup>1</sup>	
6500:302	Organizational Behavior & Leadership Skills	
6500:341	Human Resource Management	
6500:457	International Management <sup>1</sup>	
6800:421	Foreign Market Entry <sup>1</sup>	
Total Hours		6

<sup>1</sup> Must be admitted to 4-year degree granting major.

<sup>2</sup> 3250:200 Principles of Microeconomics is a pre/corequisite to 6600:205 Marketing Principles

## Sales Management, BBA Bachelor of Business Administration in Sales Management (660101BBA)

More on the Sales Management major (<https://www.uakron.edu/cba/undergraduate/majors/sales.dot>)

## Sales Management

The University of Akron's Sales Management Program, established in 1994, is the 2nd oldest such program in the United States. The placement rate of our sales students is nearly 100%, with some of the highest starting salaries among business graduates. Graduates are

working in diverse sectors including medical device sales, insurance sales, financial services, consumer packaged goods market, industrial equipment, software sales and services, and technical sales. Sales Management Careers are a high growth area both nationally and within the State of Ohio (<http://omj.ohio.gov/OMJResources/State-BachOpenings.stm>). Experts estimate that sales professionals account for 10 percent of U.S. employment, with a projected annual growth of 9%.

With one of the largest collegiate sales training facilities in the country, our sales management program has been recognized nationally and is accredited through the University Sales Center Alliance (<https://www.universitiesalescenteralliance.org/>), a consortium connecting sales faculty to share best practices and expertise. We also offer a minor in Professional Selling and certificate programs (<https://www.uakron.edu/cba/undergraduate/minors-certificates/>) in Professional Selling, Sales for Engineering students, and Health Care Selling.

The Sales Program is supported by The Fisher Institute for Professional Selling (p. 557), which houses our nine state-of-the-art sales training lab rooms, permitting students to augment traditional learning approaches with extensive sales and negotiation role playing and feedback. Additional support is offered through our Fisher Executive Advisory Board, giving students excellent access to professional networking, mentoring, internships and career opportunities.

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## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Additional Business Requirements		6-7
College of Business Administration Core		39
Sales Management Requirements		31
Additional Credits for Graduation *		10-9
Total Hours		120

\* This major requires a minimum of 120 completed credit hours.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
3450:210	Calculus with Business Applications or 3450:221 Analytic Geometry-Calculus I	
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking or 7600:106 Effective Oral Communication	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	
3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
3250:200	Principles of Microeconomics	
3850:100	Introduction to Sociology	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
6600:335	Marketing Research	
Domestic Diversity		
3850:100	Introduction to Sociology	
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## Additional Business Requirements

Code	Title	Hours
<b>General Education Tier 1 Requirement</b>		
3450:210	Calculus with Business Applications <sup>1</sup> or 3450:221 Analytic Geometry-Calculus I	3-4
<b>Required Business Courses</b>		
3250:201	Principles of Macroeconomics	3
3250:244	Introduction to Economic Analysis	
<b>Recommended Business Courses</b>		
6100:110	College of Business Administration Success Seminar <sup>2</sup>	

Code	Title	Hours
6100:200	Personal Leadership Skills	
Total Hours		6-7

- <sup>1</sup> Replaces 3450:145 Algebra for Calculus as the Tier 1 Quantitative Reasoning General Education Requirement for all business majors.
- <sup>2</sup> Required for some 1st year students

## College of Business Administration Core <sup>1</sup>

Code	Title	Hours
6100:230	Business Communication	3
6200:201	Accounting Principles I <sup>4</sup>	3
6200:202	Accounting Principles II <sup>4</sup>	3
6200:250	Spreadsheet Modeling & Decision Analysis <sup>4</sup>	3
6400:220	Legal & Social Environment of Business <sup>2</sup>	3
6400:301	Principles of Finance	3
6500:304	Business Statistics	3
6500:301	Management: Principles & Concepts	3
6500:305	Business Analytics <sup>3</sup>	3
6500:330	Principles of Supply Chain and Operations Management	3
6500:490	Strategic Management	3
6600:205	Marketing Principles	3
6800:305	International Business	3
Total Hours		39

- <sup>1</sup> Student must also have a minimum cumulative GPA of 2.0 across the CBA Core.
- <sup>2</sup> Students majoring in Accountancy are required to take 6200:424 Business Law instead of 6400:220 Legal & Social Environment of Business.
- <sup>3</sup> Students majoring in Finance are strongly recommended to take 3250:325 Applied Econometrics I instead of 6500:305 Business Analytics.
- <sup>4</sup> Accounting majors must complete with a grade of C or better.

## Sales Management Requirements

Code	Title	Hours
<b>Foundation Core</b>		
6600:275	Professional Selling	3
6600:335	Marketing Research	3
6600:336	Marketing Research Lab	1
6600:355	Consumer Behavior	3
6600:375	Marketing & Sales Analytics	3
<b>Core Competencies Courses</b>		
6600:460	B2B Marketing <sup>1</sup>	3
6600:475	Business Negotiations <sup>1</sup>	3
6600:478	Advanced Professional Selling <sup>1</sup>	3
6600:480	Sales Management <sup>1</sup>	3
<b>Professional Courses</b>		
6600:487	Internship in Sales Management <sup>1</sup> or 6600:491 Professional Workshops in Marketing	3
6600:499	Marketing Capstone Project <sup>1</sup>	3
Total Hours		31



<sup>1</sup> Must be admitted to 4 year degree granting major.

## Recommended Sequence

1st Year		Hours
<b>Spring Semester</b>		
3250:200	Principles of Microeconomics	3
3300:112	English Composition II	3
3450:210	Calculus with Business Applications	3
	Arts Requirement	3
	Natural Science Requirement with Lab	4
	Hours	16
<b>Fall Semester</b>		
3300:111	English Composition I	3
3450:145	Algebra for Calculus	4
6100:110	College of Business Administration Success Seminar <sup>1</sup>	1
6200:250	Spreadsheet Modeling & Decision Analysis	3
7600:105 or 7600:106	Introduction to Public Speaking or Effective Oral Communication	3
	Social Science Requirement	3
	Hours	17
<b>2nd Year</b>		
<b>Spring Semester</b>		
6200:202	Accounting Principles II	3
6500:305	Business Analytics	3
6600:355	Consumer Behavior	3
	Humanities Requirement	3-4
	Natural Science Requirement	3
	Hours	15-16
<b>Fall Semester</b>		
3250:201	Principles of Macroeconomics	3
6200:201	Accounting Principles I	3
6500:304	Business Statistics	3
6600:205	Marketing Principles	3
6600:275	Professional Selling	3
	Hours	15
<b>3rd Year</b>		
<b>Spring Semester</b>		
6400:220	Legal & Social Environment of Business	3
6500:330	Principles of Supply Chain and Operations Management	3
6600:375	Marketing & Sales Analytics	3
6600:475	Business Negotiations	3
	Complex Systems Requirement	3
	Hours	15
<b>Fall Semester</b>		
6400:301	Principles of Finance	3
6500:301	Management: Principles & Concepts	3
6600:335	Marketing Research (Counts as General Education Critical Thinking Tag requirement)	3
6600:336	Marketing Research Lab	1
6600:487	Internship in Sales Management	3

6600:491	Professional Workshops in Marketing <sup>2</sup>	3
	Arts or Humanities Requirement	4-3
	Hours	20-19

4th Year		Hours
<b>Spring Semester</b>		
6500:490	Strategic Management	3
6600:478	Advanced Professional Selling	3
6600:499	Marketing Capstone Project	3
	Global Diversity Requirement	3
	Hours	12
<b>Fall Semester</b>		
6600:460	B2B Marketing	3
6600:480	Sales Management	3
6800:305	International Business	3
	Domestic Diversity Requirement	3
	Hours	12
	Total Hours	122

<sup>1</sup> Required for some first year students

<sup>2</sup> Must take 3 1-credit hour Professional Workshops in Marketing

## College of Engineering and Polymer Science

The College of Engineering and Polymer Science provides educational opportunities at both the undergraduate and graduate levels for students who wish to pursue careers in engineering and polymer science. Faculty perform research with the purpose of contributing new knowledge to the fields encompassed by engineering principles. Professional service is in concert with the objectives of the University.

The College's co-operative education program, one of the oldest in the nation, enables student engineers to integrate classroom learning with on-the-job experience while they earn their degrees. Students can alternate semesters of paid employment in their major fields of interest with semesters on campus after they have completed five semesters of study.

## College Admission Requirements Admission for Incoming First-Year Students

A new first-year student can receive full admission to the College of Engineering and Polymer Science directly from high school if they meet the following requirements:

- High school GPA of 3.4 or higher
- At least 24 composite ACT or at least 1110 composite SAT
- At least 24 math ACT or at least 560 math SAT

Students interested in engineering who do not meet the academic requirements for direct admission to the College of Engineering and Polymer Science are admitted to The University of Akron as a student with an intended major in engineering, with a pre-admission status. Once a student with pre-admission status meets the admission criteria shown below, that student receives full admission to the College of Engineering and Polymer Science.

## Admission for Current UA Students and Transfer Students

Current UA students who have not yet been admitted to the College of Engineering and Polymer Science and students transferring to UA from another institution may apply for the College of Engineering and Polymer Science when they meet the following criteria:

- Complete at least 30 semester hours of coursework post high school
- Complete Calculus 2 with a C- or higher
- Have a 2.3 grade point average in at least three of the following categories:
  - in all coursework
  - in all engineering coursework
  - in all required mathematics coursework
  - in all required science coursework (chemistry, physics, computer science, biology)

Admission of students who do not meet the above requirements will be considered by the dean or representative only if the request originates by a department head or representative.

There are additional requirements for full admission to the Aerospace Systems Engineering program.

## Continuation in the Baccalaureate Programs

### Probation/Suspension/Dismissal in Engineering

A student's term and cumulative GPA determine whether a student is in good academic standing in the College of Engineering and Polymer Science. Evaluation of status is updated at the end-of-term. Students not in good academic standing in the College may be on probation, suspension, or dismissed from the College of Engineering and Polymer Science. Specific details on the process are found at College of Engineering Academic discipline (probation, suspension, and dismissal) policy (<https://www.uakron.edu/engineering/docs/College%20of%20Engineering%20Academic%20Probation%20and%20Dismissal%20Fall%202018.pdf>).

Engineering and Polymer Science students are also subject to University of Akron probation and dismissal policies (p. 26).

Engineering students on engineering and / or UA academic probation may not register for classes without first consulting their engineering academic advisor to agree and document an approved group of courses. Engineering and Polymer Science students on academic probation, suspension, or dismissal have enrollment holds placed on their account and cannot register for classes until such a meeting occurs.

## Requirements for Graduation

- Compliance with University requirements (p. 30)
- Completion of all degree requirements for the specific program, including both the appropriate list of courses and a minimum (depending on program) of 136-140 credits of coursework
- Recommendation of the student's department
- Achievement of 2.00 grade point average in all engineering and polymer science coursework attempted with 4XXX course prefix

## Engineering Accreditation

Engineering is a profession in which knowledge of mathematics and natural sciences, gained by study, experience, and practice, is applied, with judgment, to develop ways to economically utilize the materials and forces of nature for the benefit of mankind. Entrance to the engineering profession is normally through a university undergraduate program in one of the disciplines of engineering.

The University of Akron's College of Engineering and Polymer Science is home to several undergraduate programs accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org) (<http://www.abet.org>): Aerospace Systems Engineering, Biomedical Engineering, Chemical Engineering, Civil Engineering, Computer Engineering, Corrosion Engineering, Electrical Engineering, and Mechanical Engineering. Accreditation ensures that the graduates of our programs have a solid educational foundation and are ready to enter the profession. More on the importance of accreditation in engineering can be found here (<http://www.abet.org/accreditation/what-is-accreditation/why-abet-accreditation-matters/>).

Accredited engineering programs must meet a number of criteria and have specific educational objectives. The student outcomes common to all engineering programs accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org) (<http://www.abet.org>), are that graduates have:

- (1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- (2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- (3) an ability to communicate effectively with a range of audiences
- (4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- (5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- (6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- (7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

## Cooperative Education

The cooperative education program provides for a coordinated sequence of alternating periods of classroom instruction and employment during a five-year program. Students in one of Engineering and Polymer Science's undergraduate programs may pursue their degree with the cooperative education option, for a nominal five years of study, or without cooperative education, for a nominal four years of study. The exception is Aerospace Systems Engineering; in this program, cooperative education is required.

The cooperative program simultaneously provides for the development of fundamental principles in the classroom and for their application in practice. The student has the opportunity to find the type of work and organization in which the student can best apply individual ability. The student gains an appreciation of the problems of labor and management by first-hand experience. The student develops mature judgment by coping with everyday problems. The employer of a coop student has the ability to train and select a student whose abilities and aptitudes can be adapted to the needs of technical staff requirements.

While a student is at work, all rules and regulations prescribed by the employer must be obeyed. In addition, the student is subject to all current labor laws and conditions. The student is considered a full-time student by the University while on industrial assignments.

The University does not guarantee employment, but makes every effort to place a student in the best learning situation that is consistent with the acquisition of sound professional experience.

## Department of Biomedical Engineering

More information on the Department of Biomedical Engineering and the undergraduate programs in Biomedical Engineering is available at:

- department Undergraduate Bulletin page (p. 355)
- department website (<https://www.uakron.edu/engineering/BME/>)

## Department of Chemical, Biomolecular, and Corrosion Engineering

More information on the Department of Chemical, Biomolecular, and Corrosion Engineering and the undergraduate programs in Chemical Engineering and Corrosion Engineering is available at:

- department Undergraduate Bulletin page (p. 364)
- department website (<https://www.uakron.edu/engineering/CBE/>)

## Department of Civil Engineering

More information on the Department of Civil Engineering and the undergraduate programs in Civil Engineering is available at:

- department Undergraduate Bulletin page (p. 378)
- department website (<https://www.uakron.edu/engineering/CE/>)

## Department of Computer Science

More information on the Department of Computer Science and the undergraduate programs in Computer Science is available at:

- department Undergraduate Bulletin page (p. 383)
- department website (<https://www.uakron.edu/computer-science/>)

## Department of Electrical and Computer Engineering

More information on the Department of Electrical and Computer Engineering and the undergraduate programs in Electrical Engineering and Computer Engineering is available at:

- department Undergraduate Bulletin page (p. 400)
- department website (<https://www.uakron.edu/engineering/ECE/>)

## Department of Engineering and Science Technology

More information on the undergraduate programs in Engineering and Science Technology is available at:

- department Undergraduate Bulletin page (p. 415)

## Department of Mechanical Engineering

More information on the Department of Mechanical Engineering and the undergraduate programs in Mechanical Engineering and Aerospace Systems Engineering is available at:

- department Undergraduate Bulletin page (p. 448)
- department website (<https://www.uakron.edu/engineering/ME/>)

## School of Polymer Science and Polymer Engineering

More information on the School of Polymer Science and Polymer Engineering and the undergraduate programs in Polymer Science and Polymer Engineering and is available at:

- school Undergraduate Bulletin page (p. 455)
- school website (<https://www.uakron.edu/polymer/>)

## Biomedical Engineering

The Department of Biomedical Engineering (<https://www.uakron.edu/engineering/BME/>) offers an undergraduate program leading to the Bachelor of Science in Biomedical Engineering. The department also offers graduate programs leading to an interdisciplinary Master of Science in Engineering, and an interdisciplinary Doctor of Philosophy in Engineering.

Biomedical Engineering is a highly interdisciplinary field of engineering which combines a fundamental understanding of engineering principles with an appreciation of the life sciences. Biomedical Engineers are prepared to solve problems in the health care industry and interact equally with other engineers and health care professionals. Students are prepared to embark on careers in research, design and development of medical devices, instrumentation, analysis tools, clinical evaluation methods, systems and processes, and other forms of medical technology.

The development of an in-depth understanding of the fundamentals of engineering is essential and therefore a degree in Biomedical Engineering focuses first on core engineering coursework, followed by advanced applications specific to the field of Biomedical Engineering. To maintain a core understanding of engineering, the program is divided into three tracks: Biomechanics; Instrumentation, Signals and Imaging; and Biomaterials and Tissue Engineering.

Students in the Department of Biomedical Engineering receive individual advising in their areas of interest. Graduates of the program will be prepared to apply their knowledge of engineering and medicine to design, test and evaluate systems or system components to be used in the health care industry, to design and develop research projects, including the analysis and interpretation of data and the dissemination of results, and to participate in other biomedical engineering problem solving activities. Graduates will also be well prepared to enter graduate study in Biomedical Engineering, Medical School or other professional professionals.

The Biomedical Engineering program is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org) (<http://www.abet.org/>). The Biomedical Engineering program identifies program educational objectives that describe what their graduates are expected to attain within a few years of graduation. Accordingly, the educational objectives of the Biomedical Engineering program are to educate biomedical engineers who can:

- be viewed as technically competent at the interface between engineering and medicine as evidenced by:
  - creative and innovative problem solving
  - performance as a contributing team member
  - ethical and professional actions
  - an ability to interface with diverse constituencies
  - a knowledge of intellectual property and federal regulations
- exhibit continual professional development by attendance at conferences, workshops and enrollment in course work at the post baccalaureate level
- exhibit continual professional service as evidenced by:
  - active participation in professional societies
  - service as a mentor
- advance on their chosen career path

The Department of Biomedical Engineering has established the following student outcomes to be achieved by the time of graduation:

- (1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
  - (2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
  - (3) an ability to communicate effectively with a range of audiences
  - (4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
  - (5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
  - (6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
  - (7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies
- (A) Applying principles of engineering, biology, human physiology, chemistry, calculus-based physics, mathematics (through differential equations) and statistics
- (B) Solving bio/biomedical engineering problems, including those associated with the interaction between living and non-living systems
- (C) Analyzing, modeling, designing, and realizing bio/biomedical engineering devices, systems, components, or processes

(D) Making measurements on and interpreting data from living systems

Information specific to the available program options in biomedical engineering is available:

- Biomedical Engineering (Biomaterials and Tissue Track), BS (p. 358)
- Biomedical Engineering (Biomaterials and Tissue Track), Co-op Option, BS (p. 359)
- Biomedical Engineering (Biomechanics Track), BS (p. 360)
- Biomedical Engineering (Biomechanics Track), Co-op Option, BS (p. 361)
- Biomedical Engineering (Instrumentation, Signals and Imaging Track), BS (p. 362)
- Biomedical Engineering (Instrumentation, Signals and Imaging Track), Co-op Option, BS (p. 363)

## Biomedical Engineering (4800)

### 4800:101 Tools for Biomedical Engineering (3 Credits)

Prerequisite or Corequisite: 3450:221 or appropriate AP score. Introduction to Biomedical Engineering; basic operations using the Matlab environment; engineering graphics with Solidworks; and wet laboratory skills.

### 4800:111 Introduction to Biomedical Engineering Design (3 Credits)

Prerequisite: 4800:101. Prerequisite or Corequisite: 3450:222. Introduction to the interdisciplinary nature of Biomedical Engineering research and design through the use of lectures, discussions, homework and design projects.

### 4800:201 Biomedical Engineering Sophomore Seminar (1 Credit)

Prerequisites: 4800:101 and sophomore or greater standing. A seminar format to allow students to learn about current research and careers in Biomedical Engineering. Topics in technical communications will also be covered.

### 4800:220 Biomedical Computing (3 Credits)

Prerequisites: 3450:223, 4800:101 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 3450:335. Programming in Matlab environment to solve engineering problems using built-in and user-defined functions and various modules including signal processing and image processing. Concepts will be illustrated using relevant biomedical engineering examples.

### 4800:300 Biomaterials (3 Credits)

Prerequisites: 4300:202 and admission to an engineering major within the College of Engineering and Polymer Science. Properties of materials used in medicine and their interaction with biological materials will be discussed. Biocompatibility issues and materials properties and characterization will also be discussed.

### 4800:305 Introduction to Biophysical Measurements (4 Credits)

Prerequisites: 4800:101 and [4400:231 or 4400:307] and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 3100:202. Biomedical Engineering involves measurement of Physiological processes in living organisms. An understanding of the variety of instruments used and the limitations are introduced.

### 4800:310 Modeling & Simulation of Biomedical Systems (3 Credits)

Prerequisites: 3450:335, 4800:220, and admission to an engineering major within the College of Engineering and Polymer Science. Modeling and simulation of physiological systems.

**4800:325 Design of Medical Devices (3 Credits)**

Prerequisites: Junior/senior standing in the College of Engineering and Polymer Science or the College of Arts and Sciences. Design of Medical Devices, design criteria, human factors, patient care and monitoring devices, surgical devices, bench testing and legal liability.

**4800:360 Biofluid Mechanics (3 Credits)**

Prerequisites: 3450:335, 3150:133, 3650:292, and 4600:203. Introduction to the fundamentals of fluid mechanics and their application to biological, cardiovascular, respiratory and other biofluid systems.

**4800:362 Transport Fundamentals for Biomedical Engineering (3 Credits)**

Prerequisite: 3450:335, 4600:203 and admission to an engineering major within the College of Engineering and Polymer Science. Introductory topics in fluid, heat, and mass transfer including both integral and differential analysis as it applies to biological and biomedical systems.

**4800:365 Mechanics of Biological Tissues (3 Credits)**

Prerequisites: 4300:202 and admission to an engineering major within the College of Engineering and Polymer Science. The mechanical properties of musculoskeletal tissues are presented along with modeling techniques and testing procedures. Tendons, ligaments, cartilage and bone will be addressed.

**4800:370 Biomechanics of Human Movement (3 Credits)**

Prerequisites: 3100:202 and 4600:203. The application of engineering mechanics and anatomy to study and analyze human movement. Lectures and in-class labs will introduce students to experimental and theoretical techniques.

**4800:401 Introduction to Biomaterials Laboratory (2 Credits)**

Prerequisites: Admission into the Biomedical Engineering - Biomaterials and Tissue Engineering or the Biomedical Engineering - Biomaterials and Tissue Engineering / Cooperative Education program and 4800:101. Pre/Corequisite: 4800:400. Laboratory to explore techniques in biomaterials and tissue engineering and evaluate experimental outcomes. Biomaterials and Tissue Engineering Track students only.

**4800:420 Biomedical Signal & Image Processing (3 Credits)**

Prerequisites: 4800:220 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4800:305. Introduction to the basic problems associated with biological signal and image processing applications, and appropriate approaches to dealing with them.

**4800:422 Physiological Control Systems (3 Credits)**

Prerequisites: 3100:202, 3450:335. The basic techniques employed in control theory, systems analysis and model identification as they apply to physiological systems.

**4800:430 Design of Medical Imaging Systems (3 Credits)**

Prerequisites: 3100:200, 3650:292, 4400:340, 4400:353, 4800:305 and admission to an engineering major within the College of Engineering and Polymer Science or permission of instructor. Physical principles and engineering design of medical imaging systems, with emphasis on digital radiography, computed tomography, nuclear medicine, ultrasound and magnetic resonance.

**4800:435 Image Science (3 Credits)**

Prerequisites: 3100:200, 3650:292, 4400:343 or by permission of instructor. Principles of image science, image performance parameters and image assessment techniques of medical imaging systems, with emphasis on digital radiography, tomographic imaging, ultrasound and magnetic resonance.

**4800:437 Physics of Medical Imaging (3 Credits)**

Prerequisites: 3100:200, 3650:292, 4400:353, 4800:305. Physical principles of medical imaging modalities with emphasis on the properties, generation mechanisms and interaction of radiation with matter, physics of the image formation and optimization.

**4800:440 Advanced Biomaterials (3 Credits)**

Prerequisites: 4800:300 and admission to an engineering major within the College of Engineering and Polymer Science. The interactions between biomaterials and medical devices will be analyzed with respect to their potential fractionation of biological mechanisms.

**4800:445 Experimental Techniques in Biomaterials Tissue Engineering (3 Credits)**

Prerequisite: 4800:440. Laboratory experience that applies engineering concepts and practices to the analysis of biomaterials and tissue engineering.

**4800:450 Tissue Engineering (3 Credits)**

Prerequisites: 4800:300, 4800:365, 4800:362, and [4800:360 or 4200:321]. This course will explore topics to successfully design tissue engineered devices. For advanced engineering students with a background in materials, mechanics, and transport phenomena.

**4800:455 Biotransport (3 Credits)**

Prerequisites: 3100:202, 4800:220, and [4800:362 or 4200:321]. With the foundations of fluid, heat and mass transfer established, this course focuses on specific biological examples of transport phenomena.

**4800:460 Experimental Techniques in Biomechanics (3 Credits)**

Prerequisites: 4800:362, 4800:365 and admission to an engineering major within the College of Engineering and Polymer Science. Principles of testing and measuring devices commonly used for biomechanics studies. Laboratories for demonstration and hands-on experience.

**4800:464 Microfluidics for Biomedical Engineering (3 Credits)**

Prerequisites: 4800:362 or 4200:321 or 4800:360. This course will discuss fundamental principles of single and two phase flow of biofluids in microfluidic devices, and present the applications of lab-on-a-chip systems in BME.

**4800:470 Human Factors Engineering (3 Credits)**

Prerequisite: Admission to an engineering major within the College of Engineering and Polymer Science. Reliability and human error, human capabilities and limitations, crew protection, display systems, controls and controlling actions, interface design principles, risk management, Safety and accident prevention.

**4800:485 Special Topics in Biomedical Engineering (1-3 Credits)**

Prerequisite: Permission of advisor. Directed individual or group research or study in the student's field of interest. Topic subject to approval of advisor.

**4800:491 Biomedical Engineering Design I (2 Credits)**

Prerequisites: 4800:111, 4800:220, and {[4400:307 and 4800:300 and 4800:362 and 4800:365] or [4400:340 and 4400:360 and 4600:203 and 4800:310]} and admission to an engineering major within the College of Engineering and Polymer Science. Pre/Corequisite: 4800:305. The design process will be presented utilizing case studies and detailed biomedical engineering design projects.

**Gen Ed:** Tier 3 - Complex Systems

**4800:492 Biomedical Engineering Design II (2 Credits)**

Prerequisites: 4800:491 and admission to an engineering major within the College of Engineering and Polymer Science. The design process will be continued utilizing case studies and detailed biomedical engineering design projects.

**4800:498 Introduction to BME Research (2 Credits)**

Prerequisites: Permission of instructor. Directed individual or group study in research in biomedical engineering. Course is credit/no credit. May not be repeated.

**4800:499 BME Research Project (1-3 Credits)**

Prerequisites: 4800:498, permission of instructor. Directed individual or group study in research in biomedical engineering. May be repeated.

## Biomedical Engineering (Biomaterials and Tissue Track), BS

### Bachelor of Science in Biomedical Engineering, Biomaterials and Tissues (480006BS)

This option of the undergraduate program in Biomedical Engineering follows the biomaterials and tissues track and does not include a cooperative education component.

The following information has official approval of the **Department of Biomedical Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

**1st Year**

Fall Semester		Hours
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4800:101	Tools for Biomedical Engineering	3
	Hours	14

**Spring Semester**

3150:153	Principles of Chemistry II <sup>1</sup>	3
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4800:111	Introduction to Biomedical Engineering Design	3
	Second Writing Course <sup>1,3</sup>	3
	Hours	17

**2nd Year**

Fall Semester		
3100:200	Human Anatomy & Physiology I	3
3100:201	Human Anatomy & Physiology Laboratory I	1
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4300:201	Statics <sup>1</sup>	3

4800:201	Biomedical Engineering Sophomore Seminar	1
	Hours	16

**Spring Semester**

3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3150:154	Qualitative Analysis	2
3450:335	Introduction to Ordinary Differential Equations	3
4300:202	Introduction to Mechanics of Solids	3
4600:203	Dynamics <sup>1</sup>	3
	Hours	15

**3rd Year****Fall Semester**

3150:263	Organic Chemistry Lecture I	3
3150:265	Organic Chemistry Laboratory I	2
3600:120	Introduction to Ethics	3
4800:362	Transport Fundamentals for Biomedical Engineering	3
4800:365	Mechanics of Biological Tissues	3
	Hours	14

**Spring Semester**

4400:307	Basic Electrical Engineering	4
4600:300	Thermodynamics I	3
4800:220	Biomedical Computing	3
4800:300	Biomaterials	3
4800:401	Introduction to Biomaterials Laboratory	2
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	18

**Summer Semester**

3470:461	Applied Statistics	4
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	7

**4th Year****Fall Semester**

4800:305	Introduction to Biophysical Measurements	4
4800:440	Advanced Biomaterials	3
4800:491	Biomedical Engineering Design I	2
	Biomedical Engineering Elective <sup>5</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	15

**Spring Semester**

4800:492	Biomedical Engineering Design II	2
	Biomedical Engineering Elective <sup>5</sup>	3
	Biomedical Engineering Elective <sup>5</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Electives	4
	Hours	18

Total Hours 134

- <sup>1</sup> Honors sections may be available; check the schedule of classes.
- <sup>2</sup> The Biomedical Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.
- <sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.
- <sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.
- <sup>5</sup> Biomedical Engineering Electives must include a minimum of 3 credits from Biomedical Engineering (4800). All other electives may be chosen from a list of Approved Electives.

## Biomedical Engineering (Biomaterials and Tissue Track), Co-op Option, BS Bachelor of Science in Biomedical Engineering, Biomaterials and Tissues with Co-op (480007BS)

This option of the undergraduate program in Biomedical Engineering follows the biomaterials and tissues track and includes a cooperative education component.

The following information has official approval of the **Department of Biomedical Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

1st Year		Hours
<b>Fall Semester</b>		
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4800:101	Tools for Biomedical Engineering	3
Hours		14
<b>Spring Semester</b>		
3150:153	Principles of Chemistry II <sup>1</sup>	3
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4800:111	Introduction to Biomedical Engineering Design	3

Second Writing Course <sup>1,3</sup>		3
Hours		17
<b>2nd Year</b>		
<b>Fall Semester</b>		
3100:200	Human Anatomy & Physiology I	3
3100:201	Human Anatomy & Physiology Laboratory I	1
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4300:201	Statics <sup>1</sup>	3
4800:201	Biomedical Engineering Sophomore Seminar	1
Hours		16
<b>Spring Semester</b>		
3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3150:154	Qualitative Analysis	2
3450:335	Introduction to Ordinary Differential Equations	3
4300:202	Introduction to Mechanics of Solids	3
4600:203	Dynamics <sup>1</sup>	3
Hours		15
<b>Summer Semester</b>		
4100:300	Cooperative Education Work Period (Possible)	
Hours		0
<b>3rd Year</b>		
<b>Fall Semester</b>		
3150:263	Organic Chemistry Lecture I	3
3150:265	Organic Chemistry Laboratory I	2
3600:120	Introduction to Ethics	3
4800:362	Transport Fundamentals for Biomedical Engineering	3
4800:365	Mechanics of Biological Tissues	3
Hours		14
<b>Spring Semester</b>		
4100:301	Cooperative Education Work Period	0
Hours		0
<b>Summer Semester</b>		
3470:461	Applied Statistics	4
General Education or Honors Distribution <sup>4</sup>		3
Hours		7
<b>4th Year</b>		
<b>Fall Semester</b>		
4100:302	Cooperative Education Work Period	0
Hours		0
<b>Spring Semester</b>		
4400:307	Basic Electrical Engineering	4
4600:300	Thermodynamics I	3
4800:220	Biomedical Computing	3
4800:300	Biomaterials	3
4800:401	Introduction to Biomaterials Laboratory	2
General Education or Honors Distribution <sup>4</sup>		3
Hours		18

**Summer Semester**

4100:403	Cooperative Education Work Period	0
	Hours	0

**5th Year****Fall Semester**

4800:305	Introduction to Biophysical Measurements	4
4800:440	Advanced Biomaterials	3
4800:491	Biomedical Engineering Design I	2
	Biomedical Engineering Elective <sup>5</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	15

**Spring Semester**

4800:492	Biomedical Engineering Design II	2
	Biomedical Engineering Elective <sup>5</sup>	3
	Biomedical Engineering Elective <sup>5</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Electives	4
	Hours	18
	Total Hours	134

<sup>1</sup> Honors sections may be available; check the schedule of classes.

<sup>2</sup> The Biomedical Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.

<sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.

<sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.

<sup>5</sup> Biomedical Engineering Electives must include a minimum of 3 credits from Biomedical Engineering (4800). All other electives may be chosen from a list of Approved Electives.

## Biomedical Engineering (Biomechanics Track), BS

### Bachelor of Science in Biomedical Engineering, Biomechanics (480001BS)

This option of the undergraduate program in Biomedical Engineering follows the biomechanics track and does not include a cooperative education component.

The following information has official approval of the **Department of Biomedical Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of*

*required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

**1st Year**

<b>Fall Semester</b>		<b>Hours</b>
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4800:101	Tools for Biomedical Engineering	3
	Hours	14

**Spring Semester**

3150:153	Principles of Chemistry II <sup>1</sup>	3
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4800:111	Introduction to Biomedical Engineering Design	3
	Second Writing Course <sup>1,3</sup>	3
	Hours	17

**2nd Year****Fall Semester**

3100:200	Human Anatomy & Physiology I	3
3100:201	Human Anatomy & Physiology Laboratory I	1
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4300:201	Statics <sup>1</sup>	3
4800:201	Biomedical Engineering Sophomore Seminar	1
	Hours	16

**Spring Semester**

3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3450:335	Introduction to Ordinary Differential Equations	3
4300:202	Introduction to Mechanics of Solids	3
4600:203	Dynamics <sup>1</sup>	3
4800:220	Biomedical Computing	3
	Hours	16

**3rd Year****Fall Semester**

3600:120	Introduction to Ethics	3
4600:300	Thermodynamics I	3
4600:321	Kinematics of Machines	2
4800:362	Transport Fundamentals for Biomedical Engineering	3
4800:365	Mechanics of Biological Tissues	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	17

**Spring Semester**

4400:307	Basic Electrical Engineering	4
4800:300	Biomaterials	3
4800:310	Modeling & Simulation of Biomedical Systems	3



	Biomedical Engineering Elective	3
	Hours	13
<b>Summer Semester</b>		
3470:461	Applied Statistics	4
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	7
<b>4th Year</b>		
<b>Fall Semester</b>		
4800:305	Introduction to Biophysical Measurements	4
4800:491	Biomedical Engineering Design I	2
	Biomedical Engineering Elective	3
	General Education or Honors Distribution	3
	General Education or Honors Distribution	3
	Hours	15
<b>Spring Semester</b>		
4600:420	Introduction to Finite Element Method	3
4800:460	Experimental Techniques in Biomechanics	3
4800:492	Biomedical Engineering Design II	2
	Biomedical Engineering Elective <sup>5</sup>	3
	General Education or Honors Distribution	3
	General Electives	4
	Hours	18
	Total Hours	133

<sup>1</sup> Honors sections may be available; check the schedule of classes.

<sup>2</sup> The Biomedical Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.

<sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.

<sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.

<sup>5</sup> Biomedical Engineering Electives must include a minimum of 3 credits from Biomedical Engineering (4800). All other electives may be chosen from a list of Approved Electives.

## Biomedical Engineering (Biomechanics Track), Co-op Option, BS

### Bachelor of Science in Biomedical Engineering, Biomechanics with Co-op (480003BS)

This option of the undergraduate program in Biomedical Engineering follows the biomechanics track and includes a cooperative education component.

The following information has official approval of the **Department of Biomedical Engineering** and **The College of Engineering and Polymer**

**Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

#### 1st Year

<b>Fall Semester</b>		<b>Hours</b>
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4800:101	Tools for Biomedical Engineering	3
	Hours	14
<b>Spring Semester</b>		
3150:153	Principles of Chemistry II <sup>1</sup>	3
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4800:111	Introduction to Biomedical Engineering Design	3
	Second Writing Course <sup>1,3</sup>	3
	Hours	17

#### 2nd Year

<b>Fall Semester</b>		
3100:200	Human Anatomy & Physiology I	3
3100:201	Human Anatomy & Physiology Laboratory I	1
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4300:201	Statics <sup>1</sup>	3
4800:201	Biomedical Engineering Sophomore Seminar	1
	Hours	16

#### Spring Semester

3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3450:335	Introduction to Ordinary Differential Equations	3
4300:202	Introduction to Mechanics of Solids	3
4600:203	Dynamics <sup>1</sup>	3
4800:220	Biomedical Computing	3
	Hours	16

#### Summer Semester

4100:300	Cooperative Education Work Period (Possible)	
	Hours	0

#### 3rd Year

<b>Fall Semester</b>		
3600:120	Introduction to Ethics	3
4600:300	Thermodynamics I	3
4600:321	Kinematics of Machines	2

4800:362	Transport Fundamentals for Biomedical Engineering	3
4800:365	Mechanics of Biological Tissues	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	17
<b>Spring Semester</b>		
4100:301	Cooperative Education Work Period	0
	Hours	0
<b>Summer Semester</b>		
3470:461	Applied Statistics	4
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	7
<b>4th Year</b>		
<b>Fall Semester</b>		
4100:302	Cooperative Education Work Period	0
	Hours	0
<b>Spring Semester</b>		
4400:307	Basic Electrical Engineering	4
4800:300	Biomaterials	3
4800:310	Modeling & Simulation of Biomedical Systems	3
	Biomedical Engineering Elective <sup>5</sup>	3
	Hours	13
<b>Summer Semester</b>		
4100:403	Cooperative Education Work Period	0
	Hours	0
<b>5th Year</b>		
<b>Fall Semester</b>		
4800:305	Introduction to Biophysical Measurements	4
4800:491	Biomedical Engineering Design I	2
	Biomedical Engineering Elective <sup>5</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	15
<b>Spring Semester</b>		
4600:420	Introduction to Finite Element Method	3
4800:460	Experimental Techniques in Biomechanics	3
4800:492	Biomedical Engineering Design II	2
	Biomedical Engineering Elective <sup>5</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Electives	4
	Hours	18
	Total Hours	133

<sup>1</sup> Honors sections may be available; check the schedule of classes.

<sup>2</sup> The Biomedical Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.

<sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.

<sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.

<sup>5</sup> Biomedical Engineering Electives must include a minimum of 3 credits from Biomedical Engineering (4800). All other electives may be chosen from a list of Approved Electives.

## Biomedical Engineering (Instrumentation, Signals and Imaging Track), BS

### Bachelor of Science in Biomedical Engineering, Instrumentation, Signals, and Imaging (480004BS)

This option of the undergraduate program in Biomedical Engineering follows the instrumentation, signals and imaging track and does not include a cooperative education component.

The following information has official approval of the **Department of Biomedical Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

#### 1st Year

Fall Semester		Hours
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4800:101	Tools for Biomedical Engineering	3
	Hours	14

#### Spring Semester

3150:153	Principles of Chemistry II <sup>1</sup>	3
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4800:111	Introduction to Biomedical Engineering Design	3
	Second Writing Course <sup>1,3</sup>	3
	Hours	17

#### 2nd Year

##### Fall Semester

3100:200	Human Anatomy & Physiology I	3
3100:201	Human Anatomy & Physiology Laboratory I	1

3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4400:231	Circuits I	3
4400:230	Circuits I Laboratory	1
4800:201	Biomedical Engineering Sophomore Seminar	1
Hours		17

#### Spring Semester

3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3450:335	Introduction to Ordinary Differential Equations	3
4400:332	Circuits II	3
4400:330	Circuits II Laboratory	1
4450:220	Digital Logic Design	4
4800:220	Biomedical Computing	3
Hours		18

#### 3rd Year

##### Fall Semester

3600:120	Introduction to Ethics	3
4300:201	Statics <sup>1</sup>	3
4400:340	Signals & Systems	4
4400:360	Physical Electronics	3
4800:305	Introduction to Biophysical Measurements	4
Hours		17

##### Spring Semester

4800:310	Modeling & Simulation of Biomedical Systems	3
4600:203	Dynamics	3
	Biomedical Engineering Elective <sup>5</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
Hours		15

##### Summer Semester

3470:461	Applied Statistics	4
4600:305	Thermal Science	2
	General Education or Honors Distribution <sup>4</sup>	3
Hours		9

#### 4th Year

##### Fall Semester

4800:325	Design of Medical Devices	3
4800:420	Biomedical Signal & Image Processing	3
4800:491	Biomedical Engineering Design I	2
	Biomedical Engineering Elective <sup>5</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
Hours		14

##### Spring Semester

4800:300	Biomaterials	3
4800:430	Design of Medical Imaging Systems	3
4800:492	Biomedical Engineering Design II	2
	Biomedical Engineering Elective <sup>5</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3

General Electives	4
Hours	18
Total Hours	139

<sup>1</sup> Honors sections may be available; check the schedule of classes.

<sup>2</sup> The Biomedical Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.

<sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.

<sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.

<sup>5</sup> Biomedical Engineering Electives must include a minimum of 3 credits from Biomedical Engineering (4800). All other electives may be chosen from a list of Approved Electives.

## Biomedical Engineering (Instrumentation, Signals and Imaging Track), Co-op Option, BS

### Bachelor of Science in Biomedical Engineering, Instrumentation, Signals, and Imaging with Co-op (480005BS)

This option of the undergraduate program in Biomedical Engineering follows the instrumentation, signals and imaging track and includes a cooperative education component.

The following information has official approval of the **Department of Biomedical Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

#### 1st Year

Fall Semester		Hours
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4800:101	Tools for Biomedical Engineering	3
Hours		14

#### Spring Semester

3150:153	Principles of Chemistry II <sup>1</sup>	3
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4

3650:291	Elementary Classical Physics I <sup>1</sup>	4
4800:111	Introduction to Biomedical Engineering Design	3
	Second Writing Course <sup>1,3</sup>	3
	Hours	17

**2nd Year****Fall Semester**

3100:200	Human Anatomy & Physiology I	3
3100:201	Human Anatomy & Physiology Laboratory I	1
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4400:231	Circuits I	3
4400:230	Circuits I Laboratory	1
4800:201	Biomedical Engineering Sophomore Seminar	1
	Hours	17

**Spring Semester**

3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3450:335	Introduction to Ordinary Differential Equations	3
4400:332	Circuits II	3
4400:330	Circuits II Laboratory	1
4450:220	Digital Logic Design	4
4800:220	Biomedical Computing	3
	Hours	18

**Summer Semester**

4100:300	Cooperative Education Work Period (Possible)	
	Hours	0

**3rd Year****Fall Semester**

3600:120	Introduction to Ethics	3
4300:201	Statics <sup>1</sup>	3
4400:340	Signals & Systems	4
4400:360	Physical Electronics	3
4800:305	Introduction to Biophysical Measurements	4
	Hours	17

**Spring Semester**

4100:301	Cooperative Education Work Period	0
	Hours	0

**Summer Semester**

3470:461	Applied Statistics	4
4600:305	Thermal Science	2
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	9

**4th Year****Fall Semester**

4100:302	Cooperative Education Work Period	0
	Hours	0

**Spring Semester**

4600:203	Dynamics <sup>1</sup>	3
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4800:310	Modeling & Simulation of Biomedical Systems	3
	Biomedical Engineering Elective <sup>5</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	15

**Summer Semester**

4100:403	Cooperative Education Work Period	0
	Hours	0

**5th Year****Fall Semester**

4800:325	Design of Medical Devices	3
4800:420	Biomedical Signal & Image Processing	3
4800:491	Biomedical Engineering Design I	2
	Biomedical Engineering Elective <sup>5</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	14

**Spring Semester**

4800:300	Biomaterials	3
4800:430	Design of Medical Imaging Systems	3
4800:492	Biomedical Engineering Design II	2
	Biomedical Engineering Elective <sup>5</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Electives	4
	Hours	18
	Total Hours	139

<sup>1</sup> Honors sections may be available; check the schedule of classes.

<sup>2</sup> The Biomedical Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.

<sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.

<sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.

<sup>5</sup> Biomedical Engineering Electives must include a minimum of 3 credits from Biomedical Engineering (4800). All other electives may be chosen from a list of Approved Electives.

## Chemical, Biomolecular, and Corrosion Engineering

The Department of Chemical, Biomolecular, and Corrosion Engineering (<https://www.uakron.edu/engineering/CBE/>) offers two undergraduate programs, one leads to the Bachelor of Science in Chemical Engineering and the other to the Bachelor of Science in Corrosion Engineering. Chemical engineering undergraduates may also earn a polymer engineering specialization certificate or a biotechnology certificate. The department also offers graduate programs leading to a Master of Science

in Chemical Engineering, and an interdisciplinary Doctor of Philosophy in Engineering.

**Mission:** The goal of the Chemical, Biomolecular, and Corrosion Engineering Department is to prepare baccalaureate graduates with the necessary skills so that they can contribute to a highly technical global society through their professional careers. The philosophy of the Chemical, Biomolecular, and Corrosion Engineering faculty is to provide a strong theoretical foundation supported by practical applications of that knowledge, which is consistent with the mission of The University of Akron.

The Chemical, Biomolecular, and Corrosion Engineering Department provides a unique opportunity to master teamwork and design project management skills. Teams of freshmen through senior Chemical and Corrosion Engineering undergraduates work on a realistic engineering design project. Besides experience with a range of current engineering topics, the projects allow students to develop teamwork, communication, presentation, project management and information technology skills.

The department offers B.S. Chemical Engineering students at The University of Akron a five year BS/MS program in Chemical Engineering. Applications are accepted in the Spring of the junior year. More information can be found in the Graduate Bulletin (<https://bulletin.uakron.edu/graduate/colleges-programs/engineering/chemical-engineering/chemical-engineering-ms/#requirementstext>).

## 4200: Chemical Engineering

The Chemical Engineering program helps students develop intellectual capacity and the ability to apply the principles of transport phenomena, thermodynamics, and chemical reaction kinetics to the creative resolution of technological problems.

All engineers are trained in the application of mechanics, materials, economics, systems, and controls. Chemical engineers, however, apply chemical principles to design, evaluate, build, and operate systems capable of converting inexpensive raw materials into marketable products via chemical reactions, biological processes, and physical separations.

Graduates of the Chemical Engineering program find career opportunities in the chemical process industries, usually involving polymer production, petroleum refining, environmental remediation, materials research and development, process design and development, and process operations and control. In addition, chemical engineers are increasingly in demand in areas such as biotechnology, food production, and solids processing. Critical thinking skills developed throughout the curriculum enable chemical engineers to succeed in other fields including medicine, patent law, and international business.

The Chemical Engineering program maintains a balance between theory and practice to prepare students for careers in a highly technical global society. The curriculum stresses the integration of mathematics, science, and chemical engineering fundamentals throughout the program. At each level of the program, from freshman through seniors, students have the opportunity to gain experience in a wide range of emerging technologies through laboratory courses and design or research electives. Exciting work is performed in biocompatible polymeric materials, biological cellular and enzymatic processes, nanocomposite materials, chemical sensing, computational molecular science, microscale separations, green chemistry, and novel catalytic reactions. Students are also encouraged

to gain important practical experience through the optional cooperative education program.

The Chemical Engineering program is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org) (<http://www.abet.org/>). The program educational objectives (PEOs) for the Chemical Engineering program are that, within a few years after graduation, our Chemical Engineering graduates:

- apply their technical proficiency to make positive contributions as chemical engineers or any other career path they choose.
- continue life-long learning through professional activities and training, the pursuit of higher educational degrees, and individual professional improvement.
- will contribute to the professional practice of their chosen field through effective communication, leadership, teamwork and service, while exhibiting high ethical and professional standards.

The Chemical Engineering program has specified these student outcomes to be achieved by the time of graduation:

- (1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- (2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- (3) an ability to communicate effectively with a range of audiences
- (4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- (5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- (6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- (7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

The Chemical Engineering program also meets the curriculum requirements specified by the American Institute of Chemical Engineers, which are that the curriculum must provide a thorough grounding in the basic sciences including chemistry, physics, and/or biology, with some content at an advanced level, as appropriate to the objectives of the program. The curriculum must include the engineering application of these basic sciences to the design, analysis, and control of chemical, physical, and/or biological processes, including the hazards associated with these processes.

## 4250: Corrosion Engineering

The Corrosion Engineering program is a comprehensive engineering program that incorporates the fundamental and applied aspects of aqueous and high temperature corrosion. The program incorporates laboratory and project management experiences throughout the curriculum. Students will be prepared to enter into the engineering

workforce and make an impact in industries including Refining, Transportation Systems, Water Distribution, Energy, Food and Chemical Processing and others.

The purpose of the Corrosion Engineering curriculum is to prepare students for professional careers in the practical application of chemistry, mathematics, and physics to develop economic ways of controlling the degradation of materials.

The Corrosion Engineering program is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org) (<http://www.abet.org/>). The program educational objectives (PEOs) for the Corrosion Engineering program are that, within a few years after graduation, our Corrosion Engineering graduates:

- make positive technical contributions to their business, profession, and/or community
- continue to develop their educational background and/or professional preparation
- enhance the quality of their work as practicing engineers by communicating well, working effectively on (multidisciplinary) teams, participating in service activities, and acting ethically in their professional duties

The Corrosion Engineering program has specified these student outcomes to be achieved by the time of graduation:

- (1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- (2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- (3) an ability to communicate effectively with a range of audiences
- (4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- (5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- (6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- (7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Information specific to the available program options in chemical engineering and corrosion engineering is available:

- Biotechnology Specialization, Certificate (p. 369)
- Chemical Engineering, BS (p. 369)
- Chemical Engineering, Co-op Option, BS (p. 372)
- Chemical Engineering/Polymer Engineering, Certificate (p. 374)
- Corrosion Engineering, BS (p. 374)
- Corrosion Engineering, Co-op Option, BS (p. 376)

## Chemical Engineering (4200)

### 4200:101 Tools for Chemical Engineering (2 Credits)

Corequisites: 4200:110 and 3450:149. Introduction to Chemical Engineering. Basic concepts of engineering practice. Introduction to professional level software including process simulation, control design, spreadsheets, mathematical computation, and process flow graphics.

### 4200:110 Project Management and Teamwork I (1 Credit)

Teams freshmen through senior Chemical Engineering and Corrosion Engineering undergraduates on a design team working on a realistic chemical engineering problem. Develops teamwork, communications, presentation, project management and information technology skills.

### 4200:121 Chemical Engineering Computations (2 Credits)

Prerequisites: 4200:101 or 4250:101. Computer programming language, flowcharting, introductory simulation and introductory numerical analysis.

### 4200:194 Chemical Engineering Design I (1 Credit)

Prerequisites: 4200:101 and permission. Individual or group project under faculty supervision. Introduction to chemical engineering processes and modern design technology. Written report is required.

### 4200:200 Material & Energy Balances (4 Credits)

Prerequisites: [4200:121 or 4250:105], 3150:151 and 3450:221. Introduction to material and energy balance calculations applied to solution of chemical engineering problems.

### 4200:210 Project Management and Teamwork II (1 Credit)

Prerequisite: 4200:110. Teams freshmen through senior Chemical Engineering and Corrosion Engineering undergraduates on a design team working on a realistic engineering problem. Develops teamwork, communications, presentation, project management and information technology skills.

### 4200:220 Introduction to Thermodynamic Processes (3 Credits)

Prerequisites: 3450:223 and [4200:200 or 4250:200]. First and Second Laws of Thermodynamics, work, entropy, heat engines and refrigeration cycles, equations of state, departure functions and reaction equilibria.

### 4200:225 Equilibrium Thermodynamics (4 Credits)

Prerequisites: 4200:200 or 4250:200 and 3450:223. Second law of thermodynamics, entropy, applications, comprehensive treatment of pure and mixed fluids. Phase and chemical equilibrium, flow processes, power production and refrigeration processes covered.

### 4200:294 Chemical Engineering Design II (1-2 Credits)

Prerequisites: 4200:121, 4200:200 and permission. Supervised individual or group design project. Analysis of multi-unit process using simulation and/or experimental techniques. Written report and oral presentation required.

### 4200:305 Materials Science (2 Credits)

Prerequisites: 3150:153. Corequisite: 3650:292. Structure, processing and properties of metals, ceramics and polymers. Special topics, such as composites, corrosion and wear.

### 4200:308 Introduction to Bio-based Polymers (3 Credits)

Prerequisite: 3150:263 and junior standing. This course introduces basic concepts of polymer science: building blocks, structure, elementary reactions and polymerization mechanisms, through seven natural polymers.

**4200:310 Project Management and Teamwork III (1 Credit)**

Prerequisites: 4200:210 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4250:300 or 4200:353. Teams freshmen through senior Chemical Engineering and Corrosion Engineering undergraduates on a design team working on a realistic chemical engineering problem. Develops teamwork, communications, presentation, project management and information technology skills.

**4200:320 Phase Equilibrium Thermodynamics (3 Credits)**

Prerequisites: 4200:220 and admission to an engineering major within the College of Engineering and Polymer Science. Thermodynamics of mixtures, excess properties, activity coefficients, mixture fugacity, mixture phase equilibrium and thermodynamic consistency.

**4200:321 Transport Phenomena (3 Credits)**

Prerequisites: [4200:200 or 4250:200], 3450:335 and admission to an engineering major within the College of Engineering and Polymer Science. Constitutive equations for momentum, energy and mass transfer. Development of microscopic and macroscopic momentum, energy and mass transfer equations for binary systems. Analogy and dimensionless analysis. Problems and applications in unit operations of chemical engineering.

**4200:330 Chemical Reaction Engineering (3 Credits)**

Prerequisites: 3450:335, 4200:225 and admission to an engineering major within the College of Engineering and Polymer Science. Nonequilibrium processes including chemical reaction mechanisms, rate equations and ideal reactor design applied to homogeneous and heterogeneous systems.

**4200:341 Process Economics (2 Credits)**

Prerequisites: [4200:200 or 4250:200] and admission to an engineering major within the College of Engineering and Polymer Science. Theory and application of engineering economy to multi-unit processes. Cost estimation, time value of money, profit analysis, decision making and introduction to project management.

**4200:351 Fluid & Thermal Operations (3 Credits)**

Prerequisite: 4200:321 and admission to the College of Engineering. Applications of fluid mechanics including piping, pumping, compression, metering, agitation and separations. Applications of heat transfer by conduction, convection and radiation to design of process equipment.

**4200:353 Mass Transfer Operations (3 Credits)**

Prerequisites: 4200:225 and [C- or above in 4200:200 or 4250:200] and admission to an engineering major within the College of Engineering and Polymer Science. Theory and design of staged operations including distillation, extraction, absorption. Theory and design of continuous mass transfer devices.

**4200:360 Chemical Engineering Laboratory (3 Credits)**

Prerequisites: 4200:353; corequisites: 4200:330, 4200:351. Comprehensive experiments in combined heat and mass transfer, thermodynamics, and reaction kinetics. Data collection and analysis. Comprehensive reports in various formats.

**4200:394 Chemical Engineering Design III (1-3 Credits)**

Prerequisites: 4200:351 and permission. Supervised individual or group design project. Develop, evaluate and design feasible solutions to an open-ended problem pertinent to chemical engineering. Written report and oral presentation required.

**4200:408 Polymer Engineering (3 Credits)**

Prerequisite: permission or senior standing. Commercial polymerization, materials selection and property modification, polymer processing, applied rheology and classification of polymer industry.

**4200:410 Project Management and Teamwork IV (1 Credit)**

Prerequisites: 4200:310 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisites: 4200:441 or 4250:440. Teams freshmen through senior Chemical Engineering and Corrosion Engineering undergraduates on a design team working on a realistic chemical engineering problem. Develops teamwork, communications, presentation, project management and information technology skills.

**4200:421 Fundamentals of Multiphase Transport Phenomena (3 Credits)**

Prerequisite: 4200:321 or equivalent, and instructor permission. Major topics to be covered: Intrapphase and interphase transport phenomena, Transport phenomena in multiphase fluids, Transport in Porous Media, Transport in Gas/Liquid pipe flows, Computational Fluid Dynamics of multiphase systems, and Case studies.

**4200:435 Process Analysis & Control (3 Credits)**

Prerequisites: 4200:330, 4200:353 and admission to an engineering major within the College of Engineering and Polymer Science. Response of simple chemical processes and design of appropriate control systems.

**4200:438 Energy Integration (3 Credits)**

Prerequisite: 4200:351. This course uses Pinch Design formalism to present the core energy integration tools for energy and area targeting, and tools for integration of reactors, distillation columns, and heat pumps.

**4200:441 Process Design I (3 Credits)**

Prerequisites: 4200:330, 4200:341, 4200:351, 4200:353 and admission to an engineering major within the College of Engineering and Polymer Science. Application of chemical engineering fundamentals to the design of a multi-unit process. Emphasis on use of process simulators. Advanced equipment design, oral and written communication skills and teamwork.

**4200:442 Process Design II (3 Credits)**

Prerequisites: 4200:441 and admission to an engineering major within the College of Engineering and Polymer Science. Teaches methods of process conceptualization, preliminary optimization. Specific topics include: chemical process design methodology, design heuristics, energy integration, and process safety review.

**4200:450 Chemical Product Design and Development (3 Credits)**

Prerequisite: senior standing or permission. Introduction to the strategies and processes used to design and development new chemical products from the idea stage through manufacturing.

**4200:461 Solids Processing (3 Credits)**

Prerequisites: 4200:321 and 4200:353 or permission. Comprehensive problems in sedimentation, fluidization, drying and other operations involving mechanics of particulate solids in liquid and gas continua.

**4200:462 Industrial Enzyme Technology (3 Credits)**

Prerequisites: 4200:330 and 4200:351. Application of chemical engineering to biological processes involving enzymes and their industrial applications. Special emphasis given to the kinetics, control, design, and process economics aspects.

**4200:463 Pollution Control (3 Credits)**

Prerequisite: 4200:353 or permission. Air and water pollution sources and problems. Engineering aspects and methodology.

**4200:466 Digitized Data & Simulation (3 Credits)**

Prerequisite: Permission. Data acquisition and analysis by digital devices, digital control applications and design.

**4200:470 Electrochemical Engineering (3 Credits)**

Prerequisites: 4200:321, 4200:330. Chemical engineering principles as applied to the study of electrode processes and to the design of electrochemical reactors. Topics include electrochemical thermodynamics, cell polarizations, Faraday's Laws, electrode kinetics, transport processes in electrochemical systems, current distributions, reactor design, experimental methods, commercial processes, and batteries and fuel cells.

**4200:471 Fuel Engineering (3 Credits)**

Prerequisite: 4200:330 or permission of instructor. Topics related to clean liquid and solid fuels technology. Special emphasis given to design, system analysis, environmental impacts, and novel technologies.

**4200:472 Separation Processes in Biochemical Engineering (3 Credits)**

Introduction to the separation and purification techniques pertinent to bioprocesses, with emphasis on engineering considerations for large scale operations.

**4200:473 Bioreactor Design (3 Credits)**

Prerequisite: 4200:330 or instructor's consent. Design, analysis, and scale-up of bioreactors for various biological processes.

**4200:488 Chemical Processes Design (3 Credits)**

Prerequisite: Permission of instructor or senior standing. Process design and analysis of emerging chemical technologies. Case studies, such as in-situ processing, alternative fuels, bioremediation, and engineering materials manufacture.

**4200:494 Design Project (3 Credits)**

Prerequisite: Permission or senior standing. Individual design project pertinent to chemical engineering under faculty supervision. Written report and oral presentation required.

**4200:496 Topics in Chemical Engineering (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission. Topics selected from new and developing areas of chemical engineering, such as electrochemical engineering, coal and synthetic fuels processing, bioengineering, simultaneous heat and mass transfer phenomena and new separation techniques.

**4200:497 Honors Project (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission. Individual creative project pertinent to chemical engineering culminating in undergraduate thesis, supervised by faculty member of the department.

**4200:499 Research Project: Chemical Engineering (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission. Individual research project pertinent to chemical engineering under faculty supervision. Report required.

**Corrosion Engineering (4250)****4250:101 Tools for Corrosion Engineering (2 Credits)**

Corequisites: 3450:149 and 4200:110. Introduction to corrosion engineering. Basic concepts of engineering practice. Introduction to professional level software needed for later studies.

**4250:105 Corrosion Engineering Computations (2 Credits)**

Prerequisite: 4200:101 or 4250:101. Corequisite: 3150:153. Structure, processing and properties of metals, ceramics, and polymers.

**4250:194 Design Project 1 (1 Credit)**

Prerequisite: Permission. Individual design project in Corrosion Engineering that is supervised by a faculty member.

**4250:200 Material and Energy Balances for Corrosion Engineers (4 Credits)**

Prerequisites: [4200:121 or 4250:105], 3150:151 and 3450:221. Introduction to material and energy balance calculations applied to the solution of chemical processing and corrosion engineering problems.

**4250:294 Design Project 2 (1-2 Credits)**

Prerequisite: Sophomore Standing. Individual design project in Corrosion Engineering that is supervised by a faculty member.

**4250:300 Fundamentals of Aqueous Corrosion (3 Credits)**

Prerequisites: 4200:225 and [4200:305 or 4600:380] and admission to tan engineering major within the College of Engineering and Polymer Science. Corequisite: 4250:301. Fundamentals of aqueous corrosion will cover corrosion tendencies, processes and rates at low temperature. An in-depth understanding of the aqueous corrosion mechanisms, materials performance, and the effects of stress will be covered.

**4250:301 Aqueous Corrosion Lab I (1 Credit)**

Prerequisites: 3150:154 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4250:300. Laboratory exercises will reinforce the fundamentals of aqueous corrosion.

**4250:305 Aqueous Corrosion Prevention (3 Credits)**

Prerequisites: 3150:263, 4250:300 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisites: 4250:306, 4300:202 and 4400:307. This course presents a functional approach to controlling and preventing aqueous corrosion based upon engineering methodologies to proper materials selection, organic coatings, chemical inhibitors, and electrochemical protection. Applications in specific industries will be covered.

**4250:306 Aqueous Corrosion Lab II (1 Credit)**

Prerequisites: 4250:301 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4250:305. Laboratory exercises will reinforce the fundamentals of aqueous corrosion.

**4250:310 Fundamentals of Dry Corrosion (3 Credits)**

Prerequisites: 4250:300 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4250:311. Fundamentals of dry/hot corrosion will cover corrosion tendencies, processes and rates at high temperature. An in-depth understanding of the high temperature corrosion mechanisms, materials performance, and the effects of stress will be covered.

**4250:311 High Temperature Corrosion Lab (1 Credit)**

Prerequisites: 4250:306 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4250:310. Laboratory exercises will reinforce the fundamentals of high temperature corrosion.

**4250:340 Corrosion Prevention (Dry) (3 Credits)**

Prerequisite: 4250:305. Corequisite: 4250:310, 4600:380. This course presents a functional approach to controlling and preventing dry corrosion based upon engineering methodologies to proper materials selection, inorganic coatings, and passivation. Applications in specific industries will be covered.

**4250:394 Design Project 3 (1-3 Credits)**

Prerequisite: Junior Standing. Individual design project in Corrosion Engineering that is supervised by a faculty member.



**4250:440 Corrosion Engineering Design I (3 Credits)**

Prerequisites: 4250:305 and admission to an engineering major within the College of Engineering and Polymer Science. This course applies the lessons learned in corrosion prevention and laboratory courses to corrosion case studies. Solutions to existing corrosion problems will be developed based on the analysis of test data.

**4250:441 Corrosion Engineering Design II (3 Credits)**

Prerequisites: 4250:440 and admission to an engineering major within the College of Engineering and Polymer Science. This course focuses on understanding the financial, political, social and health implications of corrosion, corrosion mitigation, and corrosion prevention. Solutions to existing corrosion problems will be developed based on economic, political, social, and health issues. The course will also cover methodologies for preserving assets and reducing operation costs.

**4250:450 Engineering Principles of Corrosion (3 Credits)**

Prerequisite: Junior level standing or permission. Engineering principles for understanding corrosion and corrosion mitigation methods. Case studies of corrosion management to reliability and reduce corrosion. Multidisciplinary engineering enrollment encouraged.

**4250:494 Design Project 4 (1-3 Credits)**

Prerequisite: Senior Standing. Individual design project in Corrosion Engineering that is supervised by a faculty member.

**4250:496 Special Topics in Corrosion Engineering (1-3 Credits)**

Prerequisite: Permission. (May be repeated for a total of six credits). Topics selected from new and developing areas of corrosion engineering.

**4250:497 Honors Project (1-3 Credits)**

Prerequisites: Senior standing in Honors College or permission. Individual research or design project in Corrosion Engineering that is supervised by a faculty member. Conducted in accordance with the Honors College requirements.

## Biotechnology Specialization, Certificate

### Certificate in Biotechnology Specialization (420008C)

Chemical Engineering students may choose to specialize in biotechnology. The goal of this program is to allow engineering students with an interest in chemistry and biotechnology to develop suitable preparation for careers or graduate study in biotechnology or the medical fields without reducing their potential for careers in traditional chemical engineering. Students will have ample opportunity to work with researchers in biotechnology through their engineering and design electives.

The following information has official approval of the **Department of Chemical, Biomolecular and Corrosion Engineering** and the **College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Biotechnology Specialization" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		15
Electives		6
Total Hours		21

## Required Courses

Code	Title	Hours
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4
3100:311	Cell & Molecular Biology	4
or 3100:331	Microbiology	
3150:401	Biochemistry Lecture I	3
Total Hours		15

## Electives

Code	Title	Hours
<i>Chemical and Biomolecular Engineering Electives</i>		
<b>Select three credits of the following:</b>		<b>3</b>
4200:194	Chemical Engineering Design I	
4200:294	Chemical Engineering Design II	
4200:394	Chemical Engineering Design III	
4200:472	Separation Processes in Biochemical Engineering	
4200:473	Bioreactor Design	
4200:494	Design Project	
4200:496	Topics in Chemical Engineering	
4200:497	Honors Project	
4200:499	Research Project: Chemical Engineering	
4800:360	Biofluid Mechanics	
4800:300	Biomaterials	
<i>Design Electives</i>		
<b>Select three credits of the following:</b>		<b>3</b>
4200:294	Chemical Engineering Design II	
4200:394	Chemical Engineering Design III	
4200:473	Bioreactor Design	
4200:494	Design Project	
4200:496	Topics in Chemical Engineering	
4200:497	Honors Project	
4200:499	Research Project: Chemical Engineering	
4300:482	Special Projects: Civil Engineering	
4800:485	Special Topics in Biomedical Engineering	
Total Hours		6

## Chemical Engineering, BS Bachelor of Science in Chemical Engineering (420000BS)

This option of the undergraduate program in Chemical Engineering does not include a cooperative education component.

The following information has official approval of the **Department of Chemical, Biomolecular, and Corrosion Engineering** and **The College of**

**Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33) *	29
	Natural Science	34
	Advanced Chemistry	11
	Engineering Core	11
	Chemical Engineering	42
	Electives	9
	<b>Total Hours</b>	<b>136</b>

\* Several courses required for the major also satisfy General Education requirements. The University minimum of 34 credits are required for General Education and credit for these courses will apply to both.

## General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

	<b>Total Hours</b>	<b>34</b>
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## Natural Science

Code	Title	Hours
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3450:xxx	Advanced Math Elective	2
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:335	Introduction to Ordinary Differential Equations	3
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
	<b>Total Hours</b>	<b>34</b>

## Advanced Chemistry

Code	Title	Hours
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:314	Physical Chemistry Lecture II	3
	<b>Total Hours</b>	<b>11</b>

## Engineering Core

Code	Title	Hours
4200:121	Chemical Engineering Computations	2
4200:305	Materials Science	2
4300:201	Statics	3
4400:307	Basic Electrical Engineering	4
	<b>Total Hours</b>	<b>11</b>

## Chemical Engineering

Code	Title	Hours
4200:101	Tools for Chemical Engineering	2
4200:110	Project Management and Teamwork I	1
4200:200	Material & Energy Balances	4
4200:210	Project Management and Teamwork II	1
4200:220	Introduction to Thermodynamic Processes	3
4200:310	Project Management and Teamwork III	1
4200:320	Phase Equilibrium Thermodynamics	3
4200:321	Transport Phenomena	3
4200:330	Chemical Reaction Engineering	3
4200:341	Process Economics	2
4200:351	Fluid & Thermal Operations	3
4200:353	Mass Transfer Operations	3
4200:360	Chemical Engineering Laboratory	3
4200:410	Project Management and Teamwork IV	1
4200:435	Process Analysis & Control	3
4200:441	Process Design I	3

4200:442	Process Design II	3
Total Hours		42

## Electives

Code	Title	Hours
	Advanced Chemistry Elective	3
	Engineering Design Elective	3
	Engineering Science Elective	3
Total Hours		9

## Recommended Sequence

### 1st Year

Fall Semester	Hours
3150:151 Principles of Chemistry I <sup>1</sup>	3
3150:152 Principles of Chemistry I Laboratory	1
3300:111 English Composition I <sup>1,2</sup>	3
3450:221 Analytic Geometry-Calculus I <sup>1</sup>	4
4200:101 Tools for Chemical Engineering	2
4200:110 Project Management and Teamwork I	1
Hours	14

### Spring Semester

3150:153 Principles of Chemistry II <sup>1</sup>	3
3150:154 Qualitative Analysis	2
3450:222 Analytic Geometry-Calculus II <sup>1</sup>	4
4200:121 Chemical Engineering Computations	2
Second Writing Course <sup>1,3</sup>	3
General Education or Honor Distribution <sup>4</sup>	3
Hours	17

### 2nd Year

Fall Semester	Hours
3150:263 Organic Chemistry Lecture I	3
3150:265 Organic Chemistry Laboratory I	2
3450:223 Analytic Geometry-Calculus III <sup>1</sup>	4
3650:291 Elementary Classical Physics I <sup>1</sup>	4
4200:200 Material & Energy Balances	4
4200:210 Project Management and Teamwork II	1
Hours	18

### Spring Semester

3150:264 Organic Chemistry Lecture II	3
3450:335 Introduction to Ordinary Differential Equations	3
3650:292 Elementary Classical Physics II <sup>1</sup>	4
4200:220 Introduction to Thermodynamic Processes	3
4300:201 Statics <sup>1</sup>	3
Hours	16

### 3rd Year

Fall Semester	Hours
3250:244 Introduction to Economic Analysis	3
4200:310 Project Management and Teamwork III	1
4200:320 Phase Equilibrium Thermodynamics	3
4200:321 Transport Phenomena	3
4200:341 Process Economics	2

4200:353	Mass Transfer Operations	3
Advanced Math Elective		2
Hours		17

### Spring Semester

4200:305	Materials Science	2
4200:330	Chemical Reaction Engineering	3
4200:351	Fluid & Thermal Operations	3
4200:360	Chemical Engineering Laboratory	3
General Education or Honors Distribution <sup>4</sup>		3
Hours		14

### Summer Semester

3150:314	Physical Chemistry Lecture II	3
General Education or Honors Distribution <sup>4</sup>		3
Hours		6

### 4th Year

Fall Semester	Hours	
4200:410 Project Management and Teamwork IV	1	
4200:435 Process Analysis & Control	3	
4200:441 Process Design I	3	
General Education or Honors Distribution <sup>4</sup>		3
Advanced Chemistry Elective		3
Hours		13

### Spring Semester

4200:442	Process Design II	3
4400:307	Basic Electrical Engineering	4
4200:xxx	Chemical Engineering Elective <sup>5</sup>	3
4200:xxx	Chemical Engineering Design Elective <sup>5</sup>	3
General Education or Honors Distribution <sup>4</sup>		3
General Electives		5
Hours		21

Total Hours		136
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<sup>1</sup> Honors sections may be available; check the schedule of classes.

<sup>2</sup> The Chemical and Biomolecular Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.

<sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.

<sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.

<sup>5</sup> Honors students must take the Honors Project, which may count as a Chemical Engineering Elective or Chemical Engineering Design Elective. Consult your academic advisor.

# Chemical Engineering, Co-op Option, BS

## Bachelor of Science in Chemical Engineering with Co-op (420005BS)

This option of the undergraduate program in Chemical Engineering includes a cooperative education component.

The following information has official approval of the **Department of Chemical, Biomolecular, and Corrosion Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33) *	29
	Natural Science	34
	Advanced Chemistry	11
	Engineering Core	11
	Chemical Engineering	42
	Electives	9
	<b>Total Hours</b>	<b>136</b>

\* Several courses required for the major also satisfy General Education requirements. The University minimum of 34 credits are required for General Education and credit for these courses will apply to both.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	
	<i>Social Sciences: 6 credit hours</i>	
<b>Tier III: Tagged Courses</b>		

Select one class from each of the following subcategories:

Complex Systems	
Critical Thinking	
Domestic Diversity	
Global Diversity	
<i>Review the General Education Requirements page for detailed course listings.</i>	
<b>Total Hours</b>	<b>34</b>

## Natural Science

Code	Title	Hours
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3450:xxx	Advanced Math Elective	2
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:335	Introduction to Ordinary Differential Equations	3
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
<b>Total Hours</b>		<b>34</b>

## Advanced Chemistry

Code	Title	Hours
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:314	Physical Chemistry Lecture II	3
<b>Total Hours</b>		<b>11</b>

## Engineering Core

Code	Title	Hours
4200:121	Chemical Engineering Computations	2
4200:305	Materials Science	2
4300:201	Statics	3
4400:307	Basic Electrical Engineering	4
<b>Total Hours</b>		<b>11</b>

## Chemical Engineering

Code	Title	Hours
4200:101	Tools for Chemical Engineering	2
4200:110	Project Management and Teamwork I	1
4200:200	Material & Energy Balances	4
4200:210	Project Management and Teamwork II	1
4200:220	Introduction to Thermodynamic Processes	3
4200:310	Project Management and Teamwork III	1
4200:320	Phase Equilibrium Thermodynamics	3
4200:321	Transport Phenomena	3
4200:330	Chemical Reaction Engineering	3

4200:341	Process Economics	2
4200:351	Fluid & Thermal Operations	3
4200:353	Mass Transfer Operations	3
4200:360	Chemical Engineering Laboratory	3
4200:410	Project Management and Teamwork IV	1
4200:435	Process Analysis & Control	3
4200:441	Process Design I	3
4200:442	Process Design II	3
Total Hours		42

## Electives

Code	Title	Hours
	Advanced Chemistry Elective	3
	Engineering Design Elective	3
	Engineering Science Elective	3
Total Hours		9

## Recommended Sequence

### 1st Year

Fall Semester		Hours
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4200:101	Tools for Chemical Engineering	2
4200:110	Project Management and Teamwork I	1
Hours		14

### Spring Semester

3150:153	Principles of Chemistry II <sup>1</sup>	3
3150:154	Qualitative Analysis	2
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
4200:121	Chemical Engineering Computations	2
	Second Writing Course <sup>1,3</sup>	3
	General Education or Honor Distribution <sup>4</sup>	3
Hours		17

### 2nd Year

Fall Semester		Hours
3150:263	Organic Chemistry Lecture I	3
3150:265	Organic Chemistry Laboratory I	2
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4200:200	Material & Energy Balances	4
4200:210	Project Management and Teamwork II	1
Hours		18

### Spring Semester

3150:264	Organic Chemistry Lecture II	3
3450:335	Introduction to Ordinary Differential Equations	3
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4200:220	Introduction to Thermodynamic Processes	3
4300:201	Statics <sup>1</sup>	3
Hours		16

### Summer Semester

4100:300	Cooperative Education Work Period (Possible)	
Hours		0

### 3rd Year

Fall Semester		Hours
3250:244	Introduction to Economic Analysis	3
4200:310	Project Management and Teamwork III	1
4200:320	Phase Equilibrium Thermodynamics	3
4200:321	Transport Phenomena	3
4200:341	Process Economics	2
4200:353	Mass Transfer Operations	3
	Advanced Math Elective	2
Hours		17

### Spring Semester

4100:301	Cooperative Education Work Period	0
Hours		0

### Summer Semester

3150:314	Physical Chemistry Lecture II	3
	General Education or Honors Distribution <sup>4</sup>	3
Hours		6

### 4th Year

Fall Semester		Hours
4100:302	Cooperative Education Work Period	0
Hours		0

### Spring Semester

4200:305	Materials Science	2
4200:330	Chemical Reaction Engineering	3
4200:351	Fluid & Thermal Operations	3
4200:360	Chemical Engineering Laboratory	3
	General Education or Honors Distribution <sup>4</sup>	3
Hours		14

### Summer Semester

4100:403	Cooperative Education Work Period	0
Hours		0

### 5th Year

Fall Semester		Hours
4200:410	Project Management and Teamwork IV	1
4200:435	Process Analysis & Control	3
4200:441	Process Design I	3
	General Education or Honors Distribution <sup>4</sup>	3
	Advanced Chemistry Elective	3
Hours		13

### Spring Semester

4200:442	Process Design II	3
4400:307	Basic Electrical Engineering	4
4200:xxx	Chemical Engineering Elective <sup>5</sup>	3
4200:xxx	Chemical Engineering Design Elective <sup>5</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3

General Electives	5
Hours	21
Total Hours	136

- Honors sections may be available; check the schedule of classes.
- The Chemical and Biomolecular Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.
- Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.
- Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.
- Honors students must take the Honors Project, which may count as a Chemical Engineering Elective or Chemical Engineering Design Elective. Consult your academic advisor.

## Chemical Engineering/Polymer Engineering, Certificate

### Certificate in Chemical Engineering/Polymer Engineering (420006C)

Chemical Engineering students may choose to earn a polymer engineering specialization certificate. The goal of this program is to allow engineering students with an interest in chemistry and polymer materials to develop suitable preparation for careers or graduate study in polymer science or polymer engineering without reducing their potential for careers in traditional chemical engineering. Students will have ample opportunity to work with researchers in polymers through their engineering and design electives.

The following information has official approval of the **Department of Chemical, Biomolecular, and Corrosion Engineering** and the **College of Engineering**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Chemical Engineering / Polymer Engineering" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

### Summary

Code	Title	Hours
	Core Requirements	3
	Electives	6
	Total Hours	9

## Core Requirements

Code	Title	Hours
4200:408	Polymer Engineering	3
	Total Hours	3

## Electives

Code	Title	Hours
<i>Polymer Engineering Electives</i>		
<b>Select 3 credits of the following:</b>		<b>3</b>
4200:461	Solids Processing	
4700:425	Introduction to Blending & Compounding of Polymers	
	or 9841:425 Introduction to Blending & Compounding Polymers	
4700:427	Mold Design	
<i>Polymer Science Electives</i>		
<b>Select 3 credits of the following:</b>		<b>3</b>
9871:401	Introduction to Elastomers	
9871:402	Introduction to Plastics	
9871:403	Polymer Chemistry	
9871:407	Polymer Science	
	Total Hours	6

## Corrosion Engineering, BS Bachelor of Science in Corrosion Engineering (425000BS)

This option of the undergraduate program in Corrosion Engineering does not include a cooperative education component.

The following information has official approval of the **Department of Chemical, Biomolecular, and Corrosion Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33) *	29
	Natural Science	32
	Advanced Chemistry	11
	Engineering Core	11
	Corrosion Engineering	37
	Electives	15
	Total Hours	135

\* Several courses required for the major also satisfy General Education requirements. The University minimum of 34 credits are required for General Education and credit for these courses will apply to both.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## Natural Science

Code	Title	Hours
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:335	Introduction to Ordinary Differential Equations	3
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
Total Hours		32

## Advanced Chemistry

Code	Title	Hours
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
3150:424	Analytical Chemistry II	3
Total Hours		11

## Engineering Core

Code	Title	Hours
4200:305	Materials Science	2
4250:105	Corrosion Engineering Computations	2
4300:201	Statics	3
4400:307	Basic Electrical Engineering	4
Total Hours		11

## Corrosion Engineering

Code	Title	Hours
4200:110	Project Management and Teamwork I	1
4200:210	Project Management and Teamwork II	1
4200:220	Introduction to Thermodynamic Processes	3
4200:310	Project Management and Teamwork III	1
4200:321	Transport Phenomena	3
4200:410	Project Management and Teamwork IV	1
4250:101	Tools for Corrosion Engineering	2
4250:200	Material and Energy Balances for Corrosion Engineers	4
4250:300	Fundamentals of Aqueous Corrosion	3
4250:301	Aqueous Corrosion Lab I	1
4250:305	Aqueous Corrosion Prevention	3
4250:306	Aqueous Corrosion Lab II	1
4250:310	Fundamentals of Dry Corrosion	3
4250:311	High Temperature Corrosion Lab	1
4250:440	Corrosion Engineering Design I	3
4250:441	Corrosion Engineering Design II	3
4300:202	Introduction to Mechanics of Solids	3
Total Hours		37

## Electives

Code	Title	Hours
	Chem/Bio Elective	3
	Corrosion Engineering Elective	6
	Corrosion Engineering Design Elective	6
Total Hours		15

## Recommended Sequence

1st Year		Hours
Fall Semester		Hours
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4200:110	Project Management and Teamwork I	1
4250:101	Tools for Corrosion Engineering	2
Hours		14
Spring Semester		Hours
3150:153	Principles of Chemistry II <sup>1</sup>	3
3150:154	Qualitative Analysis	2
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4

4250:105	Corrosion Engineering Computations	2
	Second Writing Course <sup>1,3</sup>	3
	General Education or Honor Distribution <sup>4</sup>	3
Hours		17

**2nd Year****Fall Semester**

3150:263	Organic Chemistry Lecture I	3
3150:265	Organic Chemistry Laboratory I	2
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4200:210	Project Management and Teamwork II	1
4250:200	Material and Energy Balances for Corrosion Engineers	4
Hours		18

**Spring Semester**

3150:264	Organic Chemistry Lecture II	3
3450:335	Introduction to Ordinary Differential Equations	3
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4200:220	Introduction to Thermodynamic Processes	3
4200:305	Materials Science	2
Hours		15

**3rd Year****Fall Semester**

4200:310	Project Management and Teamwork III	1
4200:321	Transport Phenomena	3
4250:300	Fundamentals of Aqueous Corrosion	3
4250:301	Aqueous Corrosion Lab I	1
4300:201	Statics	3
4400:307	Basic Electrical Engineering	4
Hours		15

**Spring Semester**

	Biology or Chemistry Elective	3
3150:424	Analytical Chemistry II	3
3250:244	Introduction to Economic Analysis	3
4250:305	Aqueous Corrosion Prevention	3
4250:306	Aqueous Corrosion Lab II	1
	General Education or Honors Distribution <sup>4</sup>	3
Hours		16

**Summer Semester**

4300:202	Introduction to Mechanics of Solids	3
	General Education or Honors Distribution <sup>4</sup>	3
Hours		6

**4th Year****Fall Semester**

4200:410	Project Management and Teamwork IV	1
4250:310	Fundamentals of Dry Corrosion	3
4250:311	High Temperature Corrosion Lab	1
4250:440	Corrosion Engineering Design I	3
4250:xxx	Corrosion Engineering Elective	3
	General Education or Honors Distribution <sup>4</sup>	3
Hours		14

**Spring Semester**

4250:441	Corrosion Engineering Design II	3
4250:xxx	Corrosion Engineering Elective	3
4xxx:xxx	Design Elective	3
4xxx:xxx	Design Elective	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Electives	5
Hours		20
Total Hours		135

<sup>1</sup> Honors sections may be available; check the schedule of classes.

<sup>2</sup> The Chemical and Biomolecular Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.

<sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.

<sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.

## Corrosion Engineering, Co-op Option, BS

### Bachelor of Science in Corrosion Engineering with Co-op (425005BS)

This option of the undergraduate program in Corrosion Engineering includes a cooperative education component.

The following information has official approval of the **Department of Chemical, Biomolecular, and Corrosion Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33) *	29
	Natural Science	32
	Advanced Chemistry	11
	Engineering Core	11
	Corrosion Engineering	37



Electives	15
<b>Total Hours</b>	<b>135</b>

\* Several courses required for the major also satisfy General Education requirements. The University minimum of 34 credits are required for General Education and credit for these courses will apply to both.

## General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

<b>Total Hours</b>	<b>34</b>
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## Natural Science

Code	Title	Hours
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:335	Introduction to Ordinary Differential Equations	3
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
<b>Total Hours</b>	<b>32</b>	

## Advanced Chemistry

Code	Title	Hours
3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2

3150:424	Analytical Chemistry II	3
<b>Total Hours</b>	<b>11</b>	

## Engineering Core

Code	Title	Hours
4200:305	Materials Science	2
4250:105	Corrosion Engineering Computations	2
4300:201	Statics	3
4400:307	Basic Electrical Engineering	4
<b>Total Hours</b>	<b>11</b>	

## Corrosion Engineering

Code	Title	Hours
4200:110	Project Management and Teamwork I	1
4200:210	Project Management and Teamwork II	1
4200:220	Introduction to Thermodynamic Processes	3
4200:310	Project Management and Teamwork III	1
4200:321	Transport Phenomena	3
4200:410	Project Management and Teamwork IV	1
4250:101	Tools for Corrosion Engineering	2
4250:200	Material and Energy Balances for Corrosion Engineers	4
4250:300	Fundamentals of Aqueous Corrosion	3
4250:301	Aqueous Corrosion Lab I	1
4250:305	Aqueous Corrosion Prevention	3
4250:306	Aqueous Corrosion Lab II	1
4250:310	Fundamentals of Dry Corrosion	3
4250:311	High Temperature Corrosion Lab	1
4250:440	Corrosion Engineering Design I	3
4250:441	Corrosion Engineering Design II	3
4300:202	Introduction to Mechanics of Solids	3
<b>Total Hours</b>	<b>37</b>	

## Electives

Code	Title	Hours
	Chem/Bio Elective	3
	Corrosion Engineering Elective	6
	Corrosion Engineering Design Elective	6
<b>Total Hours</b>	<b>15</b>	

## Recommended Sequence

1st Year		Hours
Fall Semester		
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4200:101	Tools for Chemical Engineering	2
4200:110	Project Management and Teamwork I	1
	<b>Hours</b>	<b>14</b>

**Spring Semester**

3150:153	Principles of Chemistry II <sup>1</sup>	3
3150:154	Qualitative Analysis	2
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
4200:121	Chemical Engineering Computations	2
	Second Writing Course <sup>1,3</sup>	3
	General Education or Honor Distribution <sup>4</sup>	3
	Hours	17

**2nd Year****Fall Semester**

3150:263	Organic Chemistry Lecture I	3
3150:265	Organic Chemistry Laboratory I	2
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4200:210	Project Management and Teamwork II	1
4250:200	Material and Energy Balances for Corrosion Engineers	4
	Hours	18

**Spring Semester**

3150:264	Organic Chemistry Lecture II	3
3450:335	Introduction to Ordinary Differential Equations	3
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4200:220	Introduction to Thermodynamic Processes	3
4200:305	Materials Science	2
	Hours	15

**Summer Semester**

4100:300	Cooperative Education Work Period (Possible)	
	Hours	0

**3rd Year****Fall Semester**

4200:310	Project Management and Teamwork III	1
4200:321	Transport Phenomena	3
4250:300	Fundamentals of Aqueous Corrosion	3
4250:301	Aqueous Corrosion Lab I	1
4300:201	Statics	3
4400:307	Basic Electrical Engineering	4
	Hours	15

**Spring Semester**

4100:301	Cooperative Education Work Period	0
	Hours	0

**Summer Semester**

4300:202	Introduction to Mechanics of Solids	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	6

**4th Year****Fall Semester**

4100:302	Cooperative Education Work Period	0
	Hours	0

**Spring Semester**

3150:424	Analytical Chemistry II	3
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3250:244	Introduction to Economic Analysis	3
4250:305	Aqueous Corrosion Prevention	3
4250:306	Aqueous Corrosion Lab II	1
3100:xxx/3150:xxx	Biology or Chemistry Elective	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	16

**Summer Semester**

4100:403	Cooperative Education Work Period	0
	Hours	0

**5th Year****Fall Semester**

4200:410	Project Management and Teamwork IV	1
4250:310	Fundamentals of Dry Corrosion	3
4250:311	High Temperature Corrosion Lab	1
4250:440	Corrosion Engineering Design I	3
4250:xxx	Corrosion Engineering Elective	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	14

**Spring Semester**

4250:441	Corrosion Engineering Design II	3
4250:xxx	Corrosion Engineering Elective	3
4xxx:xxx	Design Elective	3
4xxx:xxx	Design Elective	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Electives	5
	Hours	20
	Total Hours	135

- <sup>1</sup> Honors sections may be available; check the schedule of classes.
- <sup>2</sup> The Chemical and Biomolecular Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.
- <sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.
- <sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.

## Civil Engineering

The Department of Civil Engineering (<https://www.uakron.edu/engineering/CE/>) offers an undergraduate program leading to the Bachelor of Science in Civil Engineering. The department also offers graduate programs leading to a Master of Science in Civil Engineering, and an interdisciplinary Doctor of Philosophy in Engineering, along with graduate-level certificate programs for practicing professionals.

## 4300: Civil Engineering

Civil Engineers plan, design, build, and operate the infrastructure of modern society. This includes highways, bridges, buildings, power plants, industrial facilities, tunnels, seaports, airports, offshore structures and

almost anything else needed as the basis of modern life. Civil engineers are also vigorously engaged in environmental activities, particularly creating safe water supplies and transporting it to where it is needed, collecting and treating wastewaters, cleanup of environmental problems, and insuring the safe disposal of solid wastes.

To achieve the high level of professional competence needed, an extensive study of mathematics, mechanics (both solids and fluids), engineering materials, structural design and environmental reactions is required. The civil engineering sub-topics that utilize these fundamentals are environmental, geotechnical, hydraulic, structural, and transportation engineering. The civil engineering curriculum at The University of Akron insures a firm grounding in all these sub-topic areas, while allowing a specialization, if desired, in the environmental, geotechnical, transportation, and structural areas. Engineering design problems are incorporated into courses in each area. The senior capstone design course presents a problem involving one, or possibly all, of these areas in the design of complex systems.

Most civil engineering graduates work for design consultants, construction companies, or governmental agencies. Others work for industrial firms and utilities. Many civil engineers own their own businesses.

The Civil Engineering program is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org) (<http://www.abet.org/>). The program educational objectives (PEOs) for the Civil Engineering program are that, within a few years after graduation, our Civil Engineering graduates:

- successfully and accurately complete Civil Engineering projects as part of a team, on time and within budget, in an ethical and professional manner, and using modern engineering tools-software
- an ability to communicate effectively with written, oral, and visual means in both technical and non-technical settings
- professional service as evidenced by participation in a professional society and/or educational outreach activities
- engage in lifelong learning as evidenced by participation in continuing education courses, workshops, graduate courses, and by pursuing professional licensure
- a basic knowledge of the business of engineering including how the private and public sector operate separately and collectively

The curriculum is designed to emphasize the fundamentals which place the graduate in a strong position to pursue further education, formally or informally, and to begin a career in any of the above areas. To meet the curriculum requirements specified by the American Society of Civil Engineers (ASCE), the civil engineering program will prepare students to meet the following student outcomes at the time of graduation:

- (1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- (2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- (3) an ability to communicate effectively with a range of audiences
- (4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must

consider the impact of engineering solutions in global, economic, environmental, and societal contexts

- (5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- (6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- (7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Information specific to the available program options in civil engineering is available:

- Civil Engineering, BS (p. 381)
- Civil Engineering, Co-op Option, BS (p. 382)

## Civil Engineering (4300)

### 4300:101 Introduction to Civil Engineering Fundamentals (3 Credits)

Corequisite: 3450:149 or higher math or appropriate AP test score. Introduction to Civil Engineering. Basic concepts of civil engineering practice including communication skills, problem solving skills, professional ethics/goals, and teamwork. Introduction to professional level software including spreadsheets, database, and mathematical computation.

### 4300:102 Tools for Civil Engineering (3 Credits)

Prerequisite: 4300:101. Building on concepts of engineering practices learned in Tools I further developing communication skills, problem solving skills, professional ethics/goals, statistics and model-building, and teamwork. Advanced use of professional level software including CAD, MATLAB and Excel.

### 4300:201 Statics (3 Credits)

Corequisites: 3450:222 and 3650:291. Forces, resultants, couples; equilibrium of force systems; distributed forces; centers of gravity, analysis of simple structures; moments of inertia; kinematics.

### 4300:202 Introduction to Mechanics of Solids (3 Credits)

Prerequisite: 4300:201. Axial force, bending moment diagrams, axial stress and deformation; stress-strain diagrams; torsion; flexural stress; flexural shearing stress; compound stresses; indeterminate beams; columns.

### 4300:306 Theory of Structures (3 Credits)

Prerequisite: 4300:202. Stability and determinacy; statically determinate trusses and frames; approximate frame analysis influence lines; moving loads; virtual work analysis; moment area theorem; theorem of three moments; moment distribution for continuous beams and frames.

### 4300:313 Soil Mechanics (3 Credits)

Prerequisites: 4300:202 and admission to an engineering major within the College of Engineering and Polymer Science or permission. Physical properties of soils. Soil water and groundwater flow. Stresses, displacements, volume changes, consolidation within a soil mass. Soil strength. Compaction.

### 4300:314 Geotechnical Engineering (3 Credits)

Prerequisites: 4300:313 and admission to an engineering major within the College of Engineering and Polymer Science. Limiting equilibrium within a soil mass. Design of retaining walls, bulkheads, shallow, deep foundation systems. Slope stability.

**4300:321 Introduction to Environmental Engineering (3 Credits)**

Prerequisites: 3150:153 and 3450:222. Basic principles of ecosystems, microbiology, chemical reactions, and material flow that environmental engineers use to protect our water, air and soil.

**4300:323 Water Supply & Pollution Control (3 Credits)**

Prerequisite: 4300:321 and admission to an engineering major within the College of Engineering and Polymer Science. Pre/Corequisite: 3450:335. Water and wastewater characteristics, criteria, quantities and distribution. Water and wastewater treatment process flowsheets, design and operation. Wastewater and residue disposal.

**4300:341 Hydraulic Engineering (3 Credits)**

Prerequisites: 4600:310 and admission to an engineering major within the College of Engineering and Polymer Science. This course will focus on presentation and application of fundamental hydraulic principles in both the classroom and laboratory. Examination of flow in pipelines and pipe networks, pumps and pumping stations, hydrology, flow in open channels, groundwater hydraulics, and design of hydraulic structures will be studied. Emphasis will be placed on proper application of principles, data interpretation and analysis, problem solving, and report writing.

**4300:361 Transportation Engineering (3 Credits)**

Prerequisites: junior standing and admission to an engineering major within the College of Engineering and Polymer Science. Introductory survey of transportation topics including transportation planning requirements and techniques, introduction to design of highways, airports and railroads and introduction to traffic engineering.

**4300:380 Engineering Materials Laboratory (3 Credits)**

Prerequisites: 4300:202 and admission to an engineering major within the College of Engineering and Polymer Science. Fundamentals and applications of materials science, mechanics of solids and study of laboratory instrumentation and standard techniques in testing of engineering materials.

**4300:401 Steel Design (3 Credits)**

Prerequisites: 4300:306 and admission to an engineering major within the College of Engineering and Polymer Science. Tension, compression members; open web joists; beams; bearing plates; beam-columns; bolted, welded connections.

**4300:403 Reinforced Concrete Design (3 Credits)**

Prerequisites: 4300:306 and admission to an engineering major within the College of Engineering and Polymer Science. Ultimate strength analysis and design; compression steel; diagonal tension; stirrups; development length; one-way slab; T-beams; two-way slabs; columns; isolated and combined footings.

**4300:404 Advanced Structural Design (3 Credits)**

Prerequisites: 4300:401 and 4300:403. Composite design; plate girders; plastic design; cantilever retaining walls; torsion in R/C members; deflection of R/C members; continuous girder bridge design.

**4300:407 Advanced Structural Analysis (3 Credits)**

Prerequisite: 4300:306. Energy methods for beams and frames. Stiffness and flexibility formulations for framed structures using classical and matrix methods. Introduction to stability and plastic analysis. Warping-Torsion behavior of beams. Analysis of axisymmetric circular plates and membrane shells.

**4300:414 Design of Earth Structures (3 Credits)**

Prerequisite: 4300:314 or permission. Design of earth structures: dams, highway fills, cofferdams, etc. Embankment construction techniques, quality control, embankment analysis, instrumentation, foundation soil stabilization, seepage analysis and control. Design problem. Graduate students will perform more advanced analysis and design.

**4300:418 Soil & Rock Exploration (3 Credits)**

Prerequisite: 4300:314 or permission. Site exploration criteria and planning. Conventional boring, sampling and in situ testing methods. Theory and application of geophysics and geophysical methods including seismic, electrical resistivity, gravity, magnetic and radioactive measurements. Air photo interpretation.

**4300:423 Chemistry for Environmental Engineers (3 Credits)**

Prerequisite: One year of college chemistry. General, physical, organic biochemistry, equilibrium, and colloid chemistry concepts applied to Environmental Engineering. Concepts are used in water and wastewater laboratory.

**4300:424 Water-Wastewater Laboratory (1 Credit)**

Corequisite: 4300:323 or permission. Analysis of water and wastewater.

**4300:426 Environmental Engineering Design (3 Credits)**

Prerequisite: 4300:323. An introduction to the physical, chemical and biological processes utilized in the treatment of water and wastewater, with design parameters emphasized.

**4300:427 Water Quality Modeling & Management (3 Credits)**

Prerequisite: 4300:323. Analysis and simulation of the physical, chemical and biochemical processes affecting stream quality. Development of management strategies based upon the application of water quality modeling techniques to environmental systems.

**4300:428 Hazardous & Solid Wastes (3 Credits)**

Prerequisite: senior standing or permission of instructor. Hazardous and solid waste quantities, properties and sources are presented. Handling, processing, storage and disposal methods are discussed with non-technical constraints outlined.

**4300:441 Hydraulic Design (3 Credits)**

Prerequisite: 4300:341. Collection and critical evaluation of hydraulic data related to actual design problem selected by instructor. Development and analysis of design alternatives. Preparation of reports.

**4300:443 Applied Hydraulics (3 Credits)**

Prerequisites: 4300:341 and admission to an engineering major within the College of Engineering and Polymer Science. Review of design principles: urban hydraulics, stream channel mechanics, sedimentation, coastal engineering.

**4300:445 Hydrology (3 Credits)**

Prerequisite: 4300:341. Surface water hydrology, water cycle, precipitation, evaporation, stream flow. Principles of hydrologic systems and their analysis. Hydrologic simulation, reservoir planning and water supply studies. Analysis of rainfall and floods.

**4300:448 Hydraulics Laboratory (1 Credit)**

Prerequisite: 4300:341. Introduction to laboratory and field devices for hydraulic measurements. Reduction and presentation of hydraulic data. Individual assignments of model studies of hydraulic structures.

**4300:450 Urban Planning (2 Credits)**

Historical developments in urban planning; urban planning techniques and patterns; comprehensive master planning studies; planning regulations; design problems; class projects; class project presentation.

**4300:451 Computer Methods of Structural Analysis (3 Credits)**

Prerequisite: 4300:306. Computer methods of structural analysis. Finite element software and interactive graphics. Stiffness concepts and matrix formulation of beams; modeling of simple and complex structural systems; vibration analysis using microcomputers.

**4300:452 Structural Vibrations & Earthquakes (3 Credits)**

Prerequisite: 4300:306. Vibration and dynamic analysis of structural systems with one, two, or more degrees of freedom; beams, frames, buildings and bridges. Numerical methods of analysis. Elastic-plastic systems. Earthquake analysis of design. Earthquake codes.

**4300:453 Optimum Structural Design (3 Credits)**

Prerequisite: 4300:306. Basic concepts in structural optimization. Mathematical programming methods including unconstrained minimization, multidimensional minimization and constrained minimization.

**4300:454 Advanced Mechanics of Materials (3 Credits)**

Prerequisite: 4300:202 or equivalent. Three-dimensional state of stress and strain analysis. Unsymmetric bending of straight and curved members with shear deformation. Beams on elastic foundations. Saint Venant's torsional problems. Inelastic analysis of bending and torsional members. Introduction to energy method. Instability behavior of prismatic members.

**4300:463 Transportation Planning (3 Credits)**

Prerequisite: 4300:361. Theory and techniques for development, analysis and evaluation of transportation system plans. Emphasis on understanding and using tools and professional methods available to solve transportation planning problems, especially in urban areas.

**4300:464 Highway Design (3 Credits)**

Prerequisite: 4300:361. Study of modern design of geometrical and pavement features of highways. Design problem and computer use. Graduate students will produce a more complete design.

**4300:465 Pavement Engineering (3 Credits)**

Prerequisite: 4300:361. Theories of elasticity, of viscoelasticity and of layered systems as applied to pavements. Pavement materials characterization; pavement design, pavement restoration for rigid and flexible pavements.

**4300:466 Traffic Engineering (3 Credits)**

Prerequisite: 4300:361. Vehicle and urban travel characteristics, traffic flow theory, traffic studies, accidents and safety, traffic signs and marking, traffic signal planning, traffic control and transportation administration.

**4300:467 Advanced Highway Design (3 Credits)**

Prerequisites: 4300:464, autoCAD capability, or permission. Computer-aided geometrical design of highways including survey data input, digital terrain modeling, cross-section templates, horizontal and vertical roadway design, earthwork computations, and advanced topics.

**4300:468 Highway Materials (3 Credits)**

Prerequisites: 4300:361 and 4300:380 or permission. Properties of aggregates, manufacture and properties of portland cement concrete, properties of asphaltic materials, design and testing of hot mix asphalt pavement mixes and of surface treatments. Laboratory preparation of specimens and determination of properties. Graduate student requirement: Graduate students will be required to perform an additional eight-hour asphalt laboratory (Absorption recovery of asphalt from solution) and to prepare a paper on a highway materials topic.

**4300:471 Construction Administration (3 Credits)**

Prerequisites: senior standing and admission to an engineering major within the College of Engineering and Polymer Science or permission. Organization for construction, construction contracts, estimating, bidding, bonds and insurance. Construction financial management and supervision of construction, scheduling using critical path method.

**4300:472 Construction Engineering (3 Credits)**

Prerequisite: senior standing or permission. Construction equipment selection and management. Techniques of various engineering construction operations including blasting, tunneling, concrete framework and dewatering.

**4300:473 Construction Materials (2 Credits)**

Prerequisites: 4300:380, 4200:305. Composition, structure and mechanical behavior of structural materials such as concrete, wood, masonry, plastics and composite materials. Discussion of applications and principles of evaluating material properties.

**4300:474 Underground Construction (2 Credits)**

Prerequisite: 4300:314. Description of practices and techniques of underground construction. Selection of proper method for individual job. Design of underground openings, support systems and linings.

**4300:480 Reliability-Based Design (4 Credits)**

Prerequisite: 3470:261 and senior standing. Probability concepts in civil engineering. Risk analysis and reliability based design.

**4300:482 Special Projects: Civil Engineering (1-3 Credits)**

Prerequisites: senior standing and permission. Directed individual or group research or study in student's field of interest. Topic subject to approval by adviser.

**4300:489 Fundamental of Engineering Exam Review (0 Credits)**

Prerequisite: Senior standing. This course is intended to prepare civil engineering students for the Fundamentals of Engineering Exam, which is to be taken prior to graduation.

**4300:490 Senior Design in Civil Engineering (3 Credits)**

Prerequisites: senior standing and admission to an engineering major within the College of Engineering and Polymer Science. A civil engineering design project that emphasizes interdisciplinary teamwork to solve a substantial, currently relevant problem.

**Gen Ed:** Tier 3 - Complex Systems

**4300:497 Honors Project (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: senior standing in Honors Program. Individual creative project or design relevant to civil engineering, supervised by faculty member of the department.

## Civil Engineering, BS

### Bachelor of Science in Civil Engineering (430000BS)

This option of the undergraduate program in Civil Engineering does not include a cooperative education component.

The following information has official approval of the **Department of Civil Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

1st Year		Hours
<b>Fall Semester</b>		
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4300:101	Introduction to Civil Engineering Fundamentals	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	17
<b>Spring Semester</b>		
3150:153	Principles of Chemistry II <sup>1</sup>	3
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
4300:102	Tools for Civil Engineering	3
	Second Writing Course <sup>1,3</sup>	3
	General Education or Honor Distribution <sup>4</sup>	3
	Hours	16
<b>2nd Year</b>		
<b>Fall Semester</b>		
2980:101 or 3350:405	Basic Surveying or Geographic Information Systems	3
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4300:201	Statics <sup>1</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	17
<b>Spring Semester</b>		
3450:335	Introduction to Ordinary Differential Equations	3
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4300:202	Introduction to Mechanics of Solids	3
4300:321	Introduction to Environmental Engineering	3
4600:203	Dynamics <sup>1</sup>	3
	Hours	16
<b>3rd Year</b>		
<b>Fall Semester</b>		
4300:306	Theory of Structures	3
4300:313	Soil Mechanics	3
4300:323	Water Supply & Pollution Control	3
4600:310	Fluid Mechanics I	2
	General Education or Honors Distribution <sup>4</sup>	3
	CE Technical/Professional Requirement	3
	Hours	17
<b>Spring Semester</b>		
4300:314	Geotechnical Engineering	3
4300:341	Hydraulic Engineering	3
4300:361	Transportation Engineering	3
4300:380	Engineering Materials Laboratory	3
4300:401	Steel Design	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	18

Summer Semester		Hours
4600:305	Thermal Science	2
4300:xxx	4300 class from 3rd year Spring (optional)	
	Hours	2
<b>4th Year</b>		
<b>Fall Semester</b>		
4300:403	Reinforced Concrete Design	3
4400:307	Basic Electrical Engineering	4
	CE Technical/Professional Requirement	3
	CE Technical/Professional Requirement	3
	CE Technical/Professional Requirement	3
	Hours	16
<b>Spring Semester</b>		
4300:471	Construction Administration	3
4300:490	Senior Design in Civil Engineering	3
	CE Technical/Professional Requirement	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Electives	5
	Hours	17
	Total Hours	136

<sup>1</sup> Honors sections may be available; check the schedule of classes.

<sup>2</sup> The Civil Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.

<sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.

<sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.

## Civil Engineering, Co-op Option, BS Bachelor of Science in Civil Engineering with Co-op (430005BS)

This option of the undergraduate program in Civil Engineering includes a cooperative education component.

The following information has official approval of the **Department of Civil Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

**1st Year**

<b>Fall Semester</b>		<b>Hours</b>
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4300:101	Introduction to Civil Engineering Fundamentals	3
	General Education or Honors Distribution <sup>4</sup>	3
	<b>Hours</b>	<b>17</b>

**Spring Semester**

3150:153	Principles of Chemistry II <sup>1</sup>	3
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
4300:102	Tools for Civil Engineering	3
	Second Writing Course <sup>1,3</sup>	3
	General Education or Honor Distribution <sup>4</sup>	3
	<b>Hours</b>	<b>16</b>

**2nd Year**

<b>Fall Semester</b>		<b>Hours</b>
2980:101 or 3350:405	Basic Surveying or Geographic Information Systems	3
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4300:201	Statics <sup>1</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
	<b>Hours</b>	<b>17</b>

**Spring Semester**

3450:335	Introduction to Ordinary Differential Equations	3
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4300:202	Introduction to Mechanics of Solids	3
4300:321	Introduction to Environmental Engineering	3
4600:203	Dynamics <sup>1</sup>	3
	<b>Hours</b>	<b>16</b>

**Summer Semester**

4100:300	Cooperative Education Work Period (Possible)	0
	<b>Hours</b>	<b>0</b>

**3rd Year**

<b>Fall Semester</b>		<b>Hours</b>
4300:306	Theory of Structures	3
4300:313	Soil Mechanics	3
4300:323	Water Supply & Pollution Control	3
4600:310	Fluid Mechanics I	2
	General Education or Honors Distribution <sup>4</sup>	3
	CE Technical/Professional Requirement	3
	<b>Hours</b>	<b>17</b>

**Spring Semester**

4100:301	Cooperative Education Work Period	0
	<b>Hours</b>	<b>0</b>

**Summer Semester**

4600:305	Thermal Science	2
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4300:xxx	4300 class from 4th year Spring (optional)	2
	<b>Hours</b>	<b>2</b>

**4th Year**

<b>Fall Semester</b>		<b>Hours</b>
4100:302	Cooperative Education Work Period	0
	<b>Hours</b>	<b>0</b>

**Spring Semester**

4300:314	Geotechnical Engineering	3
4300:341	Hydraulic Engineering	3
4300:361	Transportation Engineering	3
4300:380	Engineering Materials Laboratory	3
4300:401	Steel Design	3
	General Education or Honors Distribution <sup>4</sup>	3
	<b>Hours</b>	<b>18</b>

**Summer Semester**

4100:403	Cooperative Education Work Period	0
	<b>Hours</b>	<b>0</b>

**5th Year**

<b>Fall Semester</b>		<b>Hours</b>
4300:403	Reinforced Concrete Design	3
4400:307	Basic Electrical Engineering	4
	CE Technical/Professional Requirement	3
	CE Technical/Professional Requirement	3
	CE Technical/Professional Requirement	3
	<b>Hours</b>	<b>16</b>

**Spring Semester**

4300:471	Construction Administration	3
4300:490	Senior Design in Civil Engineering	3
	CE Technical/Professional Requirement	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Electives	5
	<b>Hours</b>	<b>17</b>
	<b>Total Hours</b>	<b>136</b>

- <sup>1</sup> Honors sections may be available; check the schedule of classes.
- <sup>2</sup> The Civil Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.
- <sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.
- <sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.

## Computer Science

### Admission to Computer Science Major

The student must have completed 30 credits and have the approval of the Dean of the College. In addition, the student must have completed:

Code	Title	Hours
3450:208	Introduction to Discrete Mathematics	4
3460:209	Computer Science I	4
3460:210	Computer Science II	4
3450:221	Analytic Geometry-Calculus I	4

- Computer Information System, Programming Option, AAB (p. 388)
- Computer Information Systems Programming Specialist, Minor (p. 389)
- Computer Information Systems Programming, Certificate (p. 390)
- Computer Information Systems, Computer Networking Option, Cisco Track, AAB (p. 390)
- Computer Information Systems, Cybersecurity Option, BS (p. 391)
- Computer Information Systems, Networking Option, BS (p. 393)
- Computer Information Systems, Programming Option, BS (p. 394)
- Computer Science, Certificate (p. 395)
- Computer Science, Management, BSCS (p. 396)
- Computer Science, Minor (p. 398)
- Computer Science, Systems, BSCS (p. 398)
- Computer Security, Certificate (p. 400)
- Computer Security, Minor (p. 400)

## Computer Information Systems (2440)

### 2440:105 Introduction to Computers and Application Software (3 Credits)

Overview of basic computer concepts, electronic mail and Internet terminologies. Introductory-level instruction and hands-on experience in word processing, spreadsheet, database and presentation software.

### 2440:121 Introduction of Logic/Programming (3 Credits)

Prerequisite: 2440:105 with a grade of C or better or placement test. An introduction to business problem solving using computer-based solutions. Topics include structured design, documentation and modularity. Includes a component of hands-on programming.

### 2440:125 Spreadsheet Software (2 Credits)

Prerequisite: 2440:105 with a grade of C or better or placement test. Emphasizes mastery of spreadsheet applications using Excel.

### 2440:140 Internet Tools (3 Credits)

Prerequisite: 2440:105 with a grade of C or better or placement test. Students will learn to create web pages using HTML and enhance their documents by including hyperlinks, tables, forms, frames and images in their HTML code.

### 2440:141 Web Server Administration (3 Credits)

Prerequisite: 2440:105 with a grade of C or better or placement test. Provides Web server administration guidelines such as selecting software/hardware, domain name registration, analyzing security/legal issues, and implementing marketing strategies.

### 2440:145 Introduction to Unix/Linux (3 Credits)

Prerequisite: 2440:105 with a grade of C or better or placement test. This course explores the vital functions that an operating system performs. A multi-user operating system is studied from a functional and hands-on approach.

### 2440:160 JAVA Programming (3 Credits)

Prerequisite: 2440:121 with a grade of C or better. Course introduces the JAVA programming language. Programming techniques are demonstrated through the coding, testing and debugging of JAVA applications and applets.

### 2440:170 Visual BASIC (3 Credits)

Prerequisite: 2440:121 with a grade of C or better. Course includes hands-on experience with Visual BASIC, design of Graphical User Interface (GUI) applications, event-driven programming, linking of windows, and accessing relational databases.

### 2440:180 Introduction to Database Management (3 Credits)

Prerequisite: 2440:121 with a grade of C or better. Overview of database system models and functions. Covers introduction to database design and relational database definition and manipulation using SQL.

### 2440:201 Networking Basics (3 Credits)

Prerequisite: 2440:105 with a grade of C or better or placement exam. The introductory course in networking. It includes study of the common network protocols, structures, and models. Basic router and switch configurations are introduced.

### 2440:202 Router and Routing Basics (3 Credits)

Prerequisite: 2440:201 with a grade of C or better. The second course to networking. It covers basic router configuration as well as routed and routing protocols.

### 2440:203 Switching Basics and Wireless (3 Credits)

Prerequisites: 2440:201 and 2440:202 with a grade of C or better in both. The third of four courses leading to the CCNA certification. The course covers switching basics and basic wireless networking.

### 2440:204 WAN Technologies (3 Credits)

Prerequisites: 2440:202 and 2440:203 (each with a grade of C or better). The fourth of four courses leading to the CCNA certification. Topics covered include IP services and Wide Area Network theory and design.

### 2440:210 Client/Server Programming (3 Credits)

Prerequisite: 2440:180 with a grade of C or better. Introduces student to client/server programming. Includes hands-on experience using a Rapid Application Development (RAD) tool to show integration of database and program development.

### 2440:211 Interactive Web Programming (3 Credits)

Prerequisites: 2440:121 and 2440:140 (each with a grade of C or better). Provides students with instruction on interactive Web programming using XML and DHTML (HTML/XHTML/HTML5, CSS, and Web scripting).

### 2440:212 Multimedia & Interactive Web Elements (3 Credits)

Prerequisite: 2440:140 with a grade of C or better. Reviews and demonstrates web tools and techniques like RealAudio, Shockwave, QuickTime, video conferencing and other dynamic graphical elements to enhance Web-based communication. Multimedia software may change to reflect current technology.

### 2440:240 Computer Information Systems Internship (3 Credits)

Prerequisite: 2440:241, [2440:202 and 2440:247], or [2440:282 and 2440:247], each with a grade of C or better. Provides student experience in computing/information technology in the workplace. Students meet with instructor to discuss and examine experiences.

### 2440:241 Systems Analysis & Design (3 Credits)

Prerequisites: 2440:180 and [2440:160 or 2440:170 or 2440:256], each with a grade of C or better. Covers all phases of business systems analysis, design, development, and implementation. Such principles as system flowcharting and file and document design emphasized.

### 2440:247 Hardware Support (3 Credits)

Prerequisite: Admission to program or permission of the program director. This course introduces the student to the basic skills required to troubleshoot, maintain and repair computers.



**2440:248 Server Hardware Support (3 Credits)**

Prerequisite: 2440:247 with a grade of C or better. This course introduces the student to server hardware and expands student knowledge of client hardware.

**2440:251 CIS Projects (3 Credits)**

Prerequisite: 2440:241 with a grade of C or better or permission. Using a simulated work environment, project teams are set up and required to analyze an unstructured problem, prepare alternative designs and implement a solution.

**2440:256 C++ Programming (3 Credits)**

Prerequisite: 2440:121 with a grade of C or better. This course explores object-oriented programming through C++ program development.

**2440:282 Microsoft Networking II (3 Credits)**

Prerequisite: 2440:281 with a grade of C or better. Provides the knowledge and skills necessary to manage and maintain computers with the Windows Server 2008 Network Operating System. This course will also help prepare you to pass the MCTS Exam.

**2440:283 Microsoft Networking III (3 Credits)**

Prerequisite: 2440:282 with a grade of C or better. Provides the knowledge and skills necessary to manage and maintain an active directory service hosted by the Server 2008 Network Operating System. This course also helps prepare the student to pass the MCTS Exam.

**2440:284 Microsoft Networking IV (3 Credits)**

Prerequisite: 2440:283 with a grade of C or better or passing score on the 70-640 Microsoft Certification Exam. This course will provide you with the knowledge and skill necessary to install, configure, manage and maintain the server services provided with Server 2008.

**2440:290 Special Topics: Computer Information Systems (1-5 Credits)**

Selected topics or subject areas of interest in computer information systems.

**2440:300 Network Authentication and Security (3 Credits)**

Prerequisites: 2440:204 with a grade of C or better and junior or better standing. This course focuses on network security issues related to conducting business over the Internet, including authentication, authorization, and firewalls.

**2440:303 Voice, Data, and Video (3 Credits)**

Prerequisites: 2440:204 with a grade of C or better and junior or better standing. This course focuses on network issues related to the integration of voice, data, and video over the same network media and equipment.

**2440:306 Ethics & Law in Information Technology (3 Credits)**

Prerequisite: Junior or greater standing. This course is designed to introduce the student to the central issues concerning intellectual property, privacy, and copyright law as it pertains to the development and distribution of software systems.

**2440:310 Wireless Networking (3 Credits)**

Prerequisite: 2440:204 with a grade of C or better or permission. This course provides students with various wireless networking technologies.

**2440:311 Client/Server Programming II (3 Credits)**

Prerequisite: 2440:210 with a grade of C or better. Discusses tools for client-server programming, distributed computing, socket programming, and security implementation.

**2440:321 Server-Side Scripting (3 Credits)**

Prerequisites: 2440:121 and 2440:140, both with a grade of C or better. This course provides students with instruction on using server-side scripting languages to develop interactive client/server web-based applications.

**2440:331 Programming for Cybersecurity (3 Credits)**

Prerequisites: 2440:121 and 2440:145 with grades of C or better. This course will introduce basic programming techniques used for ethical hacking using the Linux Operating System and other tools that are commonly used in cybersecurity.

**2440:360 Java Programming II (3 Credits)**

Prerequisite: 2440:160 with a grade of C or better. This course covers advanced object-oriented programming concepts, GUI programming, web application programming, network and security programming, JavaBeans and explores aggregations.

**2440:365 E-Business Application Development (3 Credits)**

Prerequisites: 2440:211 and 2440:321, both with a grade of C or better. This course covers web programming techniques to develop Web-based e-business solution and covers e-business models and business issues.

**2440:370 Visual Basic Programming II (3 Credits)**

Prerequisite: 2440:170 with a grade of C or better. This course explores object-oriented programming through Visual Basic program development at a more advanced level, with more attention to business applications.

**2440:388 Advanced UNIX/Linux (3 Credits)**

Prerequisites: 2440:145 with a grade of C or better and junior or greater standing. This course provides students with the necessary knowledge and skills to perform basic administrative tasks on a UNIX/Linux operating system.

**2440:400 Advanced Routing (4 Credits)**

Prerequisites: 2440:201, 2440:202, 2440:203, 2440:204, 2440:300, all with a grade of C or better, and 2030:154; or possess a current CCNA certification and be able to configure a router to the CCNA standards. This course focuses on advanced routing protocols and features and complies with the content of the Cisco Academy Cisco Certified Network Profession (CCNP) Advanced Routing course.

**2440:401 Multilayer Switching (3 Credits)**

Prerequisites: Must have a current CCNA certification and be able to program a router to the CCNA standards (requires permission), or must have successfully completed all four Cisco Networking Academy CCNA courses from an accredited academy (2440:201, 2440:202, 2440:203, 2440:204, all with a grade of C or better). This course focuses on switching protocols and features. This course complies with the content of the Cisco Academy Cisco Certified Network Profession (CCNP) Switching course.

**2440:402 Troubleshooting Complex IP-based Networks (4 Credits)**

Prerequisites: 2440:400 and 2440:401 with grades of C or better or permission. This course focuses on methodologies and hands-on skills needed to maintain and troubleshoot complex IP networks.

**2440:430 Network Monitoring and Management (3 Credits)**

Prerequisite: 2440:204 with a grade of C or better, or junior or greater standing. This course provides students the basic theory and practical application of network monitoring and management skills.

**2440:431 UNIX-based Systems Security (3 Credits)**

Prerequisites: 2440:388 with a grade of C or better and junior or greater standing. This course will introduce the various methods used to secure UNIX-based operating systems (Apple iOS and Android Operating System) on a computer network.

**2440:441 Cyber Security (3 Credits)**

Prerequisites: 2030:361, 2235:441, and 2440:388 with a grades of C or better and junior or greater standing. This course will address issues involving hacking, malware, social theories, protocols, firewalls, intrusion detection, the prevention and containment of intrusion incidents, the incident response process, and computer forensic examination.

**2440:450 Applied Data Mining (3 Credits)**

Prerequisites: 2030:345 and junior or greater standing. This course is designed to introduce the student to the central issues in business data mining.

**2440:451 Senior Programming Projects (3 Credits)**

Prerequisite: Senior or greater standing. This course is the capstone course where senior students will apply learned material by simulating a realistic work environment.

**2440:452 CIS Practicum (3 Credits)**

Prerequisite: Permission. Provides students with experience in computer information systems operation and maintenance in the workplace. Practicum must be relevant to the specialization area.

**2440:456 C++ Programming II (3 Credits)**

Prerequisite: 2440:256 with a grade of C or better. This course explores object-oriented programming through C++ program development at a more advanced level. Also considers Visual programming and connection to databases.

**2440:465 Data Communications & Networking (3 Credits)**

Prerequisite: Junior or greater standing. Introduces students to business data communication and networking concepts. The OSI model, various network configuration and popular industry communication protocols are explored at an advanced level.

**2440:470 Database Management II (3 Credits)**

Prerequisite: 2440:180 with a grade of C or better. Covers advanced database design, definition, manipulation, and administration tasks with emphasis placed on the relational model, the object-oriented model, and client/server systems.

**2440:480 Current Topics in Computer Information Systems (3 Credits)**

Prerequisite: Permission. Seminar in topics of current interest in information technology or special individual topics in information technology.

**2440:490 CIS Senior Networking Projects (3 Credits)**

Prerequisites: 2440:388, 2440:400, and 2440:401 with grades of C or better or permission. The capstone course is used to research, document and implement current and advanced IT topics using knowledge and skills developed from networking courses.

**2440:491 CIS Senior Cybersecurity Project (3 Credits)**

Prerequisites: 2235:442, 2235:443, and 2440:388 with grades of C or greater or permission. This is the capstone course for the CIS Digital Forensics and Cybersecurity degree options.

## Computer Science (3460)

**3460:101 Essentials of Computer Science (3 Credits)**

Explore major topics in Computer Science - computing systems, data representation, hardware, programming topics, and important applications such as networks, robotics, databases, and gaming.

**3460:125 Descriptive Computer Science (2 Credits)**

Computer literacy: terminology; methods, media for data representation, storage; elements of a computing system; data organization.

**3460:126 Introduction to Visual Basic Programming (3 Credits)**

Windows GUI and Microsoft's Visual BASIC programming environment. Design of user interfaces, event-driven programming, basic control structures, simple variables, arrays, and sequential files.

**3460:200 Programming for Data Science (4 Credits)**

Prerequisite: 3450:145 or 3450:149. Introductory programming for data-intensive applications including data collection, pre-processing/cleansing, analysis, and visualization, using libraries for processing of large data sets. Designed as a first programming course for non-majors in the sciences.

**3460:209 Computer Science I (4 Credits)**

Prerequisite: Completion of 3450:145 or 3450:149 with a grade of C- or better or equivalent. Introduction to problem-solving methods and algorithms. Programming in a high-level language including how to design, code, debug and document programs with good programming style.

**3460:210 Computer Science II (4 Credits)**

Prerequisites: 3460:209 and 3450:208 with a grade of C- or better. Dynamic memory allocation methods, elementary data structures, internal representations, and associated algorithms. Topics include lists, stacks, queues, trees, and sorting methods.

**3460:289 Selected Topics in Computer Science (1-3 Credits)**

Prerequisite: Permission. Selected topics of interest in computer science.

**3460:306 Assembly and System Programming (4 Credits)**

Prerequisite: Completion of 3460:210 or equivalent with a grade of C- or better. Basic computer organization, digital logic, and data representation. Programming in assembly and C languages on a typical digital computer.

**3460:307 Internet Systems Programming (3 Credits)**

Prerequisite: Completion of 3460:210 or equivalent with a grade of C- or better. Overview of current programming languages, tool and scripting technologies for the Internet and World Wide Web.

**3460:316 Data Structures (3 Credits)**

Prerequisites: 3460:210 and [3450:221 or 3450:210] with grades of C- or better. A continuation of topics in 3460:210. Topics include: graphs and graph algorithms, external sorting, hashing, advanced tree and file structures.

**3460:389 Intermediate Topics in Computer Science (1-3 Credits)**

Prerequisite: Permission of instructor. Selected topics of interest in computer science at an intermediate level.

**3460:395 Internship in Computer Science (1-12 Credits)**

Prerequisites: Completion of 3460:209 and 3460:210 with grades of C- or better, and permission of a faculty supervisor. Placement in industry for experience related to computer science. (May be repeated to a maximum of 12 credit hours. No more than three credits may be applied towards a computer science major.)

**3460:406 Introduction to C & UNIX (3 Credits)**

Prerequisite: Programming experience. Syntax of C with flow structures, pointers, and command line concepts. For UNIX, shell scripts, UNIX file structure, system calls and interprocess communication protocols. (Not an approved mathematics and computer science major, minor, or certificate elective.)

**3460:408 Windows Programming (3 Credits)**

Prerequisites: Completion of 3460:208 or 3460:210 or 3460:406 with a grade of C- or better or permission. Windows operating systems, integrated development environment, event-driven programming, graphical user interface design, object libraries, component object model, object linking, embedding, client-server objects.

**3460:411 Human-Computer Interaction (3 Credits)**

Prerequisite: 3460:316. This course introduces the basic concepts and technologies of Human-Computer Interaction (HCI). Students will learn how to design and implement systems for human to interact with computers. Topics include: Categories of HCI, CLI, GUI, NUI, Design, Implementation and Evaluation of HCI, HCI Devices, Virtual Device Drive, HCI Toolkits, HCI Standards, Categories of Interactive Tasks, EDP and Multi-Threading in HCI, VR/AR/MR/XR in HCI, APP HCI, 3D Printing.

**3460:418 Introduction to Discrete Structures (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better or permission. Introduction to a number of structures in algebra of particular use to student in computer science. Topics include algorithms and flow chart language, graphs and digraphs, trees, lattices codes.

**3460:421 Object-Oriented Programming (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better. Object-oriented design, analysis, and programming using different development models. Comparison with other programming paradigms.

**3460:426 Operating Systems (3 Credits)**

Prerequisites: Completion of 3460:316 and 4450:320 or equivalents with grades of C- or better. Introduction to aspects of all modern operating systems: types; storage management; process and resource control; interacting process synchronization.

**3460:428 UNIX System Programming (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better and knowledge of C. An overview of the UNIX operating system. Shell programming. Process management, processor management, storage management, scheduling algorithms, resource protection, and system programming.

**3460:430 Theory of Programming Languages (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better. Advanced concepts underlying programming languages and their applications, formal definitions of programming languages, Backus Normal Form, semantics. Alternative programming paradigms including functional programming.

**3460:435 Algorithms (3 Credits)**

Prerequisite: Completion of 3460:316 with a grade of C- or better. Design and analysis of efficient algorithms for random access machines; derivation of pattern classification algorithms.

**3460:436 Applied Machine Learning (3 Credits)**

Prerequisite: 3460:210 with a grade of C- or higher. Machine learning studies algorithms and models that enable computers to complete task without explicit instructions. These algorithms rely on rules, associations, and patterns presented in large data sets gathered or generated through self-learning. This course will introduce students the fundamentals of machine learning, and concepts of deep learning. Topics include machine learning concepts, tasks, and workflow; supervised learning methods for classification and prediction; unsupervised learning methods for pattern recognition; concepts of advanced supervised learning methods including deep learning algorithms such as neural networks and convolutional neural networks. The main focus of the course is the application of industry-leading machine learning algorithms and the enabling techniques that make the implementation of the algorithms practical.

**3460:438 Interactive Game & Game Engine Design (3 Credits)**

Prerequisite: 3460:316. This course will introduce the basic concepts and techniques of game and game engine design. Students will learn how to design and implement interactive computer games and game engines. Topics include: Interactive Animation, Game Engines, EDP in Game Development, Procedural Animation and Physics Engine, Decision Making and AI Games, Surface & Volume Representation, VR, AR, MR, APP Games, Game Engine Development, and Voxel-Engine.

**3460:440 Compiler Design (3 Credits)**

Prerequisites: Completion of 3460:210 and (4450:320 or 3460:306), with a grade of C- or better. Techniques used in constructing compilers, including lexical and syntactic analysis, parsing techniques, object code generation and optimization. Course requires a compiler implementation project.

**3460:445 Introduction to Bioinformatics (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better or permission. Introduce major themes in bioinformatics. Topics include concepts of molecular genetics, biological databases, database searching, sequence alignments, phylogenetic trees, structure prediction, and microarray data analysis.

**3460:453 Computer Security (3 Credits)**

Prerequisites: Completion of 3460:210 with a grade of C- or better. Principles of computer security – cryptography, authentications, secure network protocols, intrusion detection and countermeasures.

**3460:455 Data Communication & Computer Networks (3 Credits)**

Prerequisites: Completion of 3460:210 with a grade of C- or better. ISO-OSI, TCP/IP, SNA data switching, protocols, flow and error control, routing, topology, Network trends, network taxonomies, and socket-based programming.

**3460:457 Computer Graphics (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better. Topics in vector and raster graphics, interactive graphics languages, scan conversion, clipping, geometric transformation, projection, shading, animation and virtual reality.

**3460:460 Artificial Intelligence & Heuristic Programming (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better. Study of various programs which have displayed some intelligent behavior. Exploration of level at which computers can display intelligence.

**3460:463 Pervasive Computing (3 Credits)**

Prerequisites: Completion of 3460:210 with a grade of C- or better. Computing from a wireless perspective. Topics include protocols, algorithms, security and sensor networks.

**3460:465 Computer Architecture (3 Credits)**

Prerequisite: Completion of 3460:210 and (4450:320 or 3460:306), with a grade of C- or better. An introduction to the hardware organization of the computer at the register, processor and systems level. In-depth study of the architecture of a particular computer system family.

**3460:468 Mobile Robotics (3 Credits)**

Prerequisites: Completion of 3460:210 with a grade of C- or better. Introduction to history, hardware and software components, and design of autonomous mobile robots. Multiple projects involving both physical robots and software emulation.

**3460:475 Database Management (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better. Fundamentals of database organization, data manipulations and representation, data integrity, privacy.

**3460:476 Introduction to NoSQL Data Management (3 Credits)**

Prerequisite: 3460:210. The widespread emergence of big data storage needs has driven the development and adoption of a new class of non-relational databases commonly referred to as NoSQL databases. This course will explore the origins of NoSQL databases and the characteristics that distinguish them from traditional relational database management systems. Core concepts of NoSQL databases will be presented, followed by an exploration of how different database technologies implement these core concepts. We will take a closer look at 1-2 databases from each of the four main NoSQL data models (key-value, column family, document, and graph), highlighting the business needs that drive the development and use of each database. Finally, we will present criteria that decision makers should consider when choosing between relational and non-relational databases and techniques for selecting the NoSQL database that best addresses specific use cases.

**3460:477 Introduction to Parallel Processing (3 Credits)**

Prerequisites: Completion of 3460:316 with a grade of C- or better and knowledge of C. Commercial processors: past and present. Parallel languages, models of parallel computation, parallel algorithm design and performance evaluation. Parallel paradigms with relation to real world applications.

**3460:480 Software Engineering (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better. Introduction to formal software specification and validation. Introduction of methodologies and tools of design, development and validation, and maintenance.

**3460:489 Topics in Computer Science (1-3 Credits)**

Prerequisite: Permission of instructor. Selected topics in computer science at an advanced level.

**3460:490 Senior Seminar in Computer Science (3 Credits)**

Prerequisites: Must have completed at least 30 hours of 3460 (computer science) courses. Corequisites: 3460:435 and [3460:426 or 4450:325]. Professional software development, surviving "Mission Impossible" projects, computer ethics, intellectual property rights (patents and copyrights), and other current topics.

**3460:497 Individual Study in Computer Science (1-3 Credits)**

(May be repeated. Can apply to degree, minor or certificate only with department approval.) Prerequisite: Permission. Directed studies designed as introduction to research problems under guidance of designated faculty member.

**3460:498 Senior Honors Project: Computer Science (1-3 Credits)**

Prerequisites: 3460:497 and Senior student in Honors Program. Directed study for senior student in the Honors Program who has completed 3460:497. An introduction to research problems in the computer science under the guidance of selected faculty.

## Computer Information System, Programming Option, AAB

### Associate of Applied Business in Computer Information Systems, Programming (244106AAB)

More on the Computer Information Systems major (<https://www.uakron.edu/bit/cis/>)

## Program Contacts

- Dr. Zarreen Farooqi ([zarreen@uakron.edu](mailto:zarreen@uakron.edu)), 330-972-8858
- Enoch Damson ([damson@uakron.edu](mailto:damson@uakron.edu)), 330-972-7162

## Program Description

The Computer Information Systems (CIS) offers associate and baccalaureate programs that introduce students to basic computing concepts while allowing them to develop the applied skills required the workforce. Courses start the student along the path for professional certifications. There are options, minors, and certificates available. CIS courses are taught in cutting edge computer labs so students can learn and practice skills. The CIS program offers high level training for the information technology professionals. Schedules offer a range of day and evening classes.

## Department Policy

- **Students must attain a "C" or better in each course in their major area (2440).**
- A cumulative GPA of 2.0 and a minimum of 15 earned credit hours for Inter- and Intra-College Transfer into all Associate and Bachelor's degree programs.
- Additional classes may be needed to transition into a BS degree in Computer Information Systems

## Career Information

Graduates of the associate and bachelor's degree in CIS - Programming are expected to qualify for such positions as programmer/analysts, software developers, database administrators, and web developers in government, business, information technology, and other industries.

For additional information please visit the Bureau of Labor Statistics [www.bls.gov](http://www.bls.gov) or visit the Career Center <http://www.uakron.edu/career/> in the Student Union, Room 211.

The following information has official approval of **The Department of Computer Science** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. Transfer students should consult their Advisor to identify courses that are equivalent.

1st Year		Hours
Fall Semester		
2020:121	English	3
2030:152	Technical Mathematics II	2
2030:153	Technical Mathematics III	2
2420:104	Introduction to Business	3
2440:121	Introduction of Logic/Programming	3
2440:140	Web Design Fundamentals	3
Hours		16

**Spring Semester**

2420:103	Essentials of Management Technology	3
2440:145	Introduction to Unix/Linux	3
2440:170	Visual BASIC <sup>2</sup>	3
2440:180	Introduction to Database Management <sup>2</sup>	3
	Natural Science Requirement	3
	Hours	15

**2nd Year****Fall Semester**

2420:211	Essentials of Financial Accounting	3
2420:263	Professional Communications and Presentations	3
2440:210	Client/Server Programming <sup>1</sup>	3
2440:241	Systems Analysis & Design <sup>1</sup>	3
2440:256	C++ Programming <sup>1</sup>	3
	Hours	15

**Spring Semester**

2040:244	Death & Dying	3
or 2040:254	or The Black Experience from 1619-1877	
or 2040:256	or Diversity in American Society	
or 2040:257	or The Black Experience 1877 - 1954	
or 2040:258	or The Black Experience 1954 - Present	
2040:247	Survey of Basic Economics	3
2420:202	Elements of Human Resource Management	3
2440:160	JAVA Programming <sup>2</sup>	3
2440:240	Computer Information Systems Internship <sup>2</sup>	3
	Hours	15
	Total Hours	61

<sup>1</sup> Traditionally Fall Only (See Program Contact).

<sup>2</sup> Traditionally Spring Only (See Program Contact).

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

**Note:**

- Students entering the Computer Information Systems programs (Cybersecurity, Digital Forensics, Networking, and Programming) must pass department placement exams or complete the following bridge course prior to enrolling in the program.
  - Bridge Course: 2440:105 Introduction to Computers and Application Software

## Computer Information Systems Programming Specialist, Minor

### Minor in Programming Specialist (244106M)

**Program Contacts**

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Enoch Damson

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The following courses constitute a "Minor in Programming Specialist" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

**Summary**

Code	Title	Hours
Required Courses		15
Electives		6
Total Hours		21

**Required Courses <sup>1</sup>**

Code	Title	Hours
2440:121	Introduction of Logic/Programming	3
2440:160	JAVA Programming <sup>3</sup>	3
2440:170	Visual BASIC <sup>3</sup>	3
2440:180	Introduction to Database Management <sup>3</sup>	3
2440:256	C++ Programming <sup>2</sup>	3
Total Hours		15

<sup>1</sup> Students must achieve a grade of C or better in their technical courses (2440).

**Electives <sup>1</sup>**

Code	Title	Hours
<b>Select six credits from the following Computer Information Systems Electives:</b>		
2440:140	Web Design Fundamentals	
2440:145	Introduction to Unix/Linux	
2440:210	Client/Server Programming <sup>2</sup>	
2440:211	Interactive Web Programming <sup>2</sup>	
2440:241	Systems Analysis & Design <sup>2</sup>	
2440:290	Special Topics: Computer Information Systems	
Total Hours		6

<sup>1</sup> Students must achieve a grade of C or better in their technical courses (2440).

<sup>2</sup> Traditionally Fall Only (See Program Contact).

<sup>3</sup> Traditionally Spring Only (See Program Contact).

**Note:**

- Students entering the Computer Information Systems (CIS) minor programs (Programming and Cisco Networking Technology) must

pass department placement exams or complete the following bridge course prior to enrolling in the program.

- Bridge Course: 2440:105 Introduction to Computers and Application Software

## Computer Information Systems Programming, Certificate

### Certificate in Programming (244203C)

This certificate may be earned independent of earning a degree.

#### Program Contacts

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The following information has official approval of **The Department of Computer Science** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Programming" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		15
Total Hours		15

## Required Courses <sup>1</sup>

Code	Title	Hours
2440:121	Introduction of Logic/Programming	3
2440:160	JAVA Programming <sup>3</sup>	3
2440:170	Visual BASIC <sup>3</sup>	3
2440:180	Introduction to Database Management <sup>3</sup>	3
2440:256	C++ Programming <sup>2</sup>	3
Total Hours		15

<sup>1</sup> Students must achieve a grade of C or better in their technical courses (2440).

<sup>2</sup> Traditionally Fall Only (See Program Contact).

<sup>3</sup> Traditionally Spring Only (See Program Contact).

#### Note:

- Students entering the Computer Information Systems certificate programs (Programming and Cisco Networking Technology) must pass department placement exams or complete the following bridge course prior to enrolling in the program.

- Bridge Course: 2440:105 Introduction to Computers and Application Software

## Computer Information Systems, Computer Networking Option, Cisco Track, AAB

### Associate of Applied Business in Computer Information Systems, Computer Networking - Cisco (244208AAB)

More on the Computer Information Systems major (<https://www.uakron.edu/bit/cis/>)

#### Program Contacts

- Janet Kropff (jsk3@uakron.edu), 330-972-2075

## Program Description

The Computer Information Systems (CIS) offers associate and baccalaureate programs that introduce students to basic computing concepts while allowing them to develop the applied skills required the workforce. Courses start the student along the path for professional certifications. There are options, minors, and certificates available. CIS courses are taught in cutting edge computer labs so students can learn and practice skills. The CIS program offers high level training for the information technology professionals. Schedules offer a range of day and evening classes. The CIS program offers high level training for computer programmers and microcomputer application specialists. Schedules offer a range of day, evening and weekend classes.

## Department Policy

- **Students must attain a "C" or better in each course in their major area (2440).**
- A cumulative GPA of 2.0 and a minimum of 15 earned credit hours for Inter- and Intra-College Transfer into all Associate and Bachelor's degree programs.
- Additional classes may be needed to transition into a BS degree in Computer Information Systems

## Career Information

Graduates of the associate and bachelor's degree in CIS - Networking are expected to qualify for such positions as help-desk support specialists, desktop support analysts, computer operators, PC technicians, network administrators, network specialists, systems administrators, web server administrators and messaging administrators, and information technology (IT) specialists in government, business, information technology, and other industries.

For additional information, please visit the Bureau of Labor Statistics [www.bls.gov](http://www.bls.gov) (<http://www.bls.gov>) or visit the Career Center in the Student Union, Room 211 at <http://www.uakron.edu/career/>.

The following information has official approval of **The Department of Computer Science** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion*

of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others. The transfer process is completed through an appointment with your academic advisor.

Transfer students should consult their Advisor to identify courses that are equivalent.

1st Year		
Fall Semester		Hours
2020:121	English	3
2030:152	Technical Mathematics II	2
2030:153	Technical Mathematics III	2
2420:104	Introduction to Business	3
2440:121	Introduction of Logic/Programming	3
2440:247	Hardware Support <sup>1</sup>	3
Hours		16
Spring Semester		
2420:103	Essentials of Management Technology	3
2440:141	Web Server Administration	3
2440:145	Introduction to Unix/Linux	3
2440:248	Server Hardware Support <sup>2</sup>	3
Natural Science Requirement		3
Hours		15
2nd Year		
Fall Semester		Hours
2040:247	Survey of Basic Economics	3
2420:211	Essentials of Financial Accounting	3
2420:263	Professional Communications and Presentations	3
2440:201	Networking Basics <sup>1,3</sup>	3
2440:202	Router and Routing Basics <sup>1,3</sup>	3
Hours		15
Spring Semester		
2040:244	Death & Dying	3
or 2040:254	or The Black Experience from 1619-1877	
or 2040:256	or Diversity in American Society	
or 2040:257	or The Black Experience 1877 - 1954	
or 2040:258	or The Black Experience 1954 - Present	
2420:202	Elements of Human Resource Management	3
2440:203	Switching Basics and Wireless <sup>2,3</sup>	3
2440:204	WAN Technologies <sup>2,3</sup>	3
2440:240	Computer Information Systems Internship <sup>2</sup>	3
Hours		15
Total Hours		61

<sup>1</sup> Traditionally Fall only (see program contact).

<sup>2</sup> Traditionally Spring only (see program contact).

<sup>3</sup> Course is a 7.5 week course.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

#### Note:

- Students entering the Computer Information Systems programs (Cybersecurity, Digital Forensics, Networking, and Programming) must pass department placement exams or complete the following bridge course prior to enrolling in the program.
  - Bridge Course: 2440:105 Introduction to Computers and Application Software

## Computer Information Systems, Cybersecurity Option, BS

### Bachelor of Science in Computer Information Systems, Cybersecurity (244305BS)

More on the Computer Information Systems major (<https://www.uakron.edu/bit/cis/>)

#### Program Contacts

- Mr. Stanley Smith ([shsmith@uakron.edu](mailto:shsmith@uakron.edu)), 330-972-6950
- Dr. John Nicholas ([jn@uakron.edu](mailto:jn@uakron.edu)), 330-972-2563

#### Program Description

The Computer Information Systems (CIS) offers associate and baccalaureate programs that introduce students to basic computing concepts while allowing them to develop the applied skills required the workforce. Courses start the student along the path for professional certifications. There are options, minors, and certificates available. CIS courses are taught in cutting edge computer labs so students can learn and practice skills. The CIS program offers high level training for the information technology professionals. Schedules offer a range of day and evening classes.

#### Department Policy

- Students must attain a "C" or better in each course in their major area (2440).
- Acumulative GPA of 2.0 GPA and a minimum of 15 earned credit hours for Inter- and Intra- College Transfer into all Associate and Bachelor's degree programs.
- Prior to enrolling in classes for the BS degree you must contact an advisor in Polsky 301.

#### Career Information

Graduates of the BS CIS – Cybersecurity program are expected to qualify for such positions as law enforcement professionals, computer forensic specialists, data security analysts, systems security administrators, and network security administrators in government, business, information technology, and other industries.

For additional information, please visit the Bureau of Labor Statistics ([www.bls.gov](http://www.bls.gov)) or visit the Career Center in Simmons Hall, Room 301 ([www.uakron.edu/career/](http://www.uakron.edu/career/) (<http://www.uakron.edu/career/>)).

The following information has official approval of **The Department of Computer Science** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the

degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. The College of Applied Science and Technology recommends that students take the General Education courses listed in this recommended sequence. Transfer students should consult their Advisor to identify courses that are equivalent.

**1st Year**

<b>Fall Semester</b>		<b>Hours</b>
2020:121	English	3
2235:100	Introduction to Digital Forensics	3
2440:145	Introduction to Unix/Linux	3
2440:201	Networking Basics <sup>1,3</sup>	3
2440:202	Router and Routing Basics <sup>1,3</sup>	3
Hours		15

**Spring Semester**

2020:222	Technical Report Writing	3
2030:152	Technical Mathematics II	2
2030:153	Technical Mathematics III	2
2440:121	Introduction of Logic/Programming	3
2440:203	Switching Basics and Wireless <sup>2,3</sup>	3
2440:204	WAN Technologies <sup>2,3</sup>	3
Hours		16

**2nd Year**

<b>Fall Semester</b>		<b>Hours</b>
2040:256	Diversity in American Society	3
2235:280	Cybercrime	3
2420:263	Professional Communications and Presentations	3
2440:247	Hardware Support <sup>1</sup>	3
Natural Science Requirement		3
Hours		15

**Spring Semester**

2030:216	Applied Finite Mathematics	3
2040:241	Technology & Human Values	3
2235:281	Computer Forensic Methods <sup>2</sup>	3
2440:240	Computer Information Systems Internship <sup>2,4</sup>	3
2440:248	Server Hardware Support <sup>2</sup>	3
Hours		15

**3rd Year**

<b>Fall Semester</b>		<b>Hours</b>
2030:361	Applied Cryptography	3
2235:283	Cyber Warfare	3
2235:381	Computer Forensic Methods II	3
2440:340	Network Forensics I <sup>1</sup>	3
Humanities Requirement <sup>5</sup>		3
Hours		15

**Spring Semester**

2235:383	Ethical Hacking <sup>2</sup>	3
2440:331	Programming for Cybersecurity <sup>2</sup>	3
2440:388	Advanced UNIX/Linux <sup>2</sup>	3
2440:443	Network Forensics II <sup>2</sup>	3
Natural Science Requirement with Lab		4
Hours		16

**Summer Semester**

Co-op <sup>4</sup>		0
Hours		0

**4th Year**

<b>Fall Semester</b>		<b>Hours</b>
2235:382	File System Analysis <sup>1</sup>	3
2440:300	Network Authentication and Security <sup>1</sup>	3
2440:431	UNIX-based Systems Security <sup>1</sup>	3
2440:442	Wireless Forensics <sup>1</sup>	3
Arts Requirement <sup>5</sup>		3
Hours		15

**Spring Semester**

2030:461	Applied Cryptanalysis	3
2040:243	Contemporary Global Issues	3
2440:440	Intrusion Detection <sup>2</sup>	3
2440:490	CIS Senior Networking Projects <sup>2</sup>	3
Arts or Humanities Requirement <sup>5</sup>		3
Hours		15
Total Hours		122

<sup>1</sup> Traditionally Fall Only (See Program Contact).

<sup>2</sup> Traditionally Spring Only (See Program Contact).

<sup>3</sup> Course is a 7.5 week course.

<sup>4</sup> Eligible students will be involved in a paid co-op experience during the summer semester of the third year of the program. Co-op positions will enhance the cybersecurity skills of students and provide them with relevant and practical work experience in the cybersecurity industry. Students must have a cumulative GPA of 3.0 or higher in their 2440, 2235, and 2030 courses at the end of the 2nd Year Fall semester and must maintain a GPA of 3.0 or higher through 3rd Year Spring semester to be eligible for the Co-op.

- This paid co-op experience course will be offered as a special section of 2440:240 CIS Internship for those who qualify.

- Those students who have a cumulative GPA under 3.0 must complete a standard section of 2440:240 Computer Information Systems Internship. This will also include those who did not maintain a cumulative GPA of 3.0 or higher from the 2nd Year Fall semester through the 3rd Year Spring semester.

<sup>5</sup> All students pursuing a bachelor's degree at the University of Akron must complete the General Education requirements. For efficient completion of UA General Education requirements, it is recommended that students choose an Arts or Humanities course to fulfill the Global Diversity tag for CIS bachelor's programs.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

**Note:**



- Students entering the Computer Information Systems programs (Cybersecurity, Digital Forensics, Networking, and Programming) must pass department placement exams or complete the following bridge course prior to enrolling in the program.
  - Bridge Course: 2440:105 Introduction to Computers and Application Software

## Computer Information Systems, Networking Option, BS

### Bachelor of Science in Computer Information Systems, Networking (244201BS)

More on the Computer Information Systems major (<https://www.uakron.edu/bit/cis/>)

### Program Contacts

- Janet Kropff ([jsk3@uakron.edu](mailto:jsk3@uakron.edu)), 330-972-2075

### Program Description

The Computer Information Systems (CIS) offers associate and baccalaureate programs that introduce students to basic computing concepts while allowing them to develop the applied skills required the workforce. Courses start the student along the path for professional certifications. There are options, minors, and certificates available. CIS courses are taught in cutting edge computer labs so students can learn and practice skills. The CIS program offers high level training for the information technology professionals. Schedules offer a range of day and evening classes.

### Department Policy

- **Students must attain a "C" or better in each course in their major area (2440).**
- A cumulative GPA of 2.0 GPA and a minimum of 15 earned credit hours for Inter- and Intra- College Transfer into all Associate and Bachelor's degree programs.
- Prior to enrolling in classes for the BS degree you must contact an advisor in Polsky 301.

### Career Information

Graduates of the associate and bachelor's degree in CIS - Networking are expected to qualify for such positions as help-desk support specialists, desktop support analysts, computer operators, PC technicians, network administrators, network specialists, systems administrators, web server administrators and messaging administrators, and information technology (IT) specialists in government, business, information technology, and other industries.

For additional information please visit the Bureau of Labor Statistics ([www.bls.gov](http://www.bls.gov)) or visit the Career Center at Simmons Hall Room 301 ([http://www.uakron.edu/career/](http://www.uakron.edu/career)).

The following information has official approval of **The Department of Computer Science** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress

Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. The College of Applied Science and Technology recommends that students take the General Education courses listed in this recommended sequence. Transfer students should consult their Advisor to identify courses that are equivalent.

1st Year		Hours
Fall Semester		
2020:121	English	3
2030:152	Technical Mathematics II	2
2030:153	Technical Mathematics III	2
2420:104	Introduction to Business	3
2440:121	Introduction of Logic/Programming	3
2440:247	Hardware Support <sup>1</sup>	3
Hours		16

Spring Semester		Hours
2020:222	Technical Report Writing	3
2420:103	Essentials of Management Technology	3
2440:141	Web Server Administration	3
2440:145	Introduction to Unix/Linux	3
2440:248	Server Hardware Support <sup>2</sup>	3
Hours		15

2nd Year		Hours
Fall Semester		
2040:247	Survey of Basic Economics	3
2420:211	Essentials of Financial Accounting	3
2420:263	Professional Communications and Presentations	3
2440:201	Networking Basics <sup>1,3</sup>	3
2440:202	Router and Routing Basics <sup>1,3</sup>	3
Hours		15

Spring Semester		Hours
2040:244	Death & Dying	3
or 2040:254	or The Black Experience from 1619-1877	
or 2040:256	or Diversity in American Society	
or 2040:257	or The Black Experience 1877 - 1954	
or 2040:258	or The Black Experience 1954 - Present	
2420:202	Elements of Human Resource Management	3
2420:212	Basic Accounting II	3
or 2420:243	or Survey in Finance	
2440:203	Switching Basics and Wireless <sup>2,3</sup>	3
2440:204	WAN Technologies <sup>2,3</sup>	3
2440:240	Computer Information Systems Internship <sup>2</sup>	3
Hours		18

3rd Year		Hours
Fall Semester		
2030:154	Technical Mathematics IV	3
2440:300	Network Authentication and Security <sup>1</sup>	3
2440:303	Voice, Data, and Video <sup>1</sup>	3
2440:310	Wireless Networking <sup>1</sup>	3

	Humanities Requirement <sup>4</sup>	3
	Hours	15
<b>Spring Semester</b>		
2440:306	Ethics & Law in Information Technology <sup>2</sup>	3
2440:388	Advanced UNIX/Linux <sup>2</sup>	3
2440:400	Advanced Routing <sup>2</sup>	4
	Arts Requirement <sup>4</sup>	3
	Natural Science Requirement	3
	Hours	16
<b>4th Year</b>		
<b>Fall Semester</b>		
2040:240	Human Relations	3
2440:282	Microsoft Networking II <sup>1</sup>	3
2440:401	Multilayer Switching <sup>1</sup>	3
2440:430	Network Monitoring and Management <sup>1</sup>	3
	Arts or Humanities Requirement <sup>4</sup>	3
	Hours	15
<b>Spring Semester</b>		
2440:402	Troubleshooting Complex IP-based Networks <sup>2</sup>	4
2440:490	CIS Senior Networking Projects <sup>2</sup>	3
	Complex Systems Tag Requirement	3
	Natural Science Requirement with Lab	4
	Hours	14
	Total Hours	124

<sup>1</sup> Traditionally Fall Only (See Program Contact).

<sup>2</sup> Traditionally Spring Only (See Program Contact).

<sup>3</sup> Course is a 7.5 week course.

<sup>4</sup> All students pursuing a bachelor's degree at the University of Akron must complete the General Education requirements. For efficient completion of UA General Education requirements, it is recommended that students choose an Arts or Humanities course to fulfill the Global Diversity tag for CIS bachelor's programs.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your *required* General Education English, Mathematics, and Communications (Speech) requirements.**

**Note:**

- Students entering the Computer Information Systems programs (Cybersecurity, Digital Forensics, Networking, and Programming) must pass department placement exams or complete the following bridge course prior to enrolling in the program.
  - Bridge Course: 2440:105 Introduction to Computers and Application Software

## Computer Information Systems, Programming Option, BS

### Bachelor of Science in Computer Information Systems, Programming (244302BS)

More on the Computer Information Systems major (<https://www.uakron.edu/bit/cis/>)

### Program Contacts

- Dr. Zarreen Farooqi ([zarreen@uakron.edu](mailto:zarreen@uakron.edu)), 330-972-8858
- Enoch Damson ([damson@uakron.edu](mailto:damson@uakron.edu)), 330-972-7162

### Program Description

The Computer Information Systems (CIS) offers associate and baccalaureate programs that introduce students to basic computing concepts while allowing them to develop the applied skills required the workforce. Courses start the student along the path for professional certifications. There are options, minors, and certificates available. CIS courses are taught in cutting edge computer labs so students can learn and practice skills. The CIS program offers high level training for the information technology professionals. Schedules offer a range of day and evening classes.

### Department Policy

- **Students must attain a "C" or better in each course in their major area (2440).**
- A cumulative GPA of 2.0 GPA and a minimum of 15 earned credit hours for Inter- and Intra- College Transfer into all Associate and Bachelor's degree programs.
- Prior to enrolling in classes for the BS degree you must contact an advisor in Polsky 301.

### Career Information

Graduates of the AAB/BS CIS – Programming program are expected to qualify for such positions as software or applications developers, programmer analysts, software database administrators, database designers, database developers, and database warehouse analysts in government, business, information technology, and other industries.

For additional information please visit the Bureau of Labor Statistics ([www.bls.gov](http://www.bls.gov)) or visit the Career Center at Simmons Hall Room 301 (<http://www.uakron.edu/career>).

The following information has official approval of **The Department of Computer Science** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. The College of Applied Science and Technology recommends

that students take the General Education courses listed in this recommended sequence. Transfer students should consult their Advisor to identify courses that are equivalent.

**1st Year**

Fall Semester		Hours
2020:121	English	3
2030:152	Technical Mathematics II	2
2030:153	Technical Mathematics III	2
2420:104	Introduction to Business	3
2440:121	Introduction of Logic/Programming	3
2440:140	Web Design Fundamentals	3
Hours		16

Spring Semester		Hours
2020:222	Technical Report Writing	3
2420:103	Essentials of Management Technology	3
2440:145	Introduction to Unix/Linux	3
2440:170	Visual BASIC <sup>2</sup>	3
2440:180	Introduction to Database Management <sup>2</sup>	3
Hours		15

**2nd Year**

Fall Semester		Hours
2420:211	Essentials of Financial Accounting	3
2420:263	Professional Communications and Presentations	3
2440:210	Client/Server Programming <sup>1</sup>	3
2440:241	Systems Analysis & Design <sup>1</sup>	3
2440:256	C++ Programming <sup>1</sup>	3
Hours		15

Spring Semester		Hours
2040:247	Survey of Basic Economics (Gen Ed - Social Science/Critical Thinking Tag)	3
2420:202	Elements of Human Resource Management	3
2420:212	Basic Accounting II	3
or 2420:243	or Survey in Finance	
2440:160	JAVA Programming <sup>2</sup>	3
2440:240	Computer Information Systems Internship <sup>2</sup>	3
Hours		15

**3rd Year**

Fall Semester		Hours
2030:154	Technical Mathematics IV	3
2040:240	Human Relations	3
2440:360	Java Programming II <sup>1</sup>	3
	Humanities Requirement <sup>3</sup>	3
2440:xxx	CIS Elective	3
Hours		15

Spring Semester		Hours
2030:345	Technical Data Analysis	2
2440:306	Ethics & Law in Information Technology <sup>2</sup>	3
2440:456	C++ Programming II <sup>2</sup>	3
	Arts Requirement <sup>3</sup>	3
	Natural Science Requirement with Lab	4
Hours		15

**4th Year**

Fall Semester		
2040:244	Death & Dying	3
or 2040:254	or The Black Experience from 1619-1877	
or 2040:256	or Diversity in American Society	
or 2040:257	or The Black Experience 1877 - 1954	
or 2040:258	or The Black Experience 1954 - Present	
2440:465	Data Communications & Networking <sup>1</sup>	3
2440:470	Database Management II <sup>1</sup>	3
3450:208	Introduction to Discrete Mathematics	4
	Arts or Humanities Requirement <sup>3</sup>	3
Hours		16
Spring Semester		
2440:450	Applied Data Mining <sup>2</sup>	3
2440:451	Senior Programming Projects <sup>2</sup>	3
	Complex Systems Tag Requirement	3
	Natural Science Requirement	3
	Free Elective	3
Hours		15
Total Hours		122

- <sup>1</sup> Traditionally Fall Only (See Program Contact).
- <sup>2</sup> Traditionally Spring Only (See Program Contact).
- <sup>3</sup> All students pursuing a bachelor's degree at the University of Akron must complete the General Education requirements. For efficient completion of UA General Education requirements, it is recommended that students choose an Arts or Humanities course to fulfill the Global Diversity tag for CIS bachelor's programs.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

## CIS Electives

The CIS Elective may be chosen from the following list:

Code	Title	Hours
2440:321	Server-Side Scripting	3
2440:370	Visual Basic Programming II	3
2440:388	Advanced UNIX/Linux	3
2440:480	Current Topics in Computer Information Systems	3

**Note:**

- Students entering the Computer Information Systems programs (Cybersecurity, Digital Forensics, Networking, and Programming) must pass department placement exams or complete the following bridge course prior to enrolling in the program.
  - Bridge Course: 2440:105 Introduction to Computers and Application Software

## Computer Science, Certificate Certificate in Computer Science (346000C)

To qualify for the Computer Science Certificate Program, a student must have earned a bachelor's degree in another major program and must

submit to the department chair of Computer Science a written request for admission to the program. The request will outline the student's reasons and goals for enrolling in the program. A minimum grade-point average of 2.00 in the certificate program is required. To minimize double counting of credits among different degree programs, the elective credits earned in the certificate program cannot be counted towards any other programs (major, minor or certificate) at The University of Akron. In addition, the credits earned in the Computer Science certificate program cannot be counted towards the Computer Science Minor Program.

#### Program Contact

Tim O'Neil

Professor, Department of Computer Science

330-972-6492

toneil@uakron.edu

The following information has official approval of the **Department of Computer Science** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Computer Science" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. The credits earned in the certificate program cannot be counted towards the Computer Science minor program.

## Summary

Code	Title	Hours
Required Courses		18-19
Electives		6
Total Hours		24-25

## Required Courses

Code	Title	Hours
3450:208	Introduction to Discrete Mathematics	4
3460:209	Computer Science I	4
3460:210	Computer Science II	4
3460:316	Data Structures	3
3450:210 or 3450:221	Calculus with Business Applications Analytic Geometry-Calculus I	3-4
Total Hours		18-19

## Electives

Code	Title	Hours
<b>Select 6 credits of 300/400-Level Computer Science Electives</b>		<b>6</b>
3460:3XX	300-level Computer Science Elective	
3460:4XX	400-level Computer Science Elective	
Total Hours		6

# Computer Science, Management, BSCS

## Bachelor of Science in Computer Science, Management (346003BS)

More on the Computer Science, Management major (<https://www.uakron.edu/computer-science/academics/undergraduate-programs/bscs-management.dot>)

A variant of the Bachelor of Computer Science program tailored to learning about designing and developing systems for business information management.

The following information has official approval of **The Department of Computer Science** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Foreign Language and Upper Level Requirements		14
Preadmission Major Core Requirements		16
Computer Science - Management Core		33-35
Computer Science - Management Electives		12
Additional Credits for Graduation *		11-9
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.0 GPA is required in all major coursework.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
Quantitative Reasoning: 3 credit hours		
Speaking: 3 credit hours		
Writing: 6 credit hours		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>

Arts/Humanities: 9 credit hours

Natural Sciences: 7 credit hours

Social Sciences: 6 credit hours

### Tier III: Tagged Courses

Select one class from each of the following subcategories:

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

Review the General Education Requirements page for detailed course listings.

Total Hours 34

## Foreign Language and Upper Level Requirements

**Code Title Hours**  
Degree requirements include the demonstration of ability to use another language by completion of the second year of a foreign language. 14

### Foreign Language

101 Beginning I

102 Beginning II

201 Intermediate I

202 Intermediate II

7700:222 Survey of Deaf Culture in America (American Sign Language option only)

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Preadmission Major Core Requirements

Code	Title	Hours
3450:208	Introduction to Discrete Mathematics	4
3460:209	Computer Science I	4
3460:210	Computer Science II	4
3450:221	Analytic Geometry-Calculus I	4
Total Hours		16

## Computer Science - Management Core

Code	Title	Hours
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
3460:316	Data Structures	3
3460:435	Algorithms	3
3460:475	Database Management	3
3460:480	Software Engineering	3
3460:490	Senior Seminar in Computer Science	3
3470:401	Probability and Statistics for Engineers	2-4
or 3470:461	Applied Statistics	
4450:320	Computer Systems	3

4450:325	Operating Systems Concepts	3
or 3460:426	Operating Systems	
6500:301	Management: Principles & Concepts	3
or 6500:480	Introduction to Health-Care Management	
6500:310	Business Information Systems	3
Total Hours		33-35

<sup>1</sup> Counts as a College of Arts & Sciences upper level course.

## Computer Science - Management Electives

Code	Title	Hours
<b>Select a minimum of six credits of 3460 upper level electives</b>		<b>6</b>
3460:3xx <sup>1</sup>		
3460:4xx <sup>2</sup>		
<b>Select a minimum of six additional credits of approved 300 and/or 400 electives in Computer Science (3460) or related to Computer Science from the following pre-approved list:</b>		<b>6</b>
2440:204	WAN Technologies	
3350:405	Geographic Information Systems	
3350:407	Advanced Geographic Information Systems	
3450:312	Linear Algebra	
3450:410	Advanced Linear Algebra	
3450:415	Combinatorics & Graph Theory	
3450:427	Applied Numerical Methods I	
3450:428	Applied Numerical Methods II	
3450:430	Numerical Solutions for Partial Differential Equations	
3450:436	Mathematical Models	
3470:480	Statistical Data Management	
4450:410	Embedded Scientific Computing	
4450:415	System Simulation	
4450:420	Computer Systems Design	
4450:422	Embedded Systems Interfacing	
4450:427	Computer Networks	
4450:440	Digital Signal Processing	
4450:462	Analog Integrated Circuit Design	
4450:465	Programmable Logic	
4450:467	VLSI Circuits & Systems	
4800:420	Biomedical Signal & Image Processing	
7100:489	Special Topics in Studio Art (ST: Game Design)	
3460:3xx <sup>1</sup>		
3460:4xx <sup>2</sup>		
Total Hours		12

<sup>1</sup> Only 3 credits of 3460:395 Internship in Computer Science may count toward the Computer Science - Management Electives.

<sup>2</sup> 3460:489 Topics in Computer Science may be repeated under different topics.

## Computer Science, Minor

### Minor in Computer Science (346000M)

To qualify for the Computer Science Minor Program, a student must be in good academic standing in the major department, must have completed four credits of mathematics in the Department of Mathematics and must submit to the department chair of Computer Science a written request for admission to the program. The request will outline the student's reasons and goals for enrolling in the program. A minimum grade-point average of 2.00 in the minor is required. To minimize double counting of credits among different degree programs, the elective credits earned in the minor program cannot be counted towards any other programs (major, minor or certificate) at The University of Akron. In addition, the credits earned in the Computer Science minor program cannot be counted towards the Computer Science Certificate Program.

#### Program Contact

Tim O'Neil

Professor, Department of Computer Science

330-972-6492

toneil@uakron.edu

The following information has official approval of the **Department of Computer Science** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Computer Science" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. The credits earned in the minor program cannot be counted towards the Computer Science certificate program. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

### Summary

Code	Title	Hours
Required Courses		18-19
Electives		6
Total Hours		24-25

### Required Courses

Code	Title	Hours
3450:208	Introduction to Discrete Mathematics	4
3460:209	Computer Science I	4
3460:210	Computer Science II	4
3460:316	Data Structures	3
3450:210	Calculus with Business Applications	3-4
or 3450:221	Analytic Geometry-Calculus I	
Total Hours		18-19

### Electives

Code	Title	Hours
<b>Select 6 credits of 300/400-Level Computer Science Electives</b>		<b>6</b>
3460:3xx	300-level Computer Science Elective	

3460:4xx

400-level Computer Science Elective

Total Hours

6

## Computer Science, Systems, BSCS Bachelor of Science in Computer Science, Systems (346004BS)

More on the Computer Science, Systems major (<https://www.uakron.edu/computer-science/academics/undergraduate-programs/bscs-system.dot>)

A variant of the Bachelor of Computer Science program allowing customization of the necessary courses.

The following information has official approval of **The Department of Computer Science** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

### Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Foreign Language and Upper Level Requirements		14
Preadmission Major Core Requirements		16
Computer Science - Systems Core		30-32
Computer Science - Systems Electives		12
Additional Credits for Graduation *		14-12
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.0 GPA is required in all major coursework.

### General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		

**Tier II: Disciplinary Areas 22***Arts/Humanities: 9 credit hours**Natural Sciences: 7 credit hours**Social Sciences: 6 credit hours***Tier III: Tagged Courses***Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## Foreign Language and Upper Level Requirements

**Code Title Hours****Degree requirements include the demonstration of ability to use another language by completion of the second year of a foreign language. 14***Foreign Language*

101 Beginning I

102 Beginning II

201 Intermediate I

202 Intermediate II

7700:222 Survey of Deaf Culture in America (American Sign Language option only)

**Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:**

Upper-level (300/400) courses both in and outside of the student's major;

or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Preadmission Major Core Requirements

**Code Title Hours**

3450:208 Introduction to Discrete Mathematics 4

3460:209 Computer Science I 4

3460:210 Computer Science II 4

3450:221 Analytic Geometry-Calculus I 4

Total Hours 16

## Computer Science - Systems Core

**Code Title Hours**3450:222 Analytic Geometry-Calculus II <sup>1</sup> 4

3460:316 Data Structures 3

3460:307 Internet Systems Programming 3

3460:421 Software Design 3

3460:435 Algorithms 3

3460:480 Software Engineering 3

3460:490 Senior Seminar in Computer Science 3

3470:401 Probability and Statistics for Engineers 2-4

or 3470:461	Applied Statistics	
4450:320	Computer Systems	3
4450:325	Operating Systems Concepts	3
or 3460:426	Operating Systems	

Total Hours 30-32

<sup>1</sup> Counts as a College of Arts & Sciences upper level course.

## Computer Science - Systems Electives

**Code Title Hours****Select a minimum of nine credits of 3460 upper level electives 9**3460:3xx <sup>1</sup>3460:4xx <sup>2</sup>**Select a minimum of six additional credits of approved 300 and/or 400 electives in Computer Science (3460) or related to Computer Science from the following pre-approved list: 6**

2440:204 WAN Technologies

3350:405 Geographic Information Systems

3350:407 Advanced Geographic Information Systems

3450:312 Linear Algebra

3450:410 Advanced Linear Algebra

3450:415 Combinatorics &amp; Graph Theory

3450:427 Applied Numerical Methods I

3450:428 Applied Numerical Methods II

3450:430 Numerical Solutions for Partial Differential Equations

3450:436 Mathematical Models

3470:480 Statistical Data Management

4450:410 Embedded Scientific Computing

4450:415 System Simulation

4450:420 Computer Systems Design

4450:422 Embedded Systems Interfacing

4450:427 Computer Networks

4450:440 Digital Signal Processing

4450:462 Analog Integrated Circuit Design

4450:465 Programmable Logic

4450:467 VLSI Circuits &amp; Systems

4800:420 Biomedical Signal &amp; Image Processing

7100:489 Special Topics in Studio Art (ST: Game Design)

3460:3xx <sup>1</sup>3460:4xx <sup>2</sup>*The following course does not satisfy this requirement:*

3460:406 Introduction to C &amp; UNIX

Total Hours 15

<sup>1</sup> Only 3 credits of 3460:395 Internship in Computer Science may count toward the Computer Science - Systems Electives.<sup>2</sup> 3460:489 Topics in Computer Science may be repeated under different topics.

## Computer Security, Certificate

### Certificate in Computer Security (225002C)

The Computer Security Certificate provides an educational foundation in the policy, management, and technical aspects of computer and information security. Students explore the criminology of high technology crime, the legal aspects of information security, the investigative process, and basic digital forensic methods. In addition, students will receive technical instruction in computer hardware and networking. Individuals working in security and investigative fields that seek to enhance their technical skills and beginners with a general interest in the subject area are welcome.

This certificate may be earned independent of earning a degree.

#### Program Contact

Stanley Smith  
Polsky 318  
330-972-6950  
shsmith@uakron.edu

The following information has official approval of **The Department of Computer Science** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Computer Security" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

### Summary

Code	Title	Hours
Required Courses		21
Total Hours		21

### Required Courses

Code	Title	Hours
2235:280	Cybercrime	3
2235:281	Computer Forensic Methods	3
2440:201	Networking Basics	3
2440:202	Router and Routing Basics	3
or 2440:282	Microsoft Networking II	
2440:247	Hardware Support	3
3800:234	Computer and Information Security	3
3800:101	Introduction to Security Administration Technology	3
Total Hours		21

## Computer Security, Minor

### Minor in Computer Security (225002M)

The Computer Security Minor provides an educational foundation in the policy, management, and technical aspects of computer and information

security. Students explore the criminology of high technology crime, the legal aspects of information security, the investigative process, and basic digital forensic methods. In addition, students will receive technical instruction in computer hardware and networking. Individuals working in security and investigative fields that seek to enhance their technical skills and beginners with a general interest in the subject area are welcome.

A minor in Computer Security may only be awarded at the time a student receives a baccalaureate degree.

#### Program Contact

Stanley Smith  
Polsky 318  
330-972-6950  
shsmith@uakron.edu

The following information has official approval of **The Department of Computer Science** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Computer Security" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

### Summary

Code	Title	Hours
Required Courses		21
Total Hours		21

### Required Courses

Code	Title	Hours
2235:280	Cybercrime	3
2235:281	Computer Forensic Methods	3
2440:201	Networking Basics	3
2440:202	Router and Routing Basics	3
or 2440:282	Microsoft Networking II	
2440:247	Hardware Support	3
3800:234	Computer and Information Security	3
3800:101	Introduction to Security Administration Technology	3
Total Hours		21

## Electrical and Computer Engineering

The Department of Electrical and Computer Engineering (<https://www.uakron.edu/engineering/ECE/>) offers two undergraduate programs, leading to the Bachelor of Science in Electrical Engineering and the Bachelor of Science in Computer Engineering. The department also offers graduate programs leading to a Master of Science in Electrical Engineering, and an interdisciplinary Doctor of Philosophy in Engineering.



## 4400: Electrical Engineering

Every aspect of modern life is influenced by electrical engineers. They design and develop systems ranging from massive power grids and global communications networks to tiny integrated circuits inside computers and personal electronics. Branches of electrical engineering include communications, controls, electromagnetics, electronics, and power systems. Important applications include power generation and distribution, sustainable energy systems, manufacturing automation, aerospace systems, robotics, sensors and instrumentation, imaging systems, and many others.

The Electrical Engineering program is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org) (<http://www.abet.org>). Our comprehensive curriculum prepares students to identify, formulate, and implement solutions to real-world problems. Students learn how to use modern engineering tools in well-equipped laboratories, with activities that reinforce the concepts learned in the classroom. The curriculum emphasizes design and teamwork, and culminates in a capstone senior design project that integrates the material learned in earlier courses. The Electrical Engineering program offers two options, with and without a co-operative education component; our well-established co-op program enables students to strengthen the connections between theory and practice in a professional setting, and provides valuable industrial experience.

The program educational objectives (PEOs) for the Electrical Engineering program are that, within a few years after graduation, our Electrical Engineering graduates:

- achieve competitively compensated electrical engineering positions or related professional positions, or entry into programs of advanced study
- prove to be highly competent and productive in electrical engineering or related practice
- continue to develop professionally through both practical experience and a lifelong commitment to learning
- exhibit high standards of ethical conduct, societal responsibility, and professionalism in engineering

The Electrical Engineering program has specified these student outcomes to be achieved by the time of graduation:

- (1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- (2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- (3) an ability to communicate effectively with a range of audiences
- (4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- (5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives

(6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions

(7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

## 4450: Computer Engineering

In addition to traditional large computer applications, devices containing some form of embedded computing system are becoming pervasive in our society. Computer engineers design and develop hardware and software for all of these systems, ranging from software applications to communication networks to components in computing systems to small embedded sensors. Branches of computer engineering include operating systems, embedded systems design, digital circuits, algorithms, software design, and computer architecture among others. Important applications include wired and wireless networks, simulation, automation, digital control, sensing, robotics, “apps,” data management, and many others.

The Computer Engineering program is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org) (<http://www.abet.org>).

Our comprehensive curriculum prepares students to identify, formulate, and implement solutions to real-world problems. Students learn how to use modern engineering tools in well-equipped laboratories, with activities that reinforce the concepts learned in the classroom. The curriculum emphasizes design and teamwork, and culminates in a capstone senior design project that integrates the material learned in earlier courses. The Computer Engineering program offers two options, with and without a co-operative education component; our well-established co-op program enables students to strengthen the connections between theory and practice in a professional setting, and provides valuable industrial experience.

The program educational objectives (PEOs) for the Computer Engineering program are that, within a few years after graduation, our Computer Engineering graduates:

- achieve competitively compensated computer engineering positions or related professional positions, or entry into programs of advanced study
- prove to be highly competent and productive in computer engineering or related practice
- continue to develop professionally through both practical experience and a lifelong commitment to learning
- exhibit high standards of ethical conduct, societal responsibility, and professionalism in engineering

The Computer Engineering program has specified these student outcomes to be achieved by the time of graduation:

- (1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- (2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- (3) an ability to communicate effectively with a range of audiences
- (4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must

consider the impact of engineering solutions in global, economic, environmental, and societal contexts

(5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives

(6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions

(7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Information specific to the available program options in electrical engineering and computer engineering is available:

- Computer Engineering, BS (p. 405)
- Computer Engineering, Co-op Option, BS (p. 407)
- Electrical Engineering, BS (p. 410)
- Electrical Engineering, Co-op Option, BS (p. 413)

## Electrical Engineering (4400)

### 4400:101 Tools for Electrical Engineering (3 Credits)

Corequisite: 3450:221 or 3450:149. Orientation to degree programs and design practice in electrical and computer engineering. Introduction to computer applications and resources for engineering studies.

### 4400:230 Circuits I Laboratory (1 Credit)

Corequisite: 4400:231. Computation, computer aided circuit analysis, circuit theorem confirmation, report writing to include data analysis and reduction, introduction to electrical measurements.

### 4400:231 Circuits I (3 Credits)

Corequisite: 4400:230, 3450:223, 3650:292. DC and AC linear circuit analysis. Operational amplifier circuits. Loop and nodal analyses. Network theorems. Phasor techniques, steady-state AC power, three-phase systems.

### 4400:301 Undergraduate Research I: Electrical Engineering (1 Credit)

Prerequisites: 4400:230, 4400:231, 4400:330, 4400:332, 4450:220, [4400:101 or 4450:101] with a combined average grade of 3.0 or higher, admission to an engineering major within the College of Engineering and Polymer Science, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report.

### 4400:302 Undergraduate Research II: Electrical Engineering (1 Credit)

Prerequisites: [4400:301 or 4450:301], admission to an engineering major within the College of Engineering and Polymer Science, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report.

### 4400:303 Undergraduate Research III: Electrical Engineering (1 Credit)

Prerequisites: [4400:302 or 4450:302], admission to an engineering major within the College of Engineering and Polymer Science, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report to the department, and presentation of work in a research venue outside the department.

### 4400:304 Undergraduate Research IV: Electrical Engineering (1 Credit)

(May be repeated. May not be applied to degree requirements.)

Prerequisite: 4400:303 or 4450:303, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report.

### 4400:307 Basic Electrical Engineering (4 Credits)

Prerequisite: 3650:292; corequisite: 3450:335. Covers fundamental aspects of electrical circuits, electronics and electrical machinery. Not open to an electrical or computer engineering major.

### 4400:309 Design Project Seminar - Electrical Engineering (1 Credit)

Prerequisites: Junior standing and admission to an engineering major within the College of Engineering and Polymer Science. Pre/Corequisites: 4400:341, 4400:354, 4400:361, 4400:371, and 4400:381. Engineering capstone project selection and proposal, including preliminary technical specifications. Professional ethics. Intellectual property. Societal impact issues in engineering design.

### 4400:330 Circuits II Laboratory (1 Credit)

Corequisite: 4400:332. Computation, computer aided circuit analysis, circuit theorem confirmation, report writing to include data analysis and reduction, intermediate electrical measurements.

### 4400:332 Circuits II (3 Credits)

Prerequisite: 4400:231 with a grade of C- or better. Corequisites: 3450:335 and 4400:330. Coupled magnetic circuits. Transient and frequency domain analyses of linear circuits. Bode plots, Laplace transforms, transfer functions, resonance, passive and active filters.

### 4400:340 Signals & Systems (4 Credits)

Prerequisites: [3460:209 or 4450:208 or 4800:220], 3450:335 with a grade of C- or better, 4400:332 with a grade of C- or better, and admission to an engineering major within the College of Engineering and Polymer Science. Linear systems theory and transform analysis techniques for continuous and discrete systems. Convolutions, Laplace transforms, continuous and discrete Fourier transforms. Difference equations and Z transforms.

### 4400:341 Introduction to Communication Systems (3 Credits)

Prerequisites: 4400:340 and admission to an engineering major within the College of Engineering and Polymer Science. Introduces analog and digital communication systems and signal processing. Time-sampling and filtering. Modulation and demodulation techniques. Noise and bandwidth requirements. System design and performance analysis.

### 4400:353 Electromagnetics I (4 Credits)

Prerequisites: 4400:231 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 3450:335. Vector analysis. Electrostatics: electrostatic field, scalar potential, dielectrics, boundary-value problems. Magnetostatics: magnetic circuits. Maxwell's equations: Faraday's law, time-harmonic fields. Introduction to plane waves.

### 4400:354 Electromagnetics II (3 Credits)

Prerequisites: 4400:353 and admission to an engineering major within the College of Engineering and Polymer Science. Theory and application of transmission lines: transient and steady-state waves. Plane EM waves: propagation, reflection, and refraction. Waveguides open and closed-boundary guiding structures.

### 4400:360 Physical Electronics (3 Credits)

Prerequisites: 4400:332, 4450:220 and admission to an engineering major within the College of Engineering and Polymer Science. PN junction, diffusion, tunneling, FET and BJT device physics, equivalent circuits for electronic devices, time and frequency analysis, biasing and logic families.

### 4400:361 Electronic Design (4 Credits)

Prerequisites: 4400:340, 4400:360 and admission to an engineering major within the College of Engineering and Polymer Science. Power amplification, feedback, oscillators, linear integrated circuits, modulation and demodulation circuits.

**4400:371 Control Systems I (4 Credits)**

Prerequisites: 4400:340 and admission to an engineering major within the College of Engineering and Polymer Science. Introduction to servomechanisms and feedback. Modeling and response of feedback control systems. Stability of linear systems. Experiments include analog simulation and basic servomechanism.

**4400:381 Energy Conversion (4 Credits)**

Prerequisites: 4400:332 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4400:353. Nonelectrical to electrical energy conversions and vice versa: thermal, chemical, solar. Fundamentals of electromechanical energy conversion. Principles of operation of transformers, commutator machines, induction and synchronous machines.

**4400:401 Senior Design Project I - Electrical Engineering (3 Credits)**

Prerequisites: 4400:309, senior standing, admission to an engineering major within the College of Engineering and Polymer Science, and 4400:341, 4400:354, 4400:361, 4400:371, and 4400:381 with a combined average grade of 2.0 or higher. Design and preparation phase of an engineering team project. System specification, design, and simulations; ordering of components; subsystem implementations. Requires project presentations and report.

**Gen Ed:** Tier 3 - Critical Thinking

**4400:402 Senior Design Project II - Electrical Engineering (3 Credits)**

Prerequisite: 4400:401 and admission to an engineering major within the College of Engineering and Polymer Science. Implementation and evaluation phases of an engineering design project. Requires a project presentation and report.

**Gen Ed:** Tier 3 - Complex Systems

**4400:434 Active Circuits (3 Credits)**

Prerequisite: 4400:340. Applications of operational amplifiers including bilinear transfer functions, scaling, cascade design, biquad circuits, lowpass, high pass, bandpass-filters, Butterworth and Chebyshev response, sensitivity, delay filters, frequency transformations, ladder design, simulated element design, leapfrog simulation and switched-capacitors.

**4400:441 Digital Communication (3 Credits)**

Prerequisite: 4400:341 or 4450:440. Introduction to digital communications theory and systems. Sampling, formatting and baseband communications. Digital modulation techniques and optimal receivers. Error performance analysis. Error control.

**4400:445 Wireless Communications (3 Credits)**

Prerequisite: 4400:341 or 4450:440. Theory and analysis of wireless communication systems, wireless propagation, multiple access, modulation, demodulation, multipath channel characterization, diversity, cellular and PCS services and standards.

**4400:447 Random Signals (3 Credits)**

Prerequisite: 4400:340. Applications of set theory, discrete and continuous sample spaces; probability, random variables, distribution functions, density functions, stochastic processes, random signals, system function, power spectrum and correlation functions.

**4400:448 Optical Communication Networks (3 Credits)**

Prerequisites: 4400:360. Optical waveguides and integrated components. Optical transmitters and receivers. Optical communications network design.

**4400:451 Electromagnetic Compatibility (3 Credits)**

Prerequisite: 4400:360. Introduction to electromagnetics, electromagnetic compatibility, crosstalk and effects on computers, communication lines and systems.

**4400:453 Antenna Theory (3 Credits)**

Prerequisite: 4400:354. Theory of EM radiation. Wire antennas, arrays, receiving antennas, reciprocity. Integral equations for induced currents, self and mutual impedances. Equivalence principle, radiation from aperture antennas.

**4400:455 Microwaves (4 Credits)**

Prerequisite: 4400:354. Dynamic fields, Maxwell's equation and wave equations. Field analysis of wave guides, microwave components, techniques and systems.

**4400:461 Optical Electronics & Photonic Devices (3 Credits)**

Prerequisites: 4400:360. Lightwave engineering, photonic principles and optical electronic device technology.

**4400:469 Introduction to Sensors and Actuators (3 Credits)**

Prerequisite: senior standing or permission. Introduction to the theory and practice of sensors and actuators; sensing and actuation technologies; performance, and interfacing.

**4400:472 Control Systems II (4 Credits)**

Prerequisite: 4400:371. Sampled-data control system analysis and design. Discrete-time representation of sampled-data systems. Cascade, feedforward and state-variable compensation techniques. Digital computer implementation.

**4400:481 Modern Power Systems (3 Credits)**

Prerequisite: 4400:381. Introduction to electricity utility load flow, faulty analysis, stability, surge protection and relaying.

**4400:483 Power Electronics I (3 Credits)**

Prerequisite: 4400:360. Steady-state analysis and design of power electronic converters: AC/DC converters (rectifiers), DC/DC converters, DC/AC PWM and resonant converters, AC/AC converters and cycloconverters.

**4400:484 Power Electronics Laboratory & Design Project (2 Credits)**

Prerequisite: 4400:483, 4400:583 or equivalent. Experiments on different types of power electronic converters: AC/DC, DC/DC, DC/AC, and AC/AC. Design project to include design, simulation, building, and testing of a power electronic circuit.

**4400:485 Electric Motor Drives (3 Credits)**

Prerequisite: 4400:381. Application of electric machines, choice of motor for particular drive. Application of power semiconductor circuits in electric machinery.

**4400:486 Dynamics of Electric Machines (3 Credits)**

See department for course description.

**4400:487 Electromagnetic Design of Electric Machines (3 Credits)**

See department for course description.

**4400:488 Control of Machines (4 Credits)**

See department for course description.

**4400:489 Electric and Hybrid Vehicles (3 Credits)**

Prerequisite: 4400:381. Basic principles of electric and hybrid vehicles. Characteristics of electric machines, internal combustion engines, transmissions, batteries, fuel cells, ultracapacitors. Vehicle control strategies, communication networks, and overall system integration.

**4400:498 Special Topics: Electrical Engineering (1-3 Credits)**

(May be taken more than once) Prerequisite: Permission of department chair. Special topics in electrical engineering.

## Computer Engineering (4450)

### 4450:101 Tools for Computer Engineering (3 Credits)

Corequisite: 3450:221 or 3450:149. Orientation to degree programs and design practice in electrical and computer engineering. Introduction to computer applications and resources for engineering studies.

### 4450:208 Programming for Engineers (3 Credits)

Prerequisite: 4400:101 or permission. Introduction to programming. Environment and tools. C programming language. Machine level data forms and organization.

### 4450:220 Digital Logic Design (4 Credits)

Corequisites: 4400:101 or 4450:101 or 4800:101. Boolean algebra and simplification of logic functions. Combinational and synchronous sequential circuits. Laboratory projects include design of digital systems with hardware description language and simulation.

### 4450:301 Undergraduate Research I: Computer Engineering (1 Credit)

Prerequisites: completion of [4400:101 or 4450:101], 4400:230, 4400:231, 4400:330, 4400:332 and 4450:220 with a combined average grade of 3.0 or higher, admission to an engineering major within the College of Engineering and Polymer Science, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report.

### 4450:302 Undergraduate Research II: Computer Engineering (1 Credit)

Prerequisites: [4400:301 or 4450:301], admission to an engineering major within the College of Engineering and Polymer Science, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report.

### 4450:303 Undergraduate Research III: Computer Engineering (1 Credit)

Prerequisites: [4400:302 or 4450:302], admission to an engineering major within the College of Engineering and Polymer Science, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report to the department, and presentation of work in a research venue outside the department.

### 4450:304 Undergraduate Research IV: Computer Engineering (1 Credit)

(May be repeated. May not be applied to degree requirements.) Prerequisite: 4450:303 or 4400:303, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report.

### 4450:309 Design Project Seminar - Computer Engineering (1 Credit)

Prerequisites: Junior standing and admission to an engineering major within the College of Engineering and Polymer Science. Pre/Corequisites: [3460:426 or 4450:325], 4450:367, [4450:420 or 4450:427], 4450:422, and 4450:440. Engineering capstone project selection and proposal, including preliminary technical specifications. Professional ethics. Intellectual property. Societal impact issues in engineering design.

### 4450:320 Computer Systems (3 Credits)

Prerequisite: 3460:209 or 4450:208, 4450:220 or 3450:208. Introduces the design and architecture of modern computer systems. Data and instruction representation. Conventional computer organization. Hardware and software design processes. The hardware/software interface.

### 4450:325 Operating Systems Concepts (3 Credits)

Prerequisites: 4450:320, 3460:210. Processes and threads. Process communication and resource sharing. Deadlock resolution. Memory management. File systems. Introduction to network operating systems.

### 4450:367 VLSI Design (3 Credits)

Prerequisites: 4400:360 and admission to an engineering major within the College of Engineering and Polymer Science. Digital logic circuits. Very large scale integration (VLSI) fabrication processes and layout design. Delay and power of digital circuits. Latches and flip-flops in VLSI. Memory design. System-level design issues. Design project.

### 4450:401 Senior Design Project I - Computer Engineering (3 Credits)

Prerequisites: 4450:309, senior standing, admission to the College of Engineering, and completion of [3460:426 or 4450:325], 4450:367, [4450:420 or 4450:427], 4450:422, and 4450:440 with a combined average grade of 2.0 or higher. Design and preparation phase of an engineering team project. System specification, design, and simulations; ordering of components; subsystem implementations. Requires project presentations and report.

**Gen Ed:** Tier 3 - Critical Thinking

### 4450:402 Senior Design Project II - Computer Engineering (3 Credits)

Prerequisites: 4450:401 and admission to an engineering major within the College of Engineering and Polymer Science. Implementation and evaluation phases of an engineering design project. Requires a project presentation and report.

**Gen Ed:** Tier 3 - Complex Systems

### 4450:410 Embedded Scientific Computing (3 Credits)

Prerequisites: 4450:208 or 3460:209 and 4400:340. Fixed point, floating point representation and coding. Processor/DSP implementations. Assemblers, C language semantics. Adapting scientific library routines for embedded use. Minimizing complexity. Ill-conditioned problems.

### 4450:415 System Simulation (3 Credits)

Prerequisite: 4400:371 or 4450:440. Computer simulation of dynamic systems. Discrete system stability, linear multistep and Runge-Kutta methods, nonlinear systems, stiff systems, distributed systems and real-time computing.

### 4450:420 Computer Systems Design (3 Credits)

Prerequisite: 4450:320. Design of advanced processors at the microarchitecture level. Pipelining. Superscalar, vector and VLIW architectures. Instruction-level parallelism. Compiler support. Multiprocessor architectures.

### 4450:422 Embedded Systems Interfacing (3 Credits)

Prerequisites: [3460:209 or 4450:208] and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4400:360. Microcontroller structures and embedded peripherals. Interfaces to physical environments. Software access to peripherals including timers, ADCs and DACs. Synchronous and asynchronous communications. Interrupts. Real-time operating systems.

### 4450:427 Computer Networks (3 Credits)

Prerequisite: 4450:320; 4450:325 or 3460:426. Network architecture and protocol layering. Network design principles, communication protocols, and performance measures. Socket programming, routing, error detection and correction, access control, multimedia networking.

### 4450:440 Digital Signal Processing (3 Credits)

Prerequisites: 4400:340 and admission to an engineering major within the College of Engineering and Polymer Science. Signal sampling and reconstruction; data-converter models. Unilateral and bilateral z transforms. Discrete Fourier Transform (DFT); Fast Fourier Transform (FFT). Digital filter structures and design methods.

### 4450:462 Analog Integrated Circuit Design (3 Credits)

Prerequisite: 4400:360. CMOS processes and layout; amplifiers, current mirrors, and comparators; current, voltage, and bandgap references; switched capacitor circuits. Frequency and noise analysis techniques.

**4450:465 Programmable Logic (3 Credits)**

Prerequisite: 4450:220, 3460:209 or 4450:208. Digital design with programmable devices. PLD and FPGA architectures. Logic design and technology mapping tools.

**4450:467 VLSI Circuits & Systems (3 Credits)**

Prerequisite: 4450:367. High performance adders and multipliers for very large scale integration (VLSI) systems. Architectural synthesis. Design for high performance, low power, and testability.

**4450:498 Special Topics: Computer Engineering (1-3 Credits)**

(May be taken more than once) Prerequisite: Permission of department chair. Special topics in computer engineering.

## Computer Engineering, BS

### Bachelor of Science in Computer Engineering (without Co-op, 445000BS)

This option of the undergraduate program in Computer Engineering does not include a cooperative education component.

The following information has official approval of the **Department of Electrical and Computer Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33) *	28
	Science	12
	Mathematics and Statistics	21
	Computer Science	8
	Electrical Engineering	15
	Computer Engineering	28
	Capstone Design Project	7
	Computer Engineering Electives	18
	<b>Total Hours</b>	<b>137</b>

\* Several courses required for the major also satisfy General Education requirements. The University minimum of 34 credits are required for General Education and credit for these courses will apply to both.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
<b>Total Hours</b>		<b>34</b>

## Science

Code	Title	Hours
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
<b>Total Hours</b>		<b>12</b>

## Mathematics and Statistics

Code	Title	Hours
3450:208	Introduction to Discrete Mathematics	4
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:335	Introduction to Ordinary Differential Equations	3
3470:401	Probability and Statistics for Engineers	2
<b>Total Hours</b>		<b>21</b>

## Computer Science

Code	Title	Hours
3460:209	Computer Science I	4
3460:210	Computer Science II	4
<b>Total Hours</b>		<b>8</b>

## Electrical Engineering

Code	Title	Hours
4400:230	Circuits I Laboratory	1
4400:231	Circuits I	3
4400:330	Circuits II Laboratory	1
4400:332	Circuits II	3
4400:340	Signals & Systems	4
4400:360	Physical Electronics	3
Total Hours		15

## Computer Engineering

Code	Title	Hours
4450:101	Tools for Computer Engineering	3
4450:220	Digital Logic Design	4
4450:320	Computer Systems	3
4450:325	Operating Systems Concepts	3
or 3460:426	Operating Systems	
4450:367	VLSI Design	3
4450:420	Computer Systems Design	3
4450:422	Embedded Systems Interfacing	3
4450:427	Computer Networks	3
4450:440	Digital Signal Processing	3
Total Hours		28

## Capstone Design Project

Code	Title	Hours
4450:309	Design Project Seminar - Computer Engineering	1
4450:401	Senior Design Project I - Computer Engineering	3
4450:402	Senior Design Project II - Computer Engineering	3
Total Hours		7

## Computer Engineering Electives

Code	Title	Hours
<b>Select 18 credits from the following list, according to departmental Breadth and Depth requirements, and with at least 9 credits from the 4400 or 4450 subject areas:</b>		
4450:301	Undergraduate Research I: Computer Engineering	
4450:302	Undergraduate Research II: Computer Engineering	
4450:303	Undergraduate Research III: Computer Engineering	
4450:410	Embedded Scientific Computing	
4450:415	System Simulation	
4450:462	Analog Integrated Circuit Design	
4450:465	Programmable Logic	
4450:467	VLSI Circuits & Systems	
4450:498	Special Topics: Computer Engineering	
4400:341	Introduction to Communication Systems	
4400:353	Electromagnetics I	
4400:354	Electromagnetics II	
4400:361	Electronic Design	
4400:371	Control Systems I	
4400:381	Energy Conversion	

4400:434	Active Circuits	
4400:441	Digital Communication	
4400:445	Wireless Communications	
4400:447	Random Signals	
4400:448	Optical Communication Networks	
4400:451	Electromagnetic Compatibility	
4400:453	Antenna Theory	
4400:455	Microwaves	
4400:461	Optical Electronics & Photonic Devices	
4400:469	Introduction to Sensors and Actuators	
4400:472	Control Systems II	
4400:481	Modern Power Systems	
4400:483	Power Electronics I	
4400:485	Electric Motor Drives	
4400:486	Dynamics of Electric Machines	
4400:487	Electromagnetic Design of Electric Machines	
4400:488	Control of Machines	
4400:489	Electric and Hybrid Vehicles	
3450:427	Applied Numerical Methods I	
3450:428	Applied Numerical Methods II	
3460:316	Data Structures	
3460:421	Software Design	
3460:435	Algorithms	
3460:440	Compiler Design	
3460:453	Computer Security	
3460:457	Computer Graphics	
3460:460	Artificial Intelligence & Heuristic Programming	
3460:475	Database Management	
3460:477	Introduction to Parallel Processing	
Total Hours		18

## Recommended Sequence

1st Year		
Fall Semester		Hours
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4450:101	Tools for Computer Engineering	3
Hours		14
Spring Semester		
3300:112	English Composition II <sup>1,5</sup>	3
3450:208	Introduction to Discrete Mathematics	4
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4450:220	Digital Logic Design	4
Hours		19
2nd Year		
Fall Semester		
3460:209	Computer Science I	4
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:292	Elementary Classical Physics II <sup>1</sup>	4

4400:230	Circuits I Laboratory	1
4400:231	Circuits I	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	19

**Spring Semester**

3460:210	Computer Science II	4
3450:335	Introduction to Ordinary Differential Equations	3
4400:330	Circuits II Laboratory	1
4400:332	Circuits II	3
4450:320	Computer Systems	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	17

**3rd Year****Fall Semester**

4400:340	Signals & Systems	4
4400:360	Physical Electronics	3
4450:325 or 3460:426	Operating Systems Concepts or Operating Systems	3
4450:422	Embedded Systems Interfacing	3
	General Education or Honors Distribution <sup>4</sup>	3
4450:301	Undergraduate Research I: Computer Engineering (Optional)	
	Hours	16

**Spring Semester**

4450:309	Design Project Seminar - Computer Engineering	1
4450:367	VLSI Design	3
4450:420	Computer Systems Design	3
4450:427	Computer Networks	3
4450:440	Digital Signal Processing	3
4450:302	Undergraduate Research II: Computer Engineering (Optional)	
	Hours	13

**Summer Semester**

3470:401	Probability and Statistics for Engineers	2
	General Education or Honors Distribution <sup>4</sup>	3
4450:302	Undergraduate Research II: Computer Engineering (Optional)	
	Hours	5

**4th Year****Fall Semester**

4450:401	Senior Design Project I - Computer Engineering	3
	Computer Engineering Elective	3
	Computer Engineering Elective	3
	Computer Engineering Elective	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	15

**Spring Semester**

4450:402	Senior Design Project II - Computer Engineering	3
	Computer Engineering Elective	3

Computer Engineering Elective	3
Computer Engineering Elective	3
General Education or Honors Distribution <sup>4</sup>	3
General Electives	4
Hours	19
Total Hours	137

- Honors sections may be available; check the schedule of classes.
- The Electrical and Computer Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.
- Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.
- Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.
- While 3300:112 English Composition II is preferred, 2020:222 Technical Report Writing is accepted to fulfill the English composition elective.

**Notes:**

- Up to three credits of undergraduate research in Computer Engineering may be applied to program requirements as Computer Engineering Electives. Students may take at most one credit of undergraduate research in a semester.
- See Electrical and Computer Engineering Departmental Office for Approved Computer Engineering Electives (including Breadth and Depth requirements)

## Computer Engineering, Co-op Option, BS

### Bachelor of Science in Computer Engineering with Co-op (445005BS)

This option of the undergraduate program in Computer Engineering includes a cooperative education component.

The following information has official approval of the **Department of Electrical and Computer Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33) *		28
Science		12
Mathematics and Statistics		21
Computer Science		8
Electrical Engineering		15
Computer Engineering		28
Capstone Design Project		7
Computer Engineering Electives		18
Total Hours		137

\* Several courses required for the major also satisfy General Education requirements. The University minimum of 34 credits are required for General Education and credit for these courses will apply to both.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## Science

Code	Title	Hours
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
Total Hours		12

## Mathematics and Statistics

Code	Title	Hours
3450:208	Introduction to Discrete Mathematics	4
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:335	Introduction to Ordinary Differential Equations	3
3470:401	Probability and Statistics for Engineers	2
Total Hours		21

## Computer Science

Code	Title	Hours
3460:209	Computer Science I	4
3460:210	Computer Science II	4
Total Hours		8

## Electrical Engineering

Code	Title	Hours
4400:230	Circuits I Laboratory	1
4400:231	Circuits I	3
4400:330	Circuits II Laboratory	1
4400:332	Circuits II	3
4400:340	Signals & Systems	4
4400:360	Physical Electronics	3
Total Hours		15

## Computer Engineering

Code	Title	Hours
4450:101	Tools for Computer Engineering	3
4450:220	Digital Logic Design	4
4450:320	Computer Systems	3
4450:325	Operating Systems Concepts	3
or 3460:426	Operating Systems	
4450:367	VLSI Design	3
4450:420	Computer Systems Design	3
4450:422	Embedded Systems Interfacing	3
4450:427	Computer Networks	3
4450:440	Digital Signal Processing	3
Total Hours		28

## Capstone Design Project

Code	Title	Hours
4450:309	Design Project Seminar - Computer Engineering	1
4450:401	Senior Design Project I - Computer Engineering	3
4450:402	Senior Design Project II - Computer Engineering	3
Total Hours		7



## Computer Engineering Electives

Code	Title	Hours
<b>Select 18 credits from the following list, according to departmental Breadth and Depth requirements, and with at least 9 credits from the 4400 or 4450 subject areas:</b>		
4450:301	Undergraduate Research I: Computer Engineering	18
4450:302	Undergraduate Research II: Computer Engineering	
4450:303	Undergraduate Research III: Computer Engineering	
4450:410	Embedded Scientific Computing	
4450:415	System Simulation	
4450:462	Analog Integrated Circuit Design	
4450:465	Programmable Logic	
4450:467	VLSI Circuits & Systems	
4450:498	Special Topics: Computer Engineering	
4400:341	Introduction to Communication Systems	
4400:353	Electromagnetics I	
4400:354	Electromagnetics II	
4400:361	Electronic Design	
4400:371	Control Systems I	
4400:381	Energy Conversion	
4400:434	Active Circuits	
4400:441	Digital Communication	
4400:445	Wireless Communications	
4400:447	Random Signals	
4400:448	Optical Communication Networks	
4400:451	Electromagnetic Compatibility	
4400:453	Antenna Theory	
4400:455	Microwaves	
4400:461	Optical Electronics & Photonic Devices	
4400:469	Introduction to Sensors and Actuators	
4400:472	Control Systems II	
4400:481	Modern Power Systems	
4400:483	Power Electronics I	
4400:485	Electric Motor Drives	
4400:486	Dynamics of Electric Machines	
4400:487	Electromagnetic Design of Electric Machines	
4400:488	Control of Machines	
4400:489	Electric and Hybrid Vehicles	
3450:427	Applied Numerical Methods I	
3450:428	Applied Numerical Methods II	
3460:316	Data Structures	
3460:421	Software Design	
3460:435	Algorithms	
3460:440	Compiler Design	
3460:453	Computer Security	
3460:457	Computer Graphics	
3460:460	Artificial Intelligence & Heuristic Programming	
3460:475	Database Management	
3460:477	Introduction to Parallel Processing	
<b>Total Hours</b>		<b>18</b>

## Recommended Sequence

1st Year		Hours
<b>Fall Semester</b>		
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4450:101	Tools for Computer Engineering	3
Hours		14
<b>Spring Semester</b>		
3300:112	English Composition II <sup>1,5</sup>	3
3450:208	Introduction to Discrete Mathematics	4
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4450:220	Digital Logic Design	4
Hours		19
<b>2nd Year</b>		
<b>Fall Semester</b>		
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3460:209	Computer Science I	4
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4400:230	Circuits I Laboratory	1
4400:231	Circuits I	3
General Education or Honors Distribution <sup>4</sup>		3
Hours		19
<b>Spring Semester</b>		
3450:335	Introduction to Ordinary Differential Equations	3
3460:210	Computer Science II	4
4400:330	Circuits II Laboratory	1
4400:332	Circuits II	3
4450:320	Computer Systems	3
General Education or Honors Distribution <sup>4</sup>		3
Hours		17
<b>Summer Semester</b>		
4100:300	Cooperative Education Work Period (Possible)	0
Hours		0
<b>3rd Year</b>		
<b>Fall Semester</b>		
4400:340	Signals & Systems	4
4400:360	Physical Electronics	3
4450:325	Operating Systems Concepts or 3460:426 or Operating Systems	3
4450:422	Embedded Systems Interfacing	3
General Education or Honors Distribution <sup>4</sup>		3
4450:301	Undergraduate Research I: Computer Engineering (Optional)	
Hours		16
<b>Spring Semester</b>		
4100:301	Cooperative Education Work Period	0
Hours		0

**Summer Semester**

3470:401	Probability and Statistics for Engineers	2
	General Education or Honors Distribution <sup>4</sup>	3
4450:302	Undergraduate Research II: Computer Engineering (Optional)	
	Hours	5

**4th Year****Fall Semester**

4100:302	Cooperative Education Work Period	0
	Hours	0

**Spring Semester**

4450:309	Design Project Seminar - Computer Engineering	1
4450:367	VLSI Design	3
4450:420	Computer Systems Design	3
4450:427	Computer Networks	3
4450:440	Digital Signal Processing	3
4450:303	Undergraduate Research III: Computer Engineering (Optional)	
	Hours	13

**Summer Semester**

4100:403	Cooperative Education Work Period	0
	Hours	0

**5th Year****Fall Semester**

4450:401	Senior Design Project I - Computer Engineering	3
	Computer Engineering Elective	3
	Computer Engineering Elective	3
	Computer Engineering Elective	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	15

**Spring Semester**

4450:402	Senior Design Project II - Computer Engineering	3
	Computer Engineering Elective	3
	Computer Engineering Elective	3
	Computer Engineering Elective	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Electives	4
	Hours	19
	Total Hours	137

<sup>1</sup> Honors sections may be available; check the schedule of classes.

<sup>2</sup> The Electrical and Computer Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.

<sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.

<sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.

<sup>5</sup> While 3300:112 English Composition II is preferred, 2020:222 Technical Report Writing is accepted to fulfill the English composition elective.

**Notes:**

- Up to three credits of undergraduate research in Computer Engineering may be applied to program requirements as Computer Engineering Electives. Students may take at most one credit of undergraduate research in a semester.
- See Electrical and Computer Engineering Departmental Office for Approved Computer Engineering Electives (including Breadth and Depth requirements)

## Electrical Engineering, BS

### Bachelor of Science in Electrical Engineering (without Co-op, 440000BS)

This option of the undergraduate program in Electrical Engineering does not include a cooperative education component.

The following information has official approval of the **Department of Electrical and Computer Engineering and The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33) *	28
	Science	12
	Mathematics and Statistics	17
	General Engineering	8
	Computer Engineering	7
	Electrical Engineering	40
	Capstone Design Project	7
	Electrical Engineering Electives	18
	Total Hours	137

\* Several courses required for the major also satisfy General Education requirements. The University minimum of 34 credits are required for General Education and credit for these courses will apply to both.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## Science

Code	Title	Hours
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
Total Hours		12

## Mathematics and Statistics

Code	Title	Hours
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:335	Introduction to Ordinary Differential Equations	3
3470:401	Probability and Statistics for Engineers	2
Total Hours		17

## General Engineering

Code	Title	Hours
4300:201	Statics	3
4300:202	Introduction to Mechanics of Solids	3
or 4600:203	Dynamics	
4200:305	Materials Science	2

or 4600:305	Thermal Science	
Total Hours		8

## Computer Engineering

Code	Title	Hours
4450:208	Programming for Engineers	3
4450:220	Digital Logic Design	4
Total Hours		7

## Electrical Engineering

Code	Title	Hours
4400:101	Tools for Electrical Engineering	3
4400:230	Circuits I Laboratory	1
4400:231	Circuits I	3
4400:330	Circuits II Laboratory	1
4400:332	Circuits II	3
4400:340	Signals & Systems	4
4400:341	Introduction to Communication Systems	3
4400:353	Electromagnetics I	4
4400:354	Electromagnetics II	3
4400:360	Physical Electronics	3
4400:361	Electronic Design	4
4400:371	Control Systems I	4
4400:381	Energy Conversion	4
Total Hours		40

## Capstone Design Project

Code	Title	Hours
4400:309	Design Project Seminar - Electrical Engineering	1
4400:401	Senior Design Project I - Electrical Engineering	3
4400:402	Senior Design Project II - Electrical Engineering	3
Total Hours		7

## Electrical Engineering Electives

Code	Title	Hours
<b>Select 18 credits from the following list, according to departmental Breadth and Depth requirements:</b>		
4400:301	Undergraduate Research I: Electrical Engineering	
4400:302	Undergraduate Research II: Electrical Engineering	
4400:303	Undergraduate Research III: Electrical Engineering	
4400:434	Active Circuits	
4400:441	Digital Communication	
4400:445	Wireless Communications	
4400:447	Random Signals	
4400:448	Optical Communication Networks	
4400:451	Electromagnetic Compatibility	
4400:453	Antenna Theory	
4400:455	Microwaves	
4400:461	Optical Electronics & Photonic Devices	
4400:469	Introduction to Sensors and Actuators	
4400:472	Control Systems II	

4400:481	Modern Power Systems	
4400:483	Power Electronics I	
4400:485	Electric Motor Drives	
4400:486	Dynamics of Electric Machines	
4400:487	Electromagnetic Design of Electric Machines	
4400:488	Control of Machines	
4400:489	Electric and Hybrid Vehicles	
4400:498	Special Topics: Electrical Engineering	
4450:320	Computer Systems	
4450:325	Operating Systems Concepts	
4450:367	VLSI Design	
4450:410	Embedded Scientific Computing	
4450:415	System Simulation	
4450:420	Computer Systems Design	
4450:422	Embedded Systems Interfacing	
4450:427	Computer Networks	
4450:440	Digital Signal Processing	
4450:462	Analog Integrated Circuit Design	
4450:465	Programmable Logic	
4450:467	VLSI Circuits & Systems	
Total Hours		18

## Recommended Sequence

### 1st Year

Fall Semester		Hours
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4400:101	Tools for Electrical Engineering	3
Hours		14

### Spring Semester

3300:112	English Composition II <sup>1,5</sup>	3
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4450:220	Digital Logic Design	4
	General Education or Honors Distribution <sup>4</sup>	3
Hours		18

### 2nd Year

Fall Semester		Hours
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4400:230	Circuits I Laboratory	1
4400:231	Circuits I	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Education or Honors Distribution <sup>4</sup>	3
Hours		18

### Spring Semester

3450:335	Introduction to Ordinary Differential Equations	3
4300:201	Statics <sup>1</sup>	3
4400:330	Circuits II Laboratory	1

4400:332	Circuits II	3
4450:208	Programming for Engineers	3
	General Education or Honors Distribution <sup>4</sup>	3
Hours		16

### 3rd Year

#### Fall Semester

4300:202	Introduction to Mechanics of Solids	3
or 4600:203	or Dynamics	
4400:340	Signals & Systems	4
4400:353	Electromagnetics I	4
4400:360	Physical Electronics	3
4400:381	Energy Conversion	4
4400:301	Undergraduate Research I: Electrical Engineering (Optional)	
Hours		18

#### Spring Semester

4400:309	Design Project Seminar - Electrical Engineering	1
4400:341	Introduction to Communication Systems	3
4400:354	Electromagnetics II	3
4400:361	Electronic Design	4
4400:371	Control Systems I	4
4400:302	Undergraduate Research II: Electrical Engineering (Optional)	
Hours		15

#### Summer Semester

3470:401	Probability and Statistics for Engineers	2
4200:305	Materials Science	2
or 4600:305	or Thermal Science	
4400:303	Undergraduate Research III: Electrical Engineering (Optional)	
Hours		4

### 4th Year

#### Fall Semester

4400:401	Senior Design Project I - Electrical Engineering	3
	Electrical Engineering Elective	3
	Electrical Engineering Elective	3
	Electrical Engineering Elective	3
	General Education or Honors Distribution <sup>4</sup>	3
Hours		15

#### Spring Semester

4400:402	Senior Design Project II - Electrical Engineering	3
	Electrical Engineering Elective	3
	Electrical Engineering Elective	3
	Electrical Engineering Elective	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Electives	4
Hours		19

Total Hours 137

- <sup>1</sup> Honors sections may be available; check the schedule of classes.
- <sup>2</sup> The Electrical and Computer Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.
- <sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.
- <sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.
- <sup>5</sup> While 3300:112 English Composition II is preferred, 2020:222 Technical Report Writing is accepted to fulfill the English composition elective.

**Notes:**

- Up to three credits of undergraduate research in Electrical Engineering may be applied to program requirements as Electrical Engineering Electives. Students may take at most one credit of undergraduate research in a semester.
- See Electrical and Computer Engineering Departmental Office for Approved Electrical Engineering Electives (including Breadth and Depth requirements)

## Electrical Engineering, Co-op Option, BS

### Bachelor of Science in Electrical Engineering with Co-op (440005BS)

This option of the undergraduate program in Electrical Engineering includes a cooperative education component.

The following information has official approval of the **Department of Electrical and Computer Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33) *	28
	Science	12
	Mathematics and Statistics	17
	General Engineering	8
	Computer Engineering	7

Electrical Engineering	40
Capstone Design Project	7
Electrical Engineering Electives	18
<b>Total Hours</b>	<b>137</b>

\* Several courses required for the major also satisfy General Education requirements. The University minimum of 34 credits are required for General Education and credit for these courses will apply to both.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
<b>Total Hours</b>		<b>34</b>

## Science

Code	Title	Hours
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
<b>Total Hours</b>		<b>12</b>

## Mathematics and Statistics

Code	Title	Hours
3450:221	Analytic Geometry-Calculus I	4
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3450:335	Introduction to Ordinary Differential Equations	3
3470:401	Probability and Statistics for Engineers	2
<b>Total Hours</b>		<b>17</b>

## General Engineering

Code	Title	Hours
4300:201	Statics	3
4300:202	Introduction to Mechanics of Solids	3
or 4600:203	Dynamics	
4200:305	Materials Science	2
or 4600:305	Thermal Science	
Total Hours		8

## Computer Engineering

Code	Title	Hours
4450:208	Programming for Engineers	3
4450:220	Digital Logic Design	4
Total Hours		7

## Electrical Engineering

Code	Title	Hours
4400:101	Tools for Electrical Engineering	3
4400:230	Circuits I Laboratory	1
4400:231	Circuits I	3
4400:330	Circuits II Laboratory	1
4400:332	Circuits II	3
4400:340	Signals & Systems	4
4400:341	Introduction to Communication Systems	3
4400:353	Electromagnetics I	4
4400:354	Electromagnetics II	3
4400:360	Physical Electronics	3
4400:361	Electronic Design	4
4400:371	Control Systems I	4
4400:381	Energy Conversion	4
Total Hours		40

## Capstone Design Project

Code	Title	Hours
4400:309	Design Project Seminar - Electrical Engineering	1
4400:401	Senior Design Project I - Electrical Engineering	3
4400:402	Senior Design Project II - Electrical Engineering	3
Total Hours		7

Code	Title	Hours
<b>Select 18 credits from the following list, according to departmental Breadth and Depth requirements:</b>		<b>18</b>

4400:301	Undergraduate Research I: Electrical Engineering	
4400:302	Undergraduate Research II: Electrical Engineering	
4400:303	Undergraduate Research III: Electrical Engineering	
4400:434	Active Circuits	
4400:441	Digital Communication	
4400:445	Wireless Communications	
4400:447	Random Signals	
4400:448	Optical Communication Networks	
4400:451	Electromagnetic Compatibility	

4400:453	Antenna Theory	
4400:455	Microwaves	
4400:461	Optical Electronics & Photonic Devices	
4400:469	Introduction to Sensors and Actuators	
4400:472	Control Systems II	
4400:481	Modern Power Systems	
4400:483	Power Electronics I	
4400:485	Electric Motor Drives	
4400:486	Dynamics of Electric Machines	
4400:487	Electromagnetic Design of Electric Machines	
4400:488	Control of Machines	
4400:489	Electric and Hybrid Vehicles	
4400:498	Special Topics: Electrical Engineering	
4450:320	Computer Systems	
4450:325	Operating Systems Concepts	
4450:367	VLSI Design	
4450:410	Embedded Scientific Computing	
4450:415	System Simulation	
4450:420	Computer Systems Design	
4450:422	Embedded Systems Interfacing	
4450:427	Computer Networks	
4450:440	Digital Signal Processing	
4450:462	Analog Integrated Circuit Design	
4450:465	Programmable Logic	
4450:467	VLSI Circuits & Systems	
Total Hours		18

## Recommended Sequence

1st Year		Hours
Fall Semester		
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4400:101	Tools for Electrical Engineering	3
Hours		14
Spring Semester		
3300:112	English Composition II <sup>1,5</sup>	3
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4450:220	Digital Logic Design	4
General Education or Honors Distribution <sup>4</sup>		3
Hours		18
2nd Year		
Fall Semester		
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4400:230	Circuits I Laboratory	1
4400:231	Circuits I	3
General Education or Honors Distribution <sup>4</sup>		3
General Education or Honors Distribution <sup>4</sup>		3
Hours		18

**Spring Semester**

3450:335	Introduction to Ordinary Differential Equations	3
4300:201	Statics	3
4400:330	Circuits II Laboratory	1
4400:332	Circuits II	3
4450:208	Programming for Engineers	3
	General Education or Honors Distribution <sup>4</sup>	3
Hours		16

**Summer Semester**

4100:300	Cooperative Education Work Period (Possible)	0
Hours		0

**3rd Year**

**Fall Semester**

4300:202 or 4600:203	Introduction to Mechanics of Solids or Dynamics	3
4400:340	Signals & Systems	4
4400:353	Electromagnetics I	4
4400:360	Physical Electronics	3
4400:381	Energy Conversion	4
4400:301	Undergraduate Research I: Electrical Engineering (Optional)	
Hours		18

**Spring Semester**

4100:301	Cooperative Education Work Period	0
Hours		0

**Summer Semester**

3470:401	Probability and Statistics for Engineers	2
4200:305 or 4600:305	Materials Science or Thermal Science	2
4400:302	Undergraduate Research II: Electrical Engineering (Optional)	
Hours		4

**4th Year**

**Fall Semester**

4100:302	Cooperative Education Work Period	0
Hours		0

**Spring Semester**

4450:309	Design Project Seminar - Computer Engineering	1
4400:341	Introduction to Communication Systems	3
4400:354	Electromagnetics II	3
4400:361	Electronic Design	4
4400:371	Control Systems I	4
4400:303	Undergraduate Research III: Electrical Engineering (Optional)	
Hours		15

**Summer Semester**

4100:403	Cooperative Education Work Period	0
Hours		0

**5th Year**

**Fall Semester**

4400:401	Senior Design Project I - Electrical Engineering	3
	Electrical Engineering Elective	3
	Electrical Engineering Elective	3
	Electrical Engineering Elective	3
	General Education or Honors Distribution <sup>4</sup>	3
Hours		15

**Spring Semester**

4400:402	Senior Design Project II - Electrical Engineering	3
	Electrical Engineering Elective	3
	Electrical Engineering Elective	3
	Electrical Engineering Elective	3
	General Education or Honors Distribution <sup>4</sup>	3
	General Electives	4
Hours		19
Total Hours		137

- <sup>1</sup> Honors sections may be available; check the schedule of classes.
- <sup>2</sup> The Electrical and Computer Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.
- <sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.
- <sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.
- <sup>5</sup> While 3300:112 English Composition II is preferred, 2020:222 Technical Report Writing is accepted to fulfill the English composition elective.

**Notes:**

- Up to three credits of undergraduate research in Electrical Engineering may be applied to program requirements as Electrical Engineering Electives. Students may take at most one credit of undergraduate research in a semester.
- See Electrical and Computer Engineering Departmental Office for Approved Electrical Engineering Electives (including Breadth and Depth requirements)

## Engineering and Science Technology

The Department of Engineering and Science Technology offers programs in automated manufacturing and advanced manufacturing engineering technology, corrosion engineering technology, surveying and mapping, electrical and electronic engineering technology, mechanical engineering technology, and construction engineering technology.

Faculty in the Department pride themselves in applying leading-edge technology to classroom instruction while using the latest technology to

complement hands-on instruction. Program courses are offered during the day and evenings in formats that include online, hybrid, and flipped.

In each area, students learn theoretical instruction and scientific theories that are applied in industry, plus plenty of hands-on training using equipment and technology. Students also have various learning opportunities outside of the classroom, including co-ops, service-learning and professional student organizations. Strategic partnerships within the region help ensure student success and job placement.

### Why Choose Akron?

We offer market-driven, applied degrees (associate and bachelor) and certificates. Our faculty's expertise (discipline education and real-world work experience) is a key component to the program's success and enables the hands-on, experiential learning brought to our students. The Department also provides instruction in the General Technologies of Chemistry and Physics.

**Accreditation:** Our programs are accredited, ensuring program quality and continuous improvement.

**Making you career ready:** Our students have various learning opportunities outside of the classroom including co-ops, service-learning and professional student organizations. Program courses are offered during the day and evenings in formats that include online, hybrid and flipped (lectures are viewed at home, leaving class time for projects and discussions). Further, we have partnerships with industry within the region help ensure student success and job placement.

**Vision:** Our department vision is to become a regional leader in technology education recognized for our focus on student success and inclusive excellence. Through educational experiences that expose our students to the latest technology, we will empower them to become innovators and entrepreneurs.

**Mission:** The Department of Engineering and Science Technology will create a better common future for our students and for society through career-focused educational activities that address the needs of this region's industrial, technical, and business communities by leveraging the region's strengths; foster economic, social, and cultural vitality; and pursue innovative solutions to major challenges.

## 2850: Corrosion Engineering Technology

A degree in Corrosion Engineering Technology prepares students to evaluate corrosion of materials in the field and apply strategies for mitigating corrosion. Students learn engineering principles of corrosion and materials performance, and develop skills in math, science, communication, and economics. The program strives to balance classroom instruction with real-world, hands-on, experiential learning in the focus areas of material selection and design, cathodic protection, coatings, water treatment/inhibitors, failure analysis, and project/risk management. The Department of Defense has provided funds that will directly support the degree.

## 2860: Electrical and Electronic Engineering Technology

The Bachelors of Science Degree is accredited by the Engineering Technology Accreditation Commission of ABET, <https://www.abet.org>. The Associate of Applied Science Degree curriculum is the same as years one and two of the Bachelors Degree.

This program prepares individuals to develop, design, manufacture, test, and service electrical and electronic equipment and systems. It also prepares students to apply specific principles for analyzing, designing, developing, implementing, and overseeing advanced electrical, electronic, and computer systems and processes.

## 2870/2880: Automated and Advanced Manufacturing Engineering Technology

Through the study of basic technical subjects and through concentration on work measurement, manufacturing computer applications, quality control, robotics, manufacturing work cells, and MRPII, this program educates the student in the areas of analysis, and the design and management of the resources, facilities and people involved in modern manufacturing.

## 2920: Mechanical Engineering Technology

The Bachelors of Science Degree is accredited by the Engineering Technology Accreditation Commission of ABET, <https://www.abet.org>. The Associate of Applied Science Degree curriculum is the same as years one and two of the Bachelors Degree.

This program prepares individuals to work as technicians in developing, designing, manufacturing, testing, and servicing mechanical equipment and systems. It also prepares individuals to work as technologists in applying specific principles for analyzing, designing, developing, implementing, and overseeing advanced mechanical systems or processes.

## 2980: Surveying and Mapping

The Bachelors of Science Degree and Associate of Applied Science Degree are accredited by the Applied and Natural Science Accreditation Commission of ABET, <https://www.abet.org>. The Associate of Applied Science Degree curriculum is the same as years one and two of the Bachelors Degree.

The professional surveyor solves modern land boundary, location, and mapping problems by applying knowledge and skills in mathematics, law, local land history, map design, and business, using advanced technology. The program provides the surveying skills necessary to become a Certified Surveying Technician (CST) under the National Society of Professional Surveyors (NSPS) testing program. As surveying and mapping functions become more complex and technology-based, including the use of drones, the demand for highly-trained technicians and professional surveyors continues to grow.

## 2990: Construction Engineering Technology

The Bachelors of Science Degree is accredited by the Engineering Technology Accreditation Commission of ABET, <https://www.abet.org>. The Associate of Applied Science Degree curriculum is the same as years one and two of the Bachelors Degree.

Students in this program are prepared to work in the field of construction engineering technology using knowledge of construction methods, business operations, and management skills to support construction projects. They work on residential and commercial buildings, bridges, roads, dams, wastewater treatment systems, or other similar projects. Common jobs assumed by graduates of this program include but are not limited to engineering technician, construction coordinator, cost estimator, scheduler, field engineer, and assistant project engineer.



The program also offers a degree in Construction Field Operations, which prepares students for construction industry careers, such as field superintendents, foremen, project management assistants, inspectors, and other allied industrial positions.

- Advanced Manufacturing Engineering Technology, AAS (p. 424)
- Automated Manufacturing Engineering Technology, BS (p. 426)
- Construction Engineering Technology, AAS (p. 427)
- Construction Engineering Technology, BS (p. 429)
- Construction Estimation, Certificate (p. 430)
- Construction Field Operations, AAS (p. 431)
- Construction Management, Certificate (p. 432)
- Construction Materials Testing, Certificate (p. 432)
- Corrosion Engineering Technology, AAS (p. 433)
- Corrosion Technology, Certificate (p. 433)
- Drafting and Computer Drafting, Certificate (p. 434)
- Electrical and Electronic Engineering Technology, AAS (p. 435)
- Electrical and Electronic Engineering Technology, BS (p. 436)
- Geographic and Land Information Systems, Certificate (p. 438)
- Heavy Construction, Certificate (p. 438)
- Land Surveying, AAS (p. 439)
- Mechanical Engineering Technology, AAS (p. 440)
- Mechanical Engineering Technology, BS (p. 441)
- Residential Building Technology, Certificate (p. 445)
- Residential Inspection, Certificate (p. 445)
- Surveying and Mapping, BS (p. 445)
- Surveying for Civil Engineers, Certificate (p. 447)

## General Technology (2820)

### 2820:100 Introduction to Engineering Technology (2 Credits)

This introductory course stresses skills needed for academic success. Discussion of fields in engineering technology, job searches, calculators, and data measurement and analysis are included.

### 2820:105 Basic Chemistry (3 Credits)

Prerequisite: 2010:052 with a grade of C or better or math placement test. Elementary treatment of facts and principles of chemistry emphasizing biological application. Elements and compounds important in everyday life, biological processes and medicine. Introduction to laboratory techniques. Primarily for medical assistant, criminal justice and allied health students. Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

### 2820:110 Physical Science for Technicians (3 Credits)

Elementary presentation of theory and facts of general chemistry and physics (excluding electricity). Includes atomic structure, chemical reactions, energy, electromagnetic radiation, sound and mechanics.

### 2820:111 Introductory Chemistry (3 Credits)

Corequisite: 2030:152. Facts and theories of general chemistry. Elements and compounds and their uses. Elementary treatment of atomic structure, gaseous state, periodic table, water, solutions. Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

### 2820:112 Introductory & Analytical Chemistry (3 Credits)

Prerequisite: 2820:111 or permission. Chemical equilibria, ionization, radioactivity. Properties of selected metals and nonmetals. Introduction to organic chemistry. Basic concepts of qualitative analysis. Identifications of cations and anions. Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

### 2820:131 Software Applications for Technology (1 Credit)

Prerequisite: 2030:153. Word processing and spreadsheets used within technical applications. This course focuses on using software for technical reports and data analysis. Laboratory.

### 2820:290 Special Topics: General Technology (1-4 Credits)

Prerequisite: Permission. Selected topics of subject areas of interest in General Technology. (May be repeated for a total of eight credits.)

### 2820:310 Programming for Technologists (2 Credits)

Prerequisites: 2820:131 and 2030:255. A study of a technical programming language with applications in engineering technology. Limited to students in Engineering & Science Technology Department programs.

## Corrosion Engineering Technology (2850)

### 2850:100 Introduction to Corrosion Technology (2 Credits)

Prerequisite: 2030:151 or higher math. Analysis of material selection and environmental conditions on corrosion; review of corrosion types, environments and characteristics of structural materials; economic impact, control methods are explored.

### 2850:120 Corrosion Engineering Technology Fundamentals I (3 Credits)

Corequisite: 2820:111. Introduction to corrosion engineering topics including economic impacts of corrosion, types of corrosion, their recognition and prevention, parameters affecting corrosion, and methods of corrosion control.

### 2850:121 Corrosion Engineering Technology Fundamentals II (4 Credits)

Prerequisite: 2850:120. Basic understanding of steps and methods required for combating corrosion including proper design, material selection, protective coating application, inhibitors use, and cathodic and anodic protection.

### 2850:200 Advanced Corrosion Technology (3 Credits)

Prerequisite: 2850:100. Study of corrosion control methods through design, materials selection, protective coatings, cathodic and anodic protection; corrosion testing and monitoring; diagnosis of corrosion failures; selection of treatment options; corrosion data analysis.

### 2850:220 Strategies for Corrosion Prevention (4 Credits)

Prerequisite: 2850:121. Corequisite: 3650:163. This course focuses on the control of corrosion by applying coatings and cathodic protection.

### 2850:221 Corrosion Engineering Technology Projects (4 Credits)

Prerequisite: 2850:220. Course focuses on corrosion/failure analysis and corrosion mitigation, and discussion of regulatory compliance and resource acquisition and allocation.

## Electrical and Electronic Engineering Technology (2860)

### 2860:120 Circuit Fundamentals (4 Credits)

Prerequisite: 2030:152 or permission. SI units, current, voltage, resistance, Ohm's Law, circuit analysis, network theorems, computer simulation, inductor, capacitor, RLC dc analysis, transients, laboratory support of circuit concepts, ac introduction.

### 2860:121 Introduction to Electronics and Computers (2 Credits)

Prerequisite: 2030:151. Introduces students to computer simulation, Boolean algebra, circuit manufacturing, laboratory practices, and to the electronics industry.

**2860:122 AC Circuits (3 Credits)**

Prerequisite: 2860:120. Corequisite: 2030:154. Sinusoidal voltage and current, reactance and impedance, methods of AC circuit analysis, AC power, transformers, AC meters and oscilloscopes, dependent and independent sources.

**2860:123 Electronic Devices (4 Credits)**

Prerequisite: 2860:120. Physical theory, characteristics and operational parameters of solid-state devices. Analysis and design of electronic circuits incorporating these devices, utilizing characteristic curves and linear modeling.

**2860:210 Industrial Control Panel Fabrication (2 Credits)**

Prerequisite: 2030:152. This course will introduce students to shop fabricating skills involved in the creation of electrical control panels using mechanical and electrical fabricating tools.

**2860:225 Applications of Electronic Devices (4 Credits)**

Prerequisites: 2860:122 and 2860:123. Frequency response, filter concepts, electronic amplifiers, power amplifiers, multistage amplifiers, differential amplifiers, operational amplifiers, voltage regulators, feedback and oscillators, special devices, computer simulation analysis.

**2860:237 Digital Circuits (4 Credits)**

Prerequisite: 2860:121. Devices used in logic circuits, interfacing, combinational logic, arithmetic circuits, encoders, multiplexers, programmable logic devices, flip-flops, counters, shift registers, computer modeling of digital circuits.

**2860:238 Microprocessor Applications (4 Credits)**

Prerequisite: 2860:237. Programmable logic devices, computer modeling of digital circuits, memory circuits. Computer architecture, programming the microprocessor, microprocessor hardware, microprocessor applications, parallel I/O and programmable timers.

**2860:242 Machinery & Controls (3 Credits)**

Prerequisites: [2860:120 and 2860:121] or 2860:370. Study of DC and AC motors and generators and their control. Fundamentals of power transformers. Three-phase distribution and motor control. Principles of industrial electronic devices.

**2860:251 Electronic Communications (4 Credits)**

Prerequisite: 2860:225. Resonance, coupling, filters, oscillators, mixers, power amplifiers, AM, FM, receivers.

**2860:260 Electronic Project (2 Credits)**

Prerequisites: Final semester or permission and 2940:210. Design, construction, and testing of an electronic circuit of choice. Progress reports, oral, and a formal written report required. Discussion of electronic design, fabrication, and troubleshooting techniques.

**2860:290 Special Topics: Electronic Engineering Technology (1-4 Credits)**

Prerequisite: Permission of instructor. Directed study in a special field of interest chosen by the student in consultation with the instructor (may be repeated for a total of six credits).

**2860:310 National Electrical Code and Electrical System Design (3 Credits)**

Prerequisite: 2860:122 or 2860:370. This course provides students with the skills necessary to apply the National Electrical Code (NFPA 70) to the design and installation of electrical systems and circuits.

**2860:350 Advanced Circuit Theory (3 Credits)**

Prerequisite: 2860:251. Corequisite: 2030:356. Nodal, mesh, Thevenin, and dependent sources in resistive circuits. Inductor and capacitor as time domain elements. First- and second-order circuit analysis. Phasor analysis. Operational amplifier analysis.

**2860:352 Microcontrollers (4 Credits)**

Prerequisite: 2860:238. Corequisite: 2860:350. Using a typical microcontroller, study its architecture, program it, use subroutines and interrupts, use it in various applications, utilize various on-board modules including analog-to-digital, and timers.

**2860:354 Advanced Circuits Applications (3 Credits)**

Prerequisites: 2030:356 and 2860:350. Introduction to calculus based circuit analysis. Emphasizing Laplace transforms in operational circuit analysis, transfer functions, impulse function, Bode diagrams, Fourier Series.

**2860:360 Virtual Instrumentation and Data Acquisition (3 Credits)**

Prerequisites: 2860:122 and 2860:370. An introduction to instrumentation, data acquisition (DAQ) and graphical programming used in manufacturing and laboratory environments.

**2860:370 Survey of Electronics I (3 Credits)**

Prerequisite: 3650:163. Fundamentals of DC and AC electrical circuits and rotating machinery. For non-Electronic Engineering Technology majors.

**2860:371 Survey of Electronics II (3 Credits)**

Prerequisite: 2860:370. Survey of the most commonly used solid state circuit components including typical applications. Introduction into digital circuits and microprocessor applications. For non-Electronic Technology majors.

**2860:400 Computer Simulations in Technology (3 Credits)**

Prerequisites: 2030:345 and 2860:354. Introduce the use of software widely used in industry to simulate and study electrical circuits and signals. Methods of data sampling, management and presentation will be studied.

**2860:406 Communication Systems (3 Credits)**

Prerequisites: 2860:251 and 2860:354. Digital communications, transmission lines, waveguides, microwave devices and antennas.

**2860:420 Biomedical Electronic Instrumentation (3 Credits)**

Prerequisite: 2860:354. Introduction to electrical signals from the body, transducers, recording devices, telemetry, microprocessor applications, and electrical safety of medical equipment.

**2860:451 Industrial Electrical Systems (3 Credits)**

Prerequisite: 2860:354. Electric power, industrial nameplates, power factor correction, mutual inductance, linear transformers, power transformers, polyphase systems, per-phase analysis, system grounding, protective device coordination computer-aided analysis.

**2860:453 Control Systems (4 Credits)**

Prerequisites: 2860:354 and 2870:301. Modeling and responses of closed-loop systems. Laplace transforms, root-locus analysis. Stability, compensation, digital control, optimal control. Digital computer in system simulation and design.

**2860:455 Senior Project (2 Credits)**

Capstone experience consisting of Electrical or Electronic Project emphasizing creative technical analysis or design and presentation.

**2860:490 Special Topics: Electronic Engineering Technology (1-4 Credits)**

Prerequisite: Permission of instructor. Directed study in a special field of interest chosen by the student in consultation with the instructor (may be repeated for a total of six credits).

**2860:497 Senior Honors Project: Electronic Technology (1-3 Credits)**

Prerequisites: Senior standing in Honors Program, permission of department preceptor, and major in electronic technology. Independent research leading to completion of Senior Honors Thesis or other original work. (May be repeated for a total of six credits)

## Automated Manufacturing Engineering Technology (2870)

### 2870:301 Computer Control of Automated Systems (3 Credits)

The development of computer based systems and computer programs using robotics and machine controllers as the solutions for automated manufacturing problems.

### 2870:311 Facilities Planning (3 Credits)

Prerequisite: 2940:180 or 2940:210 or permission. An application based study of facilities analysis, design and layout utilizing software based solutions.

### 2870:332 Management of Technology Based Operations (3 Credits)

A study of the techniques and knowledge necessary to effectively manage technical personnel.

### 2870:348 CNC Programming I (3 Credits)

Prerequisites: [2030:154 and 2920:121] or 2880:248, or permission. Introduction to CAM (Computer Aided Manufacturing) based CNC (Computer Numerical Control) programming; development of milling, drilling, and turning programs.

### 2870:441 Advanced Quality Practices (3 Credits)

Prerequisite: 2880:241 or permission. Specific quality assurance procedures will be developed conceptually, proven mathematically, and then tested in lab exercises. Industry accepted SQC software will be used.

### 2870:448 CNC Programming II (3 Credits)

Prerequisite: 2870:348. The study of advanced CNC programming techniques utilizing an industry standard CAM programming software package and CNC program verification software.

### 2870:470 Simulation of Manufacturing Systems (3 Credits)

Prerequisite: 2880:211. Computer simulation solutions applied to the traditional manufacturing problems of equipment justification, production line balancing, and capacity planning.

### 2870:480 Automated Production (3 Credits)

Prerequisites: 2870:301, 2870:448, and 2880:201. A study of the automated production system. The various systems studied thus far, CNC, robotics, automated machines via PLCs, and facilities design, are integrated and analyzed from a production standpoint.

### 2870:485 SME Manufacturing Technologist Certification Preparation (2 Credits)

Prerequisites: 2870:441 and 2920:347. Pre/Corequisite: 2870:480. Provides a review for the SME Manufacturing Technologist Certification Exam. Topics include a review of materials and manufacturing processes, automated systems and control, quality and process control methods, manufacturing management, and other topics appearing on the exam.

### 2870:490 Manufacturing Project (2 Credits)

Prerequisite: Senior status. Advanced CAD/CAM topics are presented. A comprehensive project is undertaken.

### 2870:495 Individual Investigation in Manufacturing Engineering Technology (2 Credits)

Selected topic(s) that provide for specific individual study in the area of manufacturing engineering technology under the direct supervision of a faculty member.

### 2870:496 Special Topics in Manufacturing Engineering Technology (1-3 Credits)

Prerequisite: Permission. Selected topic(s) that provide for specific course work in the area of manufacturing engineering technology offered once or only occasionally in areas where no formal course exists.

### 2870:499 Workshop in Manufacturing Engineering Technology (1-3 Credits)

Prerequisite: Permission. Group studies of special topics in manufacturing engineering technology.

## Manufacturing Engineering Technology (2880)

### 2880:100 Basic Principles of Manufacturing Management (4 Credits)

A survey of basic concepts of management and their interrelationships to a manufacturing environment. Includes production control, quality control, work measurement, and employee motivation.

### 2880:101 Introduction to Advanced Manufacturing (2 Credits)

This course defines advanced manufacturing and provides students with an overview of the knowledge, skills, and abilities necessary to succeed in an advanced manufacturing career.

### 2880:110 Manufacturing Processes (3 Credits)

Study of the machines, methods, and processes used in manufacturing.

### 2880:130 Work Measurement & Cost Estimating (3 Credits)

Prerequisite: 2030:152. Time and motion study. Development of accurate work methods and production standards, and their relationship to manufacturing cost estimates.

### 2880:140 Computer Aided Drawing (3 Credits)

Drafting procedures and techniques used for creating drawings using AutoCAD software. Topics include basic components, drawing, editing, dimensioning, layers, text, blocks, plotting, and hatch.

### 2880:151 Industrial Safety & Environmental Protection (2 Credits)

A contemporary overview of the science and management of occupational health and safety programs, policies, and procedures in an industrial and business type environment.

### 2880:201 Robotics & Automated Manufacturing (3 Credits)

Prerequisite: 2880:100 or permission of instructor. Study of manufacturing automation and the computer-based products and processes available for this task. Robots, machine controllers, and machine/process interfaces are investigated.

### 2880:211 Manufacturing Operations (3 Credits)

A study of all functions involved in a manufacturing production system. Areas covered include product design, forecasting, capacity planning, scheduling, materials management, and project management.

### 2880:225 Computer Aided Tool Design (3 Credits)

Prerequisite: 2880:140 or 2920:121. The study of standard tool design practices and procedures utilizing industry-standard computer-aided design software.

### 2880:230 3-D Modeling & Design (3 Credits)

Prerequisite: 2940:210. This course covers advanced topics in the use of AutoCAD. These topics include 3-D modeling. Laboratory.

### 2880:232 Labor Management Relations (3 Credits)

Prerequisite: 2880:100. Study of historical background of labor movement, management viewpoints, legal framework for modern labor organizations and collective bargaining process.

### 2880:241 Introduction to Quality Assurance (3 Credits)

Prerequisite: 2030:152. Theory and practice of inspection and sampling techniques for measurement of quality, QC charts, sampling plans, mill specs, checking machine capabilities, and setting tolerances.

**2880:248 Introduction to CNC and Additive Manufacturing (3 Credits)**

Prerequisites: 2030:153 and [2880:140 or 2920:121] or permission. This course provides an overview of CNC manual programming utilizing the G-code programming language along with an introduction to additive manufacturing processes.

**2880:290 Special Topics: Industrial Technology (1-2 Credits)**

Prerequisite: Permission. Selected topics or subject areas of interest in industrial technology. (May be repeated for a total of four credits)

## Mechanical Engineering Technology (2920)

**2920:100 Survey of Mechanical Engineering Technology (2 Credits)**

Corequisite: 2030:154. Overview of the Mechanical Engineering Technology degree programs; pre-testing; career opportunities; professional societies & certification; standards; and useful tools of the MET field.

**2920:101 Introduction to Mechanical Design (3 Credits)**

Prerequisite: 2880:140 or 2920:121. Corequisite: [2880:230 or 2920:100] and 2030:154. Topics in engineering drawing: conventions, sections, dimensioning and tolerancing. Detail drawings, subassembly and assembly drawings. Introduction to various mechanical components and mechanical design tools.

**2920:121 Fundamentals of Engineering Drawing (3 Credits)**

Fundamentals of engineering drawing using freehand sketching and CAD; orthographic and isometric projections, sectioning, assemblies, and introduction to geometric dimensioning and tolerancing. Laboratory.

**2920:130 Introduction to Hydraulics and Pneumatics (3 Credits)**

Principles of hydrostatic forces, pressure, density, viscosity, incompressible and compressible fluids. Principles of hydraulic and pneumatic devices and systems.

**2920:142 Introduction to Material Technology (3 Credits)**

Fundamental properties of materials. Material testing. Applications of methods to control material properties.

**2920:243 Kinematics (3 Credits)**

Prerequisite: 2990:125. Corequisite: 2920:101. Study of rigid-body motions of simple linkages, cams, gears, and gear trains. Vector solutions emphasized. Industrial applications presented and computers used to analyze mechanisms.

**2920:245 Mechanical Design II (5 Credits)**

Prerequisites: 2920:101, 2920:243, and 2990:225. Corequisite: 2920:142. Advanced stress and fatigue analysis, theories of failure. Design of machine elements: gears, keys and keyways. Experimental stress analysis and design projects.

**2920:249 Applied Thermal Energy I (2 Credits)**

Prerequisites: 2030:255 and 3650:164. Thermodynamic principles. Study of power cycles. Applications in I.C. engines, compressors, steam power cycles, refrigeration.

**2920:251 Fluid Power (2 Credits)**

Prerequisites: 3650:160 and 3650:164. Statics and dynamics of fluids. Viscosity, energy and momentum relationships. Fluid machinery and measurements.

**2920:252 Thermo-Fluids Laboratory (1 Credit)**

Prerequisite: 2920:251. Corequisite: 2920:249. Laboratory experiments in applied thermal energy and fluid power.

**2920:290 Special Topics: Mechanical Engineering Technology (1-3 Credits)**

Prerequisite: Permission. Selected topics or subject areas of interest in Mechanical Engineering Technology. (May be repeated for a total of four credits)

**2920:310 Economics of Technology (3 Credits)**

Prerequisite: 64 credits or permission. Economic principles as they pertain to technology. Equivalence, alternatives, costs, depreciation, valuation. Project studies.

**2920:344 Dynamics (3 Credits)**

Prerequisites: 2920:243, 2030:255, and 2990:125. Introduces particle dynamics, displacement, velocity, and acceleration of constrained rigid bodies in plane motion. Kinetics of particles and rigid bodies, work and energy, mechanical vibration.

**2920:346 Mechanical Design III (4 Credits)**

Prerequisites: 2920:245 and 2920:344. Continuation of design of mechanical components: gears, bearings, shafts, springs, and fasteners. Special topics presented will be coordinated with assigned design projects.

**2920:347 Production Machinery & Processes (3 Credits)**

Prerequisites: 2030:255 and [2880:110 or 2920:142]. Study of manufacturing processes (casting, forging, welding, forming sheet metal), integrating material technology, mechanical design, and mechanics of materials.

**2920:365 Applied Thermal Energy II (3 Credits)**

Prerequisites: 2030:255, 2920:249, and 2920:251. Review and application of basic thermodynamic principles used in designing automotive engines and refrigeration equipment. Introduction to heat transfer, heating, ventilation, and air conditioning.

**2920:370 Plastics Design & Process (3 Credits)**

Prerequisites: 2820:111 or higher. Introduction to structure and properties of polymers, selection based on properties and cost, design of products and tools, basic principles of the major processes.

**2920:402 Mechanical Projects (2 Credits)**

Prerequisites: 2920:310, 2920:365, 2920:370, 2920:490, and [2870:301 or 2920:405]. Individual projects emphasizing creative technical design.

**2920:405 Introduction to Industrial Machine Control (3 Credits)**

Prerequisite: 2860:370. Principles and design of industrial machine control systems. Application oriented study of typical control devices. Utilization of programmable controllers as the system logic controllers.

**2920:470 Plastics Processing & Testing (2 Credits)**

Prerequisite: 2920:370 or permission. Use of basic polymer testing methods. Setup and operation of modern molding and extrusion equipment. Basic troubleshooting procedures. Study of processing effects on final properties.

**2920:490 Mechanical Engineering Technology Senior Seminar (1 Credit)**

Prerequisites: 2920:346 and 2920:347. An opportunity for post-testing of all MET students and the presentation of social and professional responsibilities, diversity, professional certification, life-long learning, and career opportunities.

**2920:497 Senior Honors Project in Mechanical Engineering Technology (1-3 Credits)**

Prerequisites: Senior standing in Honors Program, permission of area honors preceptor, and major in mechanical technology. Independent research leading to completion of senior honors thesis or other original work. (May be repeated for a total of six credits)

**2920:498 Independent Study in Mechanical Engineering Technology (1-4 Credits)**

Prerequisite: Permission. Directed study in a special field of interest chosen by the student in consultation with the instructor. (May be repeated for a total of six credits).

**Surveying and Mapping (2980)****2980:100 Introduction to Geomatics (2 Credits)**

An introductory course into the field of surveying and mapping technology. Integrated topics include: types of surveys, cartography, and geographic information systems.

**2980:101 Basic Surveying (3 Credits)**

Corequisite: 2030:153. Care and use of basic surveying field instruments and the basic computations and adjustments necessary to post process the field survey measurements. Field Practice.

**2980:102 Topographic Surveying (2 Credits)**

Prerequisites: 2980:101 and 2030:153. Computations and adjustments of field survey measurements using both conventional and computer methods. Development of maps and plans stressed. Field Practice.

**2980:122 Elementary Surveying (3 Credits)**

Elementary surveying for non-surveying and construction majors. Basic tools and computations. Field practice.

**2980:123 Surveying Field Practice (2 Credits)**

Prerequisite: 2980:102 or equivalent. Practical experience in use of surveying equipment and methods of surveying. Provides students with responsibility for making decisions and planning and directing complete project.

**2980:155 Computer Applications in Surveying (3 Credits)**

Use of current surveying software to solve typical problems/projects in surveying technology.

**2980:170 Surveying Drafting (3 Credits)**

Corequisite: 2030:152 or permission. Drafting procedures, techniques, and tools required for the various phases of survey office work. Projects include topographic maps, plan and profile drawings, and cross-section drawings. Laboratory.

**2980:222 Construction Surveying (3 Credits)**

Prerequisite: 2980:101. Methods and procedures for establishing line and grade for construction. Circular and parabolic curves. Cross-sectioning methods and earthwork. Communication and plan reading.

**2980:223 Geospatial Technologies (3 Credits)**

Introduction to current and emerging geospatial technologies, such as Geographic Information Systems, remote sensing and global positioning systems, and exploring mapping data sources. Laboratory required.

**2980:225 Advanced Surveying (3 Credits)**

Prerequisite: 2980:228. Introduction to topographic mapping, flood maps, and ALTA surveys. Advanced topics in control surveys, State Plane Coordinates, and bearings from celestial observations. Field practice.

**2980:228 Boundary Surveying (3 Credits)**

Prerequisite: 2980:101 or equivalent. Analysis of evidence and procedures for boundary location; establishing and/or locating points for boundary and mortgage location surveys; plat preparation. Ohio survey minimum standards.

**2980:251 CST Seminar (1 Credit)**

Prerequisite: 2980:222. Prepares students for the National Society of Professional Surveyors Certified Surveying Technician (CST) Level I Examination. Examination is given at the end of the review sessions.

**2980:310 Survey Computations & Adjustments (2 Credits)**

Prerequisite: 2980:225. Concepts relating to measurement error, probability, and reliability. Computation and adjustment of horizontal and vertical networks.

**2980:315 Boundary Control & Legal Principles (3 Credits)**

Prerequisite: 2980:228. Historical development of boundaries, rectangular system of public land surveys, systems to describe property, surveyor's responsibility to understand and properly apply legal principles to boundary.

**2980:325 OSHA Safety Requirements for Surveyors (1 Credit)**

To provide OSHA safety training and certification required for surveying companies.

**2980:330 Applied Photogrammetry (3 Credits)**

Prerequisite: 2980:155. An introduction to metrical and quantitative photogrammetry using both hard- and soft-copy systems. Laboratory.

**2980:335 The Business of Surveying (2 Credits)**

A course focused on the business aspects of surveying, including development of business plan components for a company offering professional surveying and mapping services.

**2980:340 Cadastral Surveying (2 Credits)**

Prerequisites: 2980:101. A study of the official surveys of the United States. Cadastral surveys establish or recreate boundaries and /or tracts of land.

**2980:410 LiDAR and Laser Scanning (2 Credits)**

Prerequisite: 2985:101. Introduction to LiDAR (aerial and terrestrial) scanning as it applies to surveying and mapping. The course will discuss the collection and dissemination methods of the data.

**2980:415 Legal Aspects of Surveying (3 Credits)**

Prerequisite: 2980:315. A study of statute and common law related to land surveying. Evidence and the surveyor's role in the judicial process. Interpreting and writing land descriptions.

**2980:420 Route Surveying (3 Credits)**

Prerequisite: 2980:225. Surveying for long but narrow strips of land such as highways, railroads, and pipe lines. Course includes all requisite calculations and drawings.

**2980:421 Subdivision Design (3 Credits)**

Prerequisites: 2980:155, 2980:222, and 2980:315. Site analysis, land use controls, and plotting procedures. Laboratory includes preparation of various types of projects leading to a complete subdivision.

**2980:422 Global Positioning System Surveying (3 Credits)**

Prerequisites: 2980:225 and 2985:101 or permission. Introduction to the Global Positioning System (GPS). Course includes the planning, data collection, and processing of GPS data.

**2980:425 Land Navigation (3 Credits)**

Interpretation and use of topographic maps. Study of basic map elements with emphasis on identification of features and coordinate systems. Map use for land navigation.

**2980:426 History of Surveying To 1785 (2 Credits)**

A history of land surveying. Emphasis on the development of survey procedures through history. Part I (to 1785) covers the ancient world to the colonial period.

**2980:427 Ohio Lands (2 Credits)**

Study of the history of the original Ohio Land Subdivisions.

**2980:428 History of Surveying Since 1785 (2 Credits)**

A history of land surveying. Emphasis on the development of survey procedures through history. Part II (Since 1785) covers the history of the United States to date.

**2980:430 Surveying Project (3 Credits)**

Prerequisite: Senior or greater standing and permission. Provides opportunity to research and develop a specific surveying project within chosen area of surveying. Oral, written and graphical presentation of completed project(s).

**2980:431 Senior Seminar (2 Credits)**

Prerequisite: Senior or greater standing. Students demonstrate knowledge and skills acquired as surveying majors through assessment testing and review of professional licensure laws. Preparation for national exams.

**2980:445 Applications in GIS using GPS (3 Credits)**

Prerequisite: 2985:101. Advanced instruction in GIS applications using GPS as well as other surveying and mapping methods. Laboratory.

**2980:450 Topics in Professional Practice (2 Credits)**

Prerequisite: Junior or greater standing. Topics in applicational areas of surveying from the point of view of the practitioner and the consumer of land-related data.

**2980:489 Special Topics in Surveying (1-3 Credits)**

Prerequisite: Permission. Special lecture/laboratory courses offered once or only occasionally in areas where no formal course exists. (May be repeated for a maximum of six credits.)

**2980:490 Workshop in Surveying (1-3 Credits)**

Prerequisite: Permission. Group study of special topics in surveying. May not be used to meet undergraduate major requirements in surveying. May be used for elective credit only. (May be repeated for a maximum of six credits.)

**2980:495 Internship: Surveying and Mapping (3 Credits)**

Prerequisites: 64 hours in program and permission. Supervised work experience in surveying and mapping to increase student understanding of surveying and mapping technology.

**2980:497 Surveying Honors Project (3 Credits)**

Prerequisites: Senior Studies as an honor student. Provides opportunities to research and develop a specific surveying project within chosen area of surveying. Oral, written, and geographical presentation of completed projects.

**2980:498 Independent Study (1-3 Credits)**

Prerequisite: Permission or instructor. Directed study in a special field of interest chosen by student in consultation with instructor. (May be repeated for a total of six credits).

## Geographic and Land Information Systems (2985)

**2985:101 Introduction to Geographic & Land Information Systems (3 Credits)**

Introduction to the principles and concepts of Geographic and Land Information Systems used in surveying and mapping applications. Laboratory.

**2985:151 GIS Essential Skills (3 Credits)**

Prerequisite: 2985:101. Continued instruction and hands-on emphasis on common skills used in the GIS industry. Skills: Creating reference maps, geocoding, digitizing, reports and mapbooks. Laboratory.

**2985:201 Intermediate Geographic and Land Information Systems (3 Credits)**

Prerequisite: 2985:101. Continued instruction in the hands-on technical applications of Geographic and Land Information Systems. Laboratory.

**2985:205 Building Geodatabases (3 Credits)**

Prerequisite: 2985:101. Introduction and application of spatial geodatabases. The student will create, use, and manage geodatabases. Geodatabases are used for storing spatial and attribute data. Laboratory.

**2985:210 Geographic and Land Information Systems Project (3 Credits)**

Prerequisites: 2985:101. Practical application and presentation techniques using the principles and concepts of cartography and geographic information systems. Laboratory.

**2985:280 Topics in Professional Practice (2 Credits)**

Topics in applicational areas of Geographic and Land Information Systems (GIS/LIS) from the point of view of the practitioner and the consumer.

**2985:290 Special Topics in Geographic and Land Information Systems (1-3 Credits)**

Special lecture/laboratory courses offered once or only occasionally in areas where no formal course exists.

**2985:291 Geographic and Land Information Systems Internship (3 Credits)**

Prerequisite: Permission. Supervised professional experience in GIS/LIS agencies or related setting.

**2985:295 Workshop in Geographic and Land Information Systems (1-3 Credits)**

Group studies of special topics in GIS/LIS. May be used for elective credit only to a maximum of three credits.

**2985:299 Independent Study (1-3 Credits)**

Directed study in a special field of interest chosen by the student in consultation with the instructor.

**2985:301 Exploring ArcGIS Extensions (3 Credits)**

Prerequisite: 2985:101. Specialized instruction and laboratory exercises in working with the ArcGIS extensions, Spatial Analyst, 3-D Analyst and Network Analysis. Laboratory.

## Construction Engineering Technology (2990)

**2990:125 Statics (3 Credits)**

Prerequisites: 2030:154 and 3650:160. This course covers forces, resultants, and couples. Equilibrium of force systems. Trusses, frames, centroid, moment of inertia, and friction.

**2990:129 Computer Applications in Construction (3 Credits)**

This course introduces students to important computing skills for construction managers including software for estimating, scheduling, presentations, general business administration and graphics.

**2990:131 Building Construction (2 Credits)**

Materials and methods used in construction. Encompasses buildings constructed with wood, steel, concrete or a combination of these materials.

**2990:150 Plan Reading (2 Credits)**

Prerequisite: 2990:131. The language of construction. Symbols, scales, plan views, elevation views, sections and details. Quantity take-off estimation.

**2990:225 Strength of Materials (3 Credits)**

Prerequisite: 2990:125. Stress, strain and stress-strain relationships. Tension, compression, torsion, beams. Shear and moment diagrams. Combines stresses.

**2990:226 Construction Supervision (3 Credits)**

Introduction to topics on construction supervision including planning, directing and coordinating onsite activities to build quality defined by drawings and specifications.

**2990:234 Elements of Structures (3 Credits)**

Prerequisites: 2990:125 and 2990:225. Principles of stress and structural analysis, concepts of steel, timber design, and reinforced concrete.

**2990:235 Construction Inspection (3 Credits)**

Prerequisite: 2990:131. Fundamentals of total quality management and construction inspection.

**2990:237 Materials Testing I (2 Credits)**

Prerequisite: 2030:154. Laboratory testing of soils with emphasis on physical properties of soil. Laboratory and field procedures used for quality control.

**2990:238 Materials Testing II (2 Credits)**

Prerequisite: 2030:154. Mix design of concrete. Laboratory testing of concrete containing ordinary Portland cement and pozzolanic admixtures. Experiments demonstrate physical properties as related to design and quality control.

**2990:239 Construction Geomechanics (3 Credits)**

Prerequisite: Admission to the Associate of Science program or permission of the program director. This course provides an understanding of the impact of the mechanical behavior and engineering properties of soils and rock related to construction processes and methods. Topics include erosion control, laboratory test methods for engineering design, flood and mass wasting behavior, soil subsidence, and sustainability of engineered coastal structures.

**2990:245 Construction Estimating (3 Credits)**

Prerequisite: 2030:154 and 2990:150. Quantity takeoffs in construction to include mass excavations, foundation systems, structural steel, residential construction, and various commercial construction methods.

**2990:246 Site Engineering (3 Credits)**

Prerequisite: 2990:131. The content includes study of the development of a site including surveying, excavation, soil treatment, heavy equipment requirements, storm water management, pavement design, and construction of roadways.

**2990:248 Construction Graphics (3 Credits)**

Introduction to terminology and drawing basics with a focus on civil/site plans, architectural and structural drawing.

**2990:254 Building Codes (3 Credits)**

Prerequisite: 2990:131. Students learn fundamental concepts for construction related to the residential building code.

**2990:310 Residential Building Construction (3 Credits)**

Introduction to building design, wood framing, and mechanical systems as commonly found in residential housing.

**2990:312 Neighborhood Revitalization Project (3 Credits)**

Residential construction and inspection knowledge used to perform field work, service projects, and written inspection reports.

**2990:320 Advanced Materials Testing (3 Credits)**

Prerequisite: 2990:241. This course investigates the usage of precision strain gage applications used by technicians in determining stresses in structural elements and mechanical parts.

**2990:351 Construction Quality Control (3 Credits)**

Prerequisites: Admission into the BCET program or permission of instructor. Overview of quality control concepts and techniques as related to the construction industry including the necessary statistical tools; exposes students to civil, mechanical and electrical inspection requirements.

**2990:352 Field Management & Scheduling (2 Credits)**

Prerequisites: 2990:245 or permission. Planning, scheduling, and controlling of field work within time and cost constraints. Manual methods and computer software packages studied.

**2990:354 Foundation Construction Methods (3 Credits)**

Prerequisites: 2990:234 and 2990:237. Soil mechanics and soils exploration as related to construction. Foundation construction methods and practice in the interest of safety and suitable economy.

**2990:356 Safety in Construction (3 Credits)**

The purpose of this course is to explain what creates hazards and why, and to suggest where to anticipate trouble in each phase of the work as it progresses.

**2990:358 Advanced Estimating (3 Credits)**

Prerequisite: 2990:245. This course focuses on estimating and bidding for public and private construction. Includes heavy/highway, residential and building construction with use of computer software to facilitate bid price.

**2990:359 Construction Cost Control (3 Credits)**

Prerequisites: 2420:211 or 6200:201. Course develops a practical understanding of the latest managerial accounting principles and practices as they apply to the construction business.

**2990:361 Construction Formwork (3 Credits)**

Prerequisite: 2990:234 or permission. Introduction to design and construction of formwork and temporary wood structures.

**2990:362 Advanced Elements of Structures (3 Credits)**

Prerequisite: 2990:234. This course examines advanced topics in structural engineering and is an extension of Elements of Structures.

**2990:371 Green & Sustainable Building Practices (3 Credits)**

This course is designed to provide an understanding of sustainable construction practices and their importance on environmental issues.

**2990:453 Legal Aspects of Construction (2 Credits)**

Prerequisite: Admission into the BCET program or permission. Study of business of contracting and subcontracting and legal problems therein such as breach, partial performance, payment, insolvency, subsurface. Review of standard contracts and construction industry rules of arbitration.

**2990:455 Computerized Precision Estimating (3 Credits)**

Prerequisite: 2990:245. Students will explore sophisticated software programs utilized by the construction industry to prepare estimates and bid packages.

**2990:462 Mechanical Service Systems (3 Credits)**

Introduction to materials and equipment used in mechanical heating, ventilating, air conditioning, water and waste systems.

**2990:463 Electrical Service Systems (3 Credits)**

Introduction to materials and equipment in electrical systems of buildings. Includes illumination, electrical sources, materials and distribution. Emphasis of fire safety.

**2990:465 Heavy Construction Estimating (3 Credits)**

Prerequisite: 2990:245. Quantity takeoffs and cost analysis to include methods, systems, and equipment relevant to heavy highway and civil infrastructure projects.

**2990:466 Hydraulics (3 Credits)**

Prerequisite: 2030:356. Introduction to hydrology. Flow in closed conduits and open channels, distribution, systems, storage requirements and basic concepts of hydraulic structures. Basic concepts of seepage and working knowledge of pumps.

**2990:468 Construction Management (3 Credits)**

Prerequisites: 2990:352 and 2990:358. Construction Management takes established construction practices, current technological advances, and latest management methods and makes them into an efficient, smooth working system.

**2990:469 Contracts and Specifications (2 Credits)**

Prerequisite: Admission to BSCET program or permission. This course studies the principles and applications of construction specifications, contracts, processes for managing professional risk and increasing economic performance of the construction process.

**2990:471 Understanding LEED Guidelines (3 Credits)**

Prerequisite: 2990:371. Provides an understanding of LEED guidelines and requirements and help prepare the student for the LEED associate exam.

**2990:479 CPC Seminar (3 Credits)**

Prerequisite: Must be of senior level status towards a B.S. Degree in Construction Engineering Technology or permission. This course prepares students for the content and format of the Certified Professional Constructor's Examination.

**2990:489 Special Topics in Construction (1-3 Credits)**

Prerequisite: Permission of instructor. (May be repeated for up to six credits.) Special lecture/laboratory courses offered once or only occasionally in areas where no formal courses exist.

**2990:490 Workshop in Construction (1-3 Credits)**

Prerequisites: Permission. Group studies of special topics in construction. May not be used to meet undergraduate major requirements in construction. May be used for elective credit only. (May be repeated for up to six credits)

**2990:497 Honors Project (1-3 Credits)**

Prerequisite: Senior standing in Honors College and permission of supervising faculty in student's degree field and pursuit of major in CET. Individual Senior Honor's Project relevant to student's major field of study. Specific projects are approved and supervised by a designated member of the faculty in the student's degree field.

**2990:498 Independent Study in Construction (1-3 Credits)**

Prerequisite: Permission. Directed study in a special field of interest chosen by student in consultation with instructor. (May be repeated for up to six credits)

## Advanced Manufacturing Engineering Technology, AAS

### Associate of Applied Science in Advanced Manufacturing Engineering Technology (288006AAS)

More on the Advanced Manufacturing Engineering Technology major (<https://uakron.edu/est/automated-manufacturing-technology/>)

## Program Contact

Dr. Wesley Carpenter  
Program Director

Schrank Hall (South) 221A  
330/972-7889  
wac1@uakron.edu

## Program Information

Advanced Manufacturing Engineering Technology is concerned with the analysis, design, and management of all the resources, facilities, and people involved in manufacturing processes. Advanced Manufacturing Engineering Technology requires a background in basic technical subjects, management techniques, work measurement, safety procedures, plant layout, quality control, maintenance, production control, economics, and computer applications such as CAD, CNC, and CAM.

## Career Information

A graduate of this program finds employment in manufacturing supervision and control. Duties involve the design, modification, installation, and operation of advanced manufacturing systems, materials, machines, and methods used to produce a product at a profit. Specific career opportunities may be found in the following functional areas:

- Manufacturing Engineering Technician
- Manufacturing Supervision
- Methods – production, planning, methods and engineering
- Work Measurements – time study, motion study, and standards
- Wage Payment – wage incentives, job evaluation
- Controls – production control, quality control, inventory control
- Plant Facilities and Design – plant layout, material handling, product design, storage facilities, and maintenance of plant equipment
- Industrial Relations – management-union relations, workers' compensation
- Purchasing
- Safety and Industrial Hygiene
- Estimating
- Profit and Cost Analysis
- Quality Control and Assurance

For additional information visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) (<http://www.bls.gov>) or the Career Center at the Student Union, room 211 <http://www.uakron.edu/career> (<http://www.uakron.edu/career/>).

Cooperative Education is available on an optional basis in this academic program. To obtain additional information on program benefits, eligibility requirements, or to apply for the program, contact the Career Center at 330-972-7747 or at <http://www.uakron.edu/career/> no later than the beginning of the second semester.

## Bachelor Degree Programs

Upon completion of the Advanced Manufacturing Engineering Technology Associate of Applied Science Degree, a student may proceed to the Automated Manufacturing Engineering Technology Bachelor of Science Degree. Please refer to the Automated Manufacturing Engineering Technology Bachelor of Science Degree Curriculum Guide for further information. An additional degree option is to proceed to the Bachelor of Organizational Supervision Degree.



## Technical Electives

Code	Title	Hours
2420:211	Essentials of Financial Accounting	3
2420:212	Basic Accounting II	3
2420:280	Essentials of Business Law	3
2520:101	Essentials of Marketing Technology	3
2870:332	Management of Technology Based Operations	3
2870:480	Automated Production	3
2920:101	Introduction to Mechanical Design	3
3650:163	Technical Physics: Electricity & Magnetism	2
3650:164	Technical Physics: Heat & Light	2

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Upon completion of the Advanced Manufacturing Engineering Technology Associate of Applied Science Degree, a student may proceed to the Automated Manufacturing Engineering Technology Bachelor of Science Degree. Please refer to the Automated Manufacturing Engineering Technology Bachelor of Science Degree Curriculum Guide for further information.

Transfer students should consult their Advisor to identify courses that are equivalent.

1st Year		
Fall Semester		Hours
2020:121	English	3
2030:152	Technical Mathematics II <sup>1</sup>	2
2030:153	Technical Mathematics III <sup>1</sup>	2
2920:130	Introduction to Hydraulics and Pneumatics <sup>1,2</sup>	3
2880:101	Introduction to Advanced Manufacturing <sup>1,2</sup>	2
2880:110 or 2920:142	Manufacturing Processes <sup>1,2</sup> or Introduction to Material Technology	3
Hours		15
Spring Semester		
2880:151	Industrial Safety & Environmental Protection <sup>1</sup>	2
2030:154	Technical Mathematics IV	3
2880:248	Introduction to CNC and Additive Manufacturing	3
2880:140	Computer Aided Drawing	3
3002:256	Diversity in American Society	3
Hours		14

Summer Semester		
2000:201	Cooperative Education	0
Hours		0
2nd Year		
Fall Semester		
2020:222	Technical Report Writing	3
2420:263	Professional Communications and Presentations	3
2880:130	Work Measurement & Cost Estimating	3
2880:211	Manufacturing Operations <sup>2</sup>	3
3650:150 or 3650:160	Manufacturing Physics (Sch. Lab) or Technical Physics: Mechanics	4
Hours		16
Spring Semester		
2040:243	Contemporary Global Issues	3
2880:241	Introduction to Quality Assurance (Sch. Lab)	3
2880:225	Computer Aided Tool Design	3
Open Elective <sup>4</sup>		1
Select one Technical Elective Option:		5
Option #1 (On-Campus Students)		
2880:201	Robotics & Automated Manufacturing (Sch. Lab) <sup>3</sup>	
2860:210	Industrial Control Panel Fabrication	
Option #2 (Off-Campus and Online Students)		
Select five credits from Technical Elective list <sup>4</sup>		
Hours		15
Total Hours		60

<sup>1</sup> Students completing NTMA Journeyman's Machinist Program receive block credit for these courses. Students who have not completed the entire program or who have completed the program prior to 1/1/96, see an advisor.

<sup>2</sup> Traditionally Fall only (See Program Director).

<sup>3</sup> Traditionally Spring only (See Program Director).

<sup>4</sup> Please note that for Option #2, you may take a second 3-credit course by combining the 2-credit technical elective with the 1-credit open elective.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

**You must have a minimum cumulative GPA of a 2.0 to graduate with this degree.**

# Automated Manufacturing Engineering Technology, BS

## Bachelor of Science in Automated Manufacturing Engineering Technology (287103BS)

More on the Automated Manufacturing Engineering Technology major (<https://uakron.edu/est/automated-manufacturing-technology/>)

### Program Contact

Dr. Wesley Carpenter  
Program Director  
Schrank Hall (South) 221A  
330/972-7889  
wac1@uakron.edu

The student is urged to consult The University of Akron Bulletin and the University College General Education requirements to ensure that all requirements for graduation are met. Students enter the Bachelor of Science AMET program from different associate degree programs and therefore may have different General Education requirements remaining.

### Program Information

Graduates of the Automated Manufacturing Engineering Technology degree will possess knowledge in robotics, computer integrated manufacturing, computer numerical control, manufacturing processes, manufacturing operations management, and quality control techniques to enter technician level careers in process and system design, manufacturing operations, maintenance, and technical sales or service.

- The first two years are completed as an AAS degree in Construction Engineering Technology or similarly based program.

### Required Bridgework

1. Completion of an associate degree program in engineering, science, or business technology (or related) or the first two years of a bachelor degree program with a minimum grade point average of 2.0.
2. Completed with a minimum grade of "C" 2880:241 Introduction to Quality Assurance or equivalent.
3. Completed with a minimum grade of "C" 2880:110 Manufacturing Processes or equivalent.
4. Completed with a minimum grade of "C" 2880:248 Introduction to CNC and Additive Manufacturing or equivalent.

The following information has official approval of the **Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

### Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		
Major Courses for General Education		28
Other Discipline Specific Courses		27
Math and Physical/Natural Science Courses		17
Required Courses		57
Total Hours		129

### General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

### Recommended Sequence

3rd Year		Hours
Fall Semester		
2030:255	Technical Calculus I	3
2870:348	CNC Programming I (Sch. Lab)	3
2860:370	Survey of Electronics I <sup>1</sup>	3
2880:230	3-D Modeling & Design (Lecture) <sup>2</sup>	3
Humanities Requirement		
Select one of the following:		4
3400:210	Humanities in the Western Tradition from Ancient Times to 1500	
3400:221	Humanities in the World since 1300	
Hours		16
Spring Semester		
2820:111	Introductory Chemistry <sup>1</sup>	3

2870:301	Computer Control of Automated Systems <sup>2</sup>	3
2870:311	Facilities Planning <sup>2</sup>	3
2920:310	Economics of Technology	3
2870:332	Management of Technology Based Operations	3
Select one of the following:		3
3300:252	Shakespeare & His World	
3600:101	Introduction to Philosophy	
Arts or Humanities Requirement		
Hours		18

**4th Year**

**Fall Semester**

2920:101	Introduction to Mechanical Design <sup>1</sup>	3
2870:470	Simulation of Manufacturing Systems <sup>1</sup>	3
2870:448	CNC Programming II <sup>1</sup>	3
2920:370	Plastics Design & Process <sup>1</sup>	3
2870:441	Advanced Quality Practices <sup>1</sup>	3
Select one of the following:		3
7100:210	Visual Arts Awareness	
7500:201	Exploring Music: Bach to Rock	
7900:200	Viewing Dance	
Arts Requirement		
Hours		18

**Spring Semester**

2870:480	Automated Production <sup>2</sup>	3
2870:490	Manufacturing Project <sup>2</sup>	2
2920:347	Production Machinery & Processes <sup>2</sup>	3
Technical Elective <sup>3</sup>		3
Technical Elective <sup>3</sup>		3
Complex Systems Tag Requirement		3
Hours		17
Total Hours		69

- <sup>1</sup> Traditionally Fall only.
- <sup>2</sup> Traditionally Spring only.
- <sup>3</sup> Technical Electives (see table below).

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

**You must have a minimum cumulative GPA of a 2.0 to graduate with this degree.**

**Technical Electives**

Code	Title	Hours
2030:356	Technical Calculus II	3
2040:247	Survey of Basic Economics	3
2040:251	Human Behavior at Work	3
2420:202	Elements of Human Resource Management	3
2420:211	Essentials of Financial Accounting	3
2420:212	Basic Accounting II	3
2420:280	Essentials of Business Law	3
2820:310	Programming for Technologists	2

2920:142	Introduction to Material Technology	3
2920:251	Fluid Power	2
2920:252	Thermo-Fluids Laboratory	1
2920:470	Plastics Processing & Testing	2
2990:125	Statics	3
3470:261	Introductory Statistics I	2
3470:262	Introductory Statistics II	2
2520:101	Essentials of Marketing Technology	3

- <sup>1</sup> Students completing NTMA Journeyman's Machinist Program receive block credit for these courses. Students who have not completed the entire program or who have completed the program prior to 1/1/96, see an advisor.
- <sup>2</sup> Traditionally Fall only.
- <sup>3</sup> Traditionally Spring only.
- <sup>4</sup> Please note that for Option #2, you may take a second 3-credit course by combining the 2-credit technical elective with the 1-credit open elective.
- <sup>5</sup> Technical Electives (see Requirements tab for list).

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

**You must have a minimum cumulative GPA of a 2.0 to graduate with this degree.**

**Construction Engineering Technology, AAS**  
**Associate of Applied Science in Construction Engineering Technology (299103AAS)**

More on the Construction Engineering Technology major (<https://www.uakron.edu/engineering/CE/undergraduate/construction-tech/>)

**Program Contact**

Prof. Marcia Belcher  
 Program Director  
 Schrank Hall (South) 221J  
 330-972-2055  
 mcbelcher@uakron.edu

**Program Information**

The AAS in Construction Engineering Technology program includes classroom and laboratory experiences which prepare students for careers in the construction industry and other allied industries.

Courses completed for this degree are transferable to the related Bachelor of Science degree within the program, which is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>. Please consult the Program Director or Advising for more information.

**Career Information**

Individuals working in the field of construction engineering technology use knowledge of construction methods, business operations, and

management skills to support construction projects. They work on residential and commercial buildings, bridges, road dams, wastewater treatment systems, or other similar projects. Common jobs assumed by graduates of this program include but are not limited to:

- **Engineering Technician** - use the principles and theories of science, engineering, and mathematics to solve technical problems in research and development, manufacturing, sales, construction, inspection, and maintenance.
- **Construction Inspector** - ensure that construction, alteration, or repair complies with building codes and ordinances, zoning regulations, and contract specifications.
- **Cost Estimator or Cost Engineer** - responsible for creating the budget for a project to bid on it or aid in the project's management. Monitors and analyzes project cost estimates, expenditures, and forecasts.
- **Scheduler** - planning and scheduling of construction work and work crew. Gathers and analyzes information to prepare reports on the progress of projects.
- **Field Engineer** - Monitors activities at construction sites. Works to ensure construction progresses as scheduled and contract specifications are adhered to. Inspects construction site daily and works with contractors to complete scope items.
- **Project Engineer** - Under the supervision of the Project Manager, provides technical support to construction staff. Reviews plans and other technical documents, answers questions regarding the scope and/or timing of the project, and monitors costs and project progress.

For additional information visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) (<http://www.bls.gov>) or the Career Center at Student Union 211. <http://www.uakron.edu/career> (<http://www.uakron.edu/career/>).

## Bachelor Degree Programs

Upon completion of the Construction Engineering Technology Associate of Applied Science Degree, a student may enroll in the Construction Engineering Technology Bachelor of Science Degree. Please refer to the Construction Engineering Technology Bachelor of Science Degree Curriculum Guide for further information.

The following information has official approval of the **Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Transfer students should consult their Advisor to identify courses that are equivalent.

1st Year		
Fall Semester		Hours
2020:121	English	3
2030:154	Technical Mathematics IV	3
2990:129	Computer Applications in Construction (Sch. Lab) <sup>1</sup>	3

2990:131	Building Construction <sup>1</sup>	2
3650:160	Technical Physics: Mechanics	4
Hours		15
Spring Semester		
2020:222	Technical Report Writing	3
2030:255	Technical Calculus I	3
2420:263	Professional Communications and Presentations	3
2990:125	Statics	3
2990:150	Plan Reading <sup>2</sup>	2
Hours		14
2nd Year		
Fall Semester		
2990:225	Strength of Materials	3
2990:237	Materials Testing I (Sch. Lab) <sup>1</sup>	2
2990:246	Site Engineering <sup>1</sup>	3
or 2980:101	or Basic Surveying	
3650:163	Technical Physics: Electricity & Magnetism (Sch. Lab)	2
3650:164	Technical Physics: Heat & Light (Sch. Lab)	2
2990:xxx	Technical Elective	3
Hours		15
Spring Semester		
2040:242	American Urban Society	3
2990:234	Elements of Structures <sup>2</sup>	3
2990:238	Materials Testing II <sup>2</sup>	2
2990:245	Construction Estimating <sup>2</sup>	3
2990:xxx	Technical Elective <sup>3</sup>	6
Hours		17
Total Hours		61

<sup>1</sup> Traditionally Fall only (See Program Contact).

<sup>2</sup> Traditionally Spring only (See Program Contact).

<sup>3</sup> Technical Electives are subject to enrollment demands and classroom schedules. See the list below.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

## Technical Electives

Code	Title	Hours
2870:332	Management of Technology Based Operations	3
2980:xxx	Select 2980 Courses	
2990:254	Building Codes	3
2990:310	Residential Building Construction	3
2990:312	Neighborhood Revitalization Project	3
2990:359	Construction Cost Control	3
2990:361	Construction Formwork	3
2990:362	Advanced Elements of Structures	3
2990:465	Heavy Construction Estimating	3
2990:471	Understanding LEED Guidelines	3
2990:489	Special Topics in Construction	1-3

2990:490	Workshop in Construction	1-3
2990:498	Independent Study in Construction	1-3

## Construction Engineering Technology, BS

### Bachelor of Science in Construction Engineering Technology (299103BS)

More on the Construction Engineering Technology major (<https://www.uakron.edu/engineering/CE/undergraduate/construction-tech/>)

#### Program Contact

Prof. Marcia Belcher  
Program Director  
Schrank Hall (South) 221J  
330-972-2055  
mcbelcher@uakron.edu

#### Program Description

The BS in Construction Engineering Technology degree program is an upper-level degree program designed to provide the student with additional education beyond the AAS degree in Construction Engineering Technology. This degree is also designed to meet the formal education requirements for registration as a Professional Engineer in the State of Ohio.

This degree program is defined as follows:

- The first two years are completed as an AAS degree in Construction Engineering Technology or similarly based program.
- Two years of additional prescribed coursework.
- A cooperative work experience in the construction field. The student normally enters the co-op segment between the junior and senior years.

The B.S. in Construction Engineering Technology degree program includes classroom, laboratory and industry experiences which prepares students for careers in the construction industry and other allied industries.

This program is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org> (<http://www.abet.org/>)

#### Career Opportunities Available

Individuals working in the field of construction engineering technologies use knowledge of construction methods, business operations and management skills to support construction projects. They work on residential or commercial buildings, bridges, roads, dams, wastewater treatment systems, or other similar projects. Common jobs assumed by graduates of this program include:

- **Field Engineer** - Monitors activities at construction sites. Works to ensure construction progresses as scheduled and contract specifications are adhered to. Inspects construction site daily and works with contractors to complete scope items.
- **Project Engineer** - Under the supervision of the Project Manager, provides technical support to construction staff. Reviews plans and other technical documents, answers questions regarding the scope and/or timing of the project, and monitors costs and project progress.

- **Construction Manager** - plan, organize, direct and coordinate building projects. Often called project managers, constructors, construction superintendents, project engineers, construction supervisors, or general contractors.
- **Construction Inspector** - ensure that construction, alteration, or repair complies with building codes and ordinances, zoning regulations, and contract specifications
- **Construction Coordinator** - coordinates construction scheduling and communication and acts as a liaison to project management concerning bids, subcontracting, progress and delays.
- **Cost Estimator or Cost Engineer** - responsible for creating the budget for a project to bid on it or aid in the project's management. Monitors and analyzes project cost estimates, expenditures, and forecasts.
- **Scheduler** - planning and scheduling of construction work and work crew. Gathers and analyzes information to prepare reports on the progress of projects.
- **Engineering Technician** - use the principles and theories of science, engineering, and mathematics to solve technical problems in research and development, manufacturing, sales, construction, inspection, and maintenance.

#### Requirements for Admission

Applicants for the Construction Engineering Technology program must hold an associate degree in Construction Engineering Technology from an accredited program or provide evidence of an equivalent academic background. The applicant must have a minimum cumulative grade-point average of 2.0 out of a possible 4.0.

Applicants with an associate degree in a discipline other than Construction Engineering Technology will be required to complete a specific formal set of courses as specified at the time of admission. Final approval for admission is based upon recommendations from the Director of the Construction Engineering Technology Program.

#### Cooperative Work Study Requirement

The required cooperative work study experience of the Construction Engineering Technology program may begin after the student has completed 64 hours of course work in the Construction Engineering Technology program. This requirement may be satisfied by one of the following options:

1. One semester<sup>1</sup> co-op registered with the Center for Career Management.
2. 120 service hours with a credible construction organization.<sup>2</sup>
3. One calendar year of full-time, continuous, and ongoing employment in a construction management related position.<sup>2</sup>

<sup>1</sup> Summer I and II combined count as one semester for the co-op.

<sup>2</sup> For options B and C, a portfolio of work must be submitted to and approved by the Program Director. The portfolio will include but not be limited to a description of the various work, evidence of work such as supervisor letters or certificates, and a technical paper, addressing a relevant topic associated with the work.

#### Requirements for Graduation

- Compliance with the requirements of the general education program as outlined in this Bulletin.

- Completion of the requirements for the associate degree in Construction Engineering Technology at The University of Akron or an approved associate degree program

Successful completion of a minimum of 121 credits in the B.S. in Construction Engineering Technology Program including the associate degree program, the general education courses, co-op/work study, and Year 3 and Year 4 course requirements.

The following information has official approval of the **Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

### 3rd Year

Fall Semester		Hours
2030:356	Technical Calculus II	3
2990:352	Field Management & Scheduling (Sch. lab) <sup>1</sup>	2
2990:354	Foundation Construction Methods <sup>1</sup>	3
3002:256 or 7750:244	Diversity in American Society or Death & Dying	3
Select one of the following:		4
3400:210	Humanities in the Western Tradition from Ancient Times to 1500	
3400:221	Humanities in the World since 1300	
Humanities Requirement		
Hours		15

### Spring Semester

2990:356	Safety in Construction <sup>2</sup>	3
2990:358	Advanced Estimating <sup>2</sup>	3
2990:371	Green & Sustainable Building Practices <sup>2</sup>	3
6200:201 or 2420:211	Accounting Principles I or Essentials of Financial Accounting	3
Select one of the following:		3
7100:210	Visual Arts Awareness	
7500:201	Exploring Music: Bach to Rock	
7900:200	Viewing Dance	
Arts Requirement		
Hours		15

### Summer Semester

Corporate Work Study (15 Weeks)		
Hours		0

### 4th Year

Fall Semester		Hours
2990:462	Mechanical Service Systems	3
2990:468	Construction Management <sup>1</sup>	3
2990:469	Contracts and Specifications	2
Technical Elective <sup>3</sup>		3

Select one of the following:		3
3300:252	Shakespeare & His World	
3600:101	Introduction to Philosophy	
Arts or Humanities Requirement		
Hours		14
<b>Spring Semester</b>		
2040:243	Contemporary Global Issues	3
2990:453	Legal Aspects of Construction <sup>2</sup>	2
2990:463	Electrical Service Systems	3
2990:466	Hydraulics <sup>2</sup>	3
5550:211	First Aid & Cardiopulmonary Resuscitation	2
Complex Systems Tag Requirement		3
Hours		16
Total Hours		60

<sup>1</sup> Traditionally Fall only.

<sup>2</sup> Traditionally Spring only.

<sup>3</sup> Technical Electives are subject to enrollment demands and classroom schedules. See the list below.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your *required* General Education English, Mathematics, and Communications (Speech) requirements.**

## Technical Electives

Code	Title	Hours
2870:332	Management of Technology Based Operations	3
2990:310	Residential Building Construction	3
2990:312	Neighborhood Revitalization Project	3
2990:359	Construction Cost Control	3
2990:361	Construction Formwork	3
2990:362	Advanced Elements of Structures	3
2990:465	Heavy Construction Estimating	3
2990:471	Understanding LEED Guidelines	3
2990:489	Special Topics in Construction	1-3
2990:490	Workshop in Construction	1-3
2990:497	Honors Project	1-3
2990:498	Independent Study in Construction	1-3

## Construction Estimation, Certificate Certificate in Construction Estimation (299110C)

This certificate program is aimed at developing technical knowledge and skills necessary to accurately estimate construction projects. This certificate may be earned independently of earning a degree, but all coursework can be applied to an AAS degree or the BS degree in Construction Engineering.

### Program Contact

Professor Marcia Belcher, P.E.  
Construction Engineering Technology Program Director  
College of Applied Science and Technology  
330-972-2055

mcbelcher@uakron.edu

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Construction Estimation" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		15
Total Hours		15

## Required Courses

Code	Title	Hours
2990:131	Building Construction	2
2990:150	Plan Reading	2
2990:245	Construction Estimating	3
2990:358	Advanced Estimating	3
2990:465	Heavy Construction Estimating	3
2990:469	Contracts and Specifications	2
Total Hours		15

## Construction Field Operations, AAS

### Associate of Applied Science in Construction Field Operations (299111AAS)

#### Program Contact

Prof. Marcia Belcher  
Program Director  
Schrank Hall (South) 221J  
330-972-2055  
mcbelcher@uakron.edu

#### Program Information

The AAS in Construction Field Operations Technology program includes classroom and laboratory experiences which prepare students for careers in the construction industry as field superintendents, foremen, project management assistants, inspectors and other allied industrial positions.

#### Career Information

Individuals working in the area of construction field operations technology use knowledge of construction methods and materials, supervision, inspection, and fundamental management skills necessary to support construction projects. They work on residential and commercial buildings, bridges, roads, dams, wastewater treatment systems, or other similar projects. Common jobs assumed by graduates of this program include but are not limited to:

- **Engineering Technician** – use the principles and theories of science, engineering, and mathematics to solve technical problems in research and development, manufacturing, sales, construction, inspection, and maintenance.
- **Construction Inspector** – ensure that construction, alteration, or repair complies with building codes and ordinances, zoning regulations, and contract specifications.
- **Construction Superintendent** – runs day-to-day field operations on the construction site and controls the short-term schedule. The superintendent's role also includes quality control and subcontractor coordination responsibilities.
- **Construction Foreman** – the foreman is the tradesman with specialist's knowledge of a given trade and is focused on the overall management of that particular trade on the job site.
- **Field Engineer's Assistant** – Monitors activities at construction sites and reports to Project Engineer and/or Owner's Representative. Contributes to the maintaining of the project schedule and budget, as well as ensuring compliance with the contract specifications.

## Bachelor Degree Programs

Upon completion of the Construction Field Operation Technology Associate of Applied Science Degree, a student may enroll in the Construction Engineering Technology Bachelor of Science Degree. There are a series of bridgework courses in math and science that must first be completed. Please refer to the Construction Engineering Technology Bachelor of Science Degree Curriculum Guide for further information or contact the program director.

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#### 1st Year

Fall Semester		Hours
2020:121	English	3
2030:152	Technical Mathematics II	2
2030:153	Technical Mathematics III	2
2980:101	Basic Surveying <sup>1</sup>	3
2990:129	Computer Applications in Construction <sup>1</sup>	3
2990:131	Building Construction <sup>1</sup>	2
Hours		15

#### Spring Semester

2020:222	Technical Report Writing	3
2420:263	Professional Communications and Presentations	3
2990:150	Plan Reading <sup>2</sup>	2
2990:248	Construction Graphics	3
Select one of the following:		3-4

3370:101	Introductory Physical Geology (recommended)	
3370:xxx	Natural Science Requirement without Lab	
Hours		14-15
<b>2nd Year</b>		
<b>Fall Semester</b>		
2980:222	Construction Surveying	3
2990:226	Construction Supervision <sup>1</sup>	3
2990:246	Site Engineering <sup>1</sup>	3
2990:237	Materials Testing I <sup>1</sup>	2
2990:310	Residential Building Construction	3
Hours		14
<b>Spring Semester</b>		
2990:235	Construction Inspection	3
2990:238	Materials Testing II <sup>2</sup>	2
2990:356	Safety in Construction <sup>2</sup>	3
7750:230	Human Relations	3
	Technical Elective	3
	Technical Elective	3
Hours		17
Total Hours		60-61

<sup>1</sup> Traditionally Fall only (See Program Contact).

<sup>2</sup> Traditionally Spring only (See Program Contact).

**Policy Alert:** By the end of your first 48 credit hours attempted, you must have completed your *required* General Education English, Mathematics, and Communications (Speech) requirements.

## Construction Management, Certificate

### Certificate in Construction Management (299104C)

This program is aimed at developing technical knowledge and skills necessary to supervise a construction project. This certificate may be earned independently of earning a degree, but all coursework can be applied to an AAS degree or the BS degree in Construction Engineering.

#### Program Contact

Professor Marcia Belcher, P.E.  
Construction Engineering Technology Program Director  
College of Applied Science and Technology  
330-972-2055  
mcbelcher@uakron.edu

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Construction Management" and must be completed with a minimum grade point

average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		16
Total Hours		16

## Required Courses

Code	Title	Hours
2990:352	Field Management & Scheduling	2
2990:358	Advanced Estimating	3
2990:359	Construction Cost Control	3
2990:453	Legal Aspects of Construction	2
2990:468	Construction Management	3
2990:479	CPC Seminar	3
Total Hours		16

Note: Because most of the required courses have prerequisites, student should consult with the program director of the Construction Engineering Technology program for a contract before beginning course work.

## Construction Materials Testing, Certificate

### Certificate in Materials Testing (299106C)

The purpose of the certificate program in Materials Testing is to train individuals in the processes and procedures involved in standardized laboratory testing of construction related materials. This certificate may be earned independently of earning a degree, but all coursework can be applied to an AAS degree or the BS degree in Construction Engineering.

#### Program Contact

Professor Marcia Belcher, P.E.  
Construction Engineering Technology Program Director  
330-972-2055  
mcbelcher@uakron.edu

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Materials Testing" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		16
Total Hours		16



## Required Courses

Code	Title	Hours
2990:125	Statics	3
2990:225	Strength of Materials	3
2990:237	Materials Testing I	2
2990:238	Materials Testing II	2
2990:354	Foundation Construction Methods	3
2990:246	Site Engineering	3
Total Hours		16

## Corrosion Engineering Technology, AAS

### Associate of Applied Science in Corrosion Engineering Technology (285000AAS)

More on the Corrosion Engineering Technology major (<https://www.uakron.edu/est/corrosion-engineering-technology/>)

### Program Contact

Dr. Jennifer Lillard  
Program Director  
Schrank Hall (South) 117B  
330-972-6787  
jlillard@uakron.edu

### Program Description

The AAS in Corrosion Engineering Technology program includes classroom and laboratory experiences which prepare students for careers in the corrosion industry and other allied industries.

### Career Information

A person with an associate degree in Corrosion Engineering Technology can find employment in any industry that is impacted by material degradation. Examples include the oil and gas, chemical processing, and construction industries.

The program prepares the student to evaluate corrosion of materials in the field and apply strategies for mitigating corrosion. In completing the AAS degree in Corrosion Engineering Technology, the student will also be prepared to pass certification tests in Basic Corrosion and Cathodic Protection offered by NACE.

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Transfer students should consult their Advisor to identify courses that are equivalent.

1st Year		
Fall Semester		Hours
2020:121	English	3
2030:153	Technical Mathematics III	2
2040:240	Human Relations	3
2420:263	Professional Communications and Presentations	3
2820:111	Introductory Chemistry <sup>1</sup>	3
2850:120	Corrosion Engineering Technology Fundamentals I	3
Hours		17
Spring Semester		
2020:222	Technical Report Writing	3
2030:154	Technical Mathematics IV	3
2820:112	Introductory & Analytical Chemistry <sup>2</sup>	3
2820:160	Technical Physics: Mechanics	4
2850:121	Corrosion Engineering Technology Fundamentals II	4
Hours		17
2nd Year		
Fall Semester		
2040:244	Death & Dying	2-3
or 2040:254	or The Black Experience from 1619-1877	
or 2040:256	or Diversity in American Society	
2820:163	Technical Physics: Electricity & Magnetism (Sch. Lab)	2
2850:220	Strategies for Corrosion Prevention	4
2920:142	Introduction to Material Technology <sup>2</sup>	3
2990:125	Statics	3
Hours		14-15
Spring Semester		
2040:247	Survey of Basic Economics	3
2850:221	Corrosion Engineering Technology Projects	4
2880:241	Introduction to Quality Assurance	3
2990:225	Strength of Materials	3
Hours		13
Total Hours		61-62

<sup>1</sup> Traditionally Fall only (see Program Contact)

<sup>2</sup> Traditionally Spring only (see Program Contact)

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

## Corrosion Technology, Certificate

### Certificate in Corrosion Technology (285000C)

The objective of this certificate is to enhance student knowledge of the fundamentals of corrosion technology, including forms of corrosion,

types of corrosive environments, material selection, corrosion control, testing, monitoring and treatment.

#### Program Contacts

Lori Kraft  
Professor of General Technology  
330-972-7058  
lkraft@uakron.edu

Shari Thorman  
Academic Advisor  
330-972-6327  
thorman@uakron.edu  
Schrank Hall South 123

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Corrosion Technology" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		5
Electives		12
Total Hours		17

## Required Courses

Code	Title	Hours
2850:100	Introduction to Corrosion Technology	2
2850:200	Advanced Corrosion Technology	3
Total Hours		5

## Electives

Code	Title	Hours
<b>Complete one course from each of the following four categories</b>		<b>12</b>
<i>Chemistry I Courses</i>		
2820:111	Introductory Chemistry	
or 3150:151	Principles of Chemistry I	
<i>Chemistry II Courses</i>		
2820:112	Introductory & Analytical Chemistry	
or 3150:153	Principles of Chemistry II	
<i>Circuits Courses</i>		
2860:122	AC Circuits	
or 2860:370	Survey of Electronics I	
or 4400:307	Basic Electrical Engineering	
<i>Materials/Devices Courses</i>		
2920:142	Introduction to Material Technology	
or 2860:225	Applications of Electronic Devices	
or 4200:305	Materials Science	

or 4300:202 Introduction to Mechanics of Solids

Total Hours 12

## Drafting and Computer Drafting, Certificate

### Certificate in Drafting and Computer Drafting (294001C)

#### Program Contact

Dr. David Roke  
The College of Applied Science & Technology  
330-972-6813  
roke@uakron.edu

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Drafting and Computer Drafting" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		17
Total Hours		17

## Required Courses

Code	Title	Hours
2880:140	Computer Aided Drawing	3
2880:230	3-D Modeling & Design	3
2920:121	Fundamentals of Engineering Drawing	3
2980:170	Surveying Drafting	3
2985:101	Introduction to Geographic & Land Information Systems	3
2990:150	Plan Reading	2
Total Hours		17

Note:

- Students must achieve a grade of C or better in their technical courses.

# Electrical and Electronic Engineering Technology, AAS

## Associate of Applied Science in Electrical and Electronic Engineering Technology (286001AAS)

### Program Contact

Dr. David Roke  
Interim Department Chair  
Schrank Hall (South) 123  
330-972-6813  
roke@uakron.edu

### Program Information

This program prepares individuals for work as technicians in developing, manufacturing, installing, testing and maintaining electrical and electronic equipment and systems.

### Career Information

The demand by industry for electronic technicians is now and will continue to be great. It is estimated that thousands of new electronic technicians will be required each year. Electronic technicians find employment in many areas of the electronics field; some of the specific career opportunities include:

- *Computer Technician* - installation, implementation, maintenance of data processing hardware and systems.
- *Engineering Aide* - assists engineers in the design, development, and testing of new electronic equipment.
- *Customer-Service Technician* - installs, operates, and maintains electronic equipment located at the customer's installation. Also provides training for the customer's personnel.
- *Communications Technician* - installs and operates various types of commercial and govt. communications equipment.
- *Plant Technician* - works in electronic manufacturing operations in designing and setting up quality control and other tests for manufactured products. Also may supervise and train electronic production workers

### Placement or Optional Cooperative Education

Co-op work experiences are available on an optional basis in this academic program. To obtain additional information contact the Career Center regarding these opportunities.

For additional information regarding career opportunities in the Electronic Engineering Technology field, please visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) (<http://www.bls.gov>) or the Career Center at the Student Union, room 211, (330-972-7747) <http://www.uakron.edu/career> (<http://www.uakron.edu/career/>)

### Bachelor Degree Programs

Upon completion of the Electrical and Electronic Engineering Technology Associate of Applied Science Degree, a student may proceed to the Electrical and Electronic Engineering Technology Bachelor of Science Degree. Please refer to the Electrical and Electronic Engineering

Technology Bachelor of Science degree Curriculum Guide for further information.

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. Transfer students should consult their Advisor to identify courses that are equivalent.

1st Year		
Fall Semester		Hours
2020:121	English	3
2030:153	Technical Mathematics III	2
2420:263	Professional Communications and Presentations	3
2860:120	Circuit Fundamentals (Sch. Lab) <sup>1</sup>	4
2860:121	Introduction to Electronics and Computers (Sch. Lab) <sup>1</sup>	2
Hours		14
Spring Semester		
2030:154	Technical Mathematics IV	3
2820:160	Technical Physics: Mechanics (Sch. Lab)	4
2860:122	AC Circuits (Sch. Lab) <sup>2</sup>	3
2860:123	Electronic Devices (Sch. Lab) <sup>2</sup>	4
Hours		14
2nd Year		
Fall Semester		
2030:255	Technical Calculus I	3
2040:240	Human Relations	3
2860:225	Applications of Electronic Devices (Sch. Lab) <sup>1</sup>	4
2860:237	Digital Circuits (Sch. Lab) <sup>1</sup>	4
2860:242	Machinery & Controls (Sch. Lab) <sup>1</sup>	3
Hours		17
Spring Semester		
2040:243	Contemporary Global Issues	3
2040:244	Death & Dying	2-3
	or 2040:254 or The Black Experience from 1619-1877	
	or 2040:256 or Diversity in American Society	
	or 2040:257 or The Black Experience 1877 - 1954	
	or 2040:258 or The Black Experience 1954 - Present	
2820:164	Technical Physics: Heat & Light (Sch. Lab)	2
2860:238	Microprocessor Applications (Sch. Lab) <sup>2</sup>	4
	or 2860:251 or Electronic Communications	
2860:260	Electronic Project (Sch. Lab) <sup>2</sup>	2
	Technical Elective <sup>3</sup>	3
Hours		16-17
Total Hours		61-62

- <sup>1</sup> Traditionally Fall course offering only (See Program Contact).
- <sup>2</sup> Traditionally Spring course offering only (See Program Contact).
- <sup>3</sup> Technical Electives: Availability dependent on enrollment demands and classroom availability. Technical Electives are defined as courses outside of the Electronic Engineering Technology Program that supports a student's career interest. The following list shows approved technical electives. Some courses listed may involve prerequisites. Any course taken that is not on the following list must be approved by the Program Director in writing in order to be considered a technical elective.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

## Technical Electives

Code	Title	Hours
2870:332	Management of Technology Based Operations	3
2880:110	Manufacturing Processes	3
2920:101	Introduction to Mechanical Design	3
2920:121	Fundamentals of Engineering Drawing	3
2920:310	Economics of Technology	3
2880:140	Computer Aided Drawing	3
2880:230	3-D Modeling & Design	3
2980:101	Basic Surveying	3
2985:101	Introduction to Geographic & Land Information Systems	3
2990:125	Statics	3
2990:150	Plan Reading	2
2860:290	Special Topics: Electronic Engineering Technology	1-4

# Electrical and Electronic Engineering Technology, BS

## Bachelor of Science in Electrical and Electronic Engineering Technology (286103BS)



## Program Contact

Dr. David Roke  
Interim Department Chair  
Schrank Hall (South) 123  
330-972-6813  
roke@uakron.edu

## Program Information

Graduates of the Electrical and Electronic Engineering Technology program will work with engineers in developing, manufacturing, testing and servicing Electrical/Electronic components, equipment and systems.

Accredited by the Engineering Technology Accreditation Commission of ABET, <https://www.abet.org> (<http://www.abet.org/>)

## Program Educational Objectives

Program educational objectives are broad statements that describe what graduates are expected to attain within a few years after graduation. Program educational objectives are based on the needs of the program's constituencies (i.e., students, alumni, employers of our students, and faculty of the program).

The Bachelor of Science in **Electrical and Electronic Engineering Technology (EEET)** program at the University of Akron has as its primary educational objective to produce technically capable graduates who within five years of graduation, will demonstrate:

- the fundamental knowledge and problem-solving skills to be productive as individual and team contributors in an electrical/electronic engineering technology career field.
- a commitment to accountability, attention to detail, and reliability.
- written and verbal communication skills developed in a broad-based university education.

## Student Outcomes

Student outcomes describe what students are expected to know and be able to do by the time of graduation. These relate to the knowledge, skills, and behaviors that students acquire as they progress through the program, including:

1. an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
2. an ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
3. an ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
4. an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes;
5. an ability to function effectively as a member as well as a leader on technical teams.

## Placement or Optional Cooperative Education

Co-op work experiences are available on an optional basis in this academic program. To obtain additional information contact the Career Center regarding these opportunities.

For additional information regarding career opportunities in the Electronic Engineering Technology field, please visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) (<http://www.bls.gov>) or the Career Center at the Student Union, room 211, (330-972-7747) <http://www.uakron.edu/career> (<http://www.uakron.edu/career/>)

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation

requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

**3rd Year**

Fall Semester		Hours
2020:222	Technical Report Writing	3
2030:356	Technical Calculus II	3
	Computer Programming Elective <sup>1</sup>	2
	Electronic Engineering Technology Electives <sup>4</sup>	6
Hours		14

**Spring Semester**

2030:345	Technical Data Analysis <sup>2</sup>	2
2870:301 or 2920:405	Computer Control of Automated Systems (Sch. Lab) or Introduction to Industrial Machine Control	3
2860:352	Microcontrollers (Sch. Lab) <sup>3</sup>	4
2860:354	Advanced Circuits Applications	3
3400:210	Humanities in the Western Tradition from Ancient Times to 1500	4
Hours		16

**4th Year**

**Fall Semester**

2860:453	Control Systems (Sch. Lab) <sup>2</sup>	4
	Arts Requirement	
	Complex Systems Tag Requirement	3
	Electronic Engineering Technology Electives <sup>4</sup>	3
	Natural Science Requirement	3
	Select one of the following:	3
7100:210	Visual Arts Awareness	
7500:201	Exploring Music: Bach to Rock	
	Arts Requirement	
Hours		16

**Spring Semester**

2860:455	Senior Project <sup>3</sup>	2
	Technical Electives <sup>5</sup>	3
	Electronic Engineering Technology Electives <sup>4</sup>	6
	Select one of the following:	3
3300:252	Shakespeare & His World	
3600:101	Introduction to Philosophy	
	Arts or Humanities Requirement	
Hours		14
Total Hours		60

<sup>1</sup> Computer Programming Electives. Choose one of the following Computer Programming Electives courses.

<sup>2</sup> Traditionally Fall only. (See Program Contact).

<sup>3</sup> Traditionally Spring only (See Program Contact).

<sup>4</sup> Electronic Engineering Technology Electives. Please note that each of the following Electronic Engineering Technology Electives classes may be offered only once during the year, including the summer session. Consult with the Schedule of Classes Bulletin for exact scheduling of classes.

<sup>5</sup> Technical Electives. Availability dependent on enrollment demands and classroom availability. Technical Electives are defined as courses outside of the Electronic Engineering Technology Program that support a student's career interest. The following list shows approved technical electives. Some courses listed may involve prerequisites. Any course taken that is not on the following list must be approved by the Program Director in writing in order to be considered a technical elective. Choose a minimum of three (3) credit hours from the Technical Electives courses listed below.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

## Computer Programming Electives

Code	Title	Hours
2820:310	Programming for Technologists	2
3460:126	Introduction to Visual Basic Programming	3
3460:209	Computer Science I	4
4450:208	Programming for Engineers	3

## Electronic Engineering Technology Electives

Code	Title	Hours
2860:238	Microprocessor Applications (Sch. Lab)	4
2860:251	Electronic Communications (Sch. Lab)	4
2860:290	Special Topics: Electronic Engineering Technology	1-4
2860:360	Virtual Instrumentation and Data Acquisition	3
2860:310	National Electrical Code and Electrical System Design	3
2860:350	Advanced Circuit Theory <sup>1</sup>	3
2860:400	Computer Simulations in Technology	3
2860:406	Communication Systems	3
2860:420	Biomedical Electronic Instrumentation	3
2860:451	Industrial Electrical Systems	3
2860:490	Special Topics: Electronic Engineering Technology	1-4

<sup>1</sup> Traditionally Fall only. (See Program Contact).

## Technical Electives

Code	Title	Hours
2030:290	Special Topics: Associate Studies Mathematics	1-4
2030:361	Applied Cryptography	3
2030:480	Advanced Topics in Technical Mathematics	2
2820:111	Introductory Chemistry (Sch. Lab)	3
2820:112	Introductory & Analytical Chemistry	3
2820:290	Special Topics: General Technology	1-4
2850:200	Advanced Corrosion Technology	3
2870:332	Management of Technology Based Operations	3
2870:348	CNC Programming I	3

2870:448	CNC Programming II	3
2870:470	Simulation of Manufacturing Systems	3
2870:480	Automated Production	3
2880:110	Manufacturing Processes	3
2880:201	Robotics & Automated Manufacturing	3
2880:211	Manufacturing Operations	3
2920:101	Introduction to Mechanical Design	3
2920:142	Introduction to Material Technology	3
2920:249	Applied Thermal Energy I	2
2920:251	Fluid Power	2
2920:252	Thermo-Fluids Laboratory	1
2920:310	Economics of Technology	3
2880:140	Computer Aided Drawing	3
2940:240	Electrical & Electronic Drafting	3
2980:101	Basic Surveying	3
2985:101	Introduction to Geographic & Land Information Systems	3
2990:125	Statics	3
2990:150	Plan Reading	2
2990:245	Construction Estimating	3
2990:371	Green & Sustainable Building Practices	3
2990:453	Legal Aspects of Construction	2
2990:462	Mechanical Service Systems	3
2990:463	Electrical Service Systems	3
2990:469	Contracts and Specifications	2
3100:200	Human Anatomy & Physiology I	3
3460:306	Assembly and System Programming	4

## Geographic and Land Information Systems, Certificate

### Certificate in Geographic and Land Information Systems (298105C)

This certificate program in Geographic and Land Information Systems may be earned independently of any degree program. This certificate program has been designed to provide individuals with the basic entry-level skills necessary for those seeking positions as GIS Technicians. Basic emphasis is on understanding and applying geospatial data in digital mapping applications. GIS software will be utilized. All courses taken may be applied to an A.A.S. in GIS/LIS, Land Surveying, and /or the B.S. degree in Surveying and Mapping.

#### Program Contact

Professor Larry Shubat  
GIS/LIS Program Director  
330-972-2451  
lcs@uakron.edu

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Geographic and Land Information Systems" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

### Summary

Code	Title	Hours
Required Courses		12
Electives		3
Total Hours		15

### Required Courses

Code	Title	Hours
2985:101	Introduction to Geographic & Land Information Systems	3
2985:201	Intermediate Geographic and Land Information Systems	3
2985:205	Building Geodatabases	3
2980:445	Applications in GIS using GPS	3
Total Hours		12

### Electives

Code	Title	Hours
<b>Complete one of the following courses:</b>		<b>3</b>
2980:xxx	Any Surveying Class	
2985:xxx	Any GIS/LIS Class	
2235:350	Disaster Preparedness & Response	
Total Hours		3

## Heavy Construction, Certificate

### Certificate in Heavy Construction (299107C)

This program is aimed at developing technical knowledge and skills necessary to supervise a highway construction project. This certificate may be earned independently of earning a degree, but all coursework can be applied to an AAS degree or the BS degree in Construction Engineering.

#### Program Contact

Professor Marcia Belcher, P.E.  
Construction Engineering Technology Program Director  
330-972-2055  
mcbelcher@uakron.edu

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Heavy Construction" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		17
Total Hours		17

## Required Courses

Code	Title	Hours
2990:246	Site Engineering	3
2990:352	Field Management & Scheduling	2
2990:358	Advanced Estimating	3
2990:361	Construction Formwork	3
2990:465	Heavy Construction Estimating	3
2990:466	Hydraulics	3
Total Hours		17

Note: Because most of the required courses have prerequisites, student should consult with the program director of the Construction Engineering Technology program for a contract before beginning course work.

## Land Surveying, AAS

### Associate of Applied Science in Land Surveying (298109AAS)

More on the Land Surveying major (<https://uakron.edu/est/survey-map-engineering-tech/>)

## Program Contact

Mr. Gary A. Schuller  
Program Director  
Schrank Hall (South) 117J  
330-972-7122  
[gas1@uakron.edu](mailto:gas1@uakron.edu)

## Program Description

This program prepares graduates to work as surveying technicians under the direction of a professional registered surveyor. It is designed to provide a foundation in mathematics, natural science, and communication skills as well as the surveying skills necessary to become a Certified Surveying Technician (CST) under the National Society of Professional Surveyors' (NSPS) testing program.

Accredited by the Applied and Natural Science Accreditation Commission of ABET, <http://www.abet.org>

## Career Information

For additional information visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) (<http://www.bls.gov>) or the Career Center at the Student Union, room 211 <http://www.uakron.edu/career> (<http://www.uakron.edu/career/>).

## Bachelor Degree Programs

Upon completion of the Land Surveying Associate of Applied Science Degree, a student may proceed to the Surveying and Mapping Bachelor of Science Degree. Please refer to the Survey and Mapping Bachelor of Science Degree Curriculum Guide for further information.

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Transfer students should consult their Advisor to identify courses that are equivalent.

### 1st Year

Fall Semester		Hours
2020:121	English	3
2030:153	Technical Mathematics III	2
2980:100	Introduction to Geomatics	2
2980:101	Basic Surveying (Sch. Lab)	3
2980:170	Surveying Drafting (Sch. Lab) <sup>1</sup>	3
Hours		13

### Spring Semester

2030:154	Technical Mathematics IV	3
2030:260	Advanced Trigonometry <sup>2</sup>	2
2980:102	Topographic Surveying (Sch. Lab)	2
2980:155	Computer Applications in Surveying (Sch. Lab)	3
3650:160	Technical Physics: Mechanics (Sch. Lab)	4
Hours		14

### Summer Semester

2980:123	Surveying Field Practice	2
Hours		2

### 2nd Year

Fall Semester		Hours
2040:243	Contemporary Global Issues	3
2980:222	Construction Surveying (Sch. Lab) <sup>1</sup>	3
2980:223	Geospatial Technologies (Sch. Lab)	3
2980:228	Boundary Surveying (Sch. Lab)	3
	Surveying Elective <sup>3</sup>	2
Hours		14

### Spring Semester

2420:263	Professional Communications and Presentations	3
2980:225	Advanced Surveying (Sch. Lab) <sup>2</sup>	3
2980:251	CST Seminar <sup>4</sup>	1
2985:101	Introduction to Geographic & Land Information Systems (Sch. Lab)	3
3350:100	Introduction to Geography	3
3370:101	Introductory Physical Geology	4
Hours		17

Total Hours 60

- <sup>1</sup> Traditionally Fall only (See Program Contact).
- <sup>2</sup> Traditionally Spring only (See Program Contact).
- <sup>3</sup> Surveying Electives - see list below.
- <sup>4</sup> Students must take the National Society of Professional Surveyors (NSPS) Certified Surveying Technician (CST) Exam Level 1. [www.nspss.us.com](http://www.nspss.us.com) (<http://www.nspss.us.com>) for information about the CST program.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your *required* General Education English, Mathematics, and Communications (Speech) requirements.**

## Surveying Electives

Code	Title	Hours
2980:325	OSHA Safety Requirements for Surveyors	1
2980:335	The Business of Surveying	2
2980:340	Cadastral Surveying	2
2980:420	Route Surveying	3
2980:425	Land Navigation	3
2980:426	History of Surveying To 1785	2
2980:428	History of Surveying Since 1785	2
2980:445	Applications in GIS using GPS	3
2980:450	Topics in Professional Practice	2
2980:489	Special Topics in Surveying	1-3
2980:490	Workshop in Surveying	1-3
2980:495	Internship: Surveying and Mapping	3
2980:498	Independent Study	1-3
2980:xxx		
2940:xxx	Any 2940 Course: Upon Approval of the Program Director	

## Mechanical Engineering Technology, AAS

### Associate of Applied Science in Mechanical Engineering Technology (292001AAS)

More on the Mechanical Engineering Technology major (<https://www.uakron.edu/engineering/ME/>)

## Contact Information

Scott Dilling  
 Program Director  
 Schrank Hall (South) 123G  
 330-972-6232  
 sd53@uakron.edu

## Program Information

Mechanical Engineering Technology is concerned with the design of products and the machines required to manufacture them. Mechanical technicians are needed in all industries, from steelmaking to consumer products such as tires, cars, and home appliances. Mechanical technicians work along with engineers in design, testing, manufacturing, and servicing of the mechanical components and systems found

everywhere in industry. The associate degree holder is well qualified to begin working in the various areas of mechanical technology.

## Career Information

The demand by industry for mechanical technicians is now and will continue to be great. It is estimated that thousands of new mechanical technicians will be required each year. Mechanical technicians find employment in many areas of the mechanical field; some of the specific career opportunities include:

- Junior or Assistant Designer – Designs machine elements and/or systems.
- Engineering Aid - Assists the mechanical engineer, a good beginning for the inexperienced graduate.
- Laboratory Technician – Primarily responsible for evaluation of product or process diagnosis. May do field testing (tires, cars, etc.). Specifying materials from the design and processing standpoints.
- Customer Service Technician – Installs and maintains equipment on site. May also serve as sales representative in recommending a machine for a particular application.
- Plant Engineer – Establishes maintenance schedules and applies tool and machine design production process.

## Placement or Optional Cooperative Education

Co-op work experiences are available on an optional basis in this academic program. To obtain additional information, contact the Career Center regarding these opportunities.

For additional information regarding career opportunities in the Mechanical Engineering Technology field, please visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) (<http://www.bls.gov/>) or the Career Center at the Student Union, room 211, (330-972-7747) <http://www.uakron.edu/career> (<http://www.uakron.edu/career/>)

## Bachelor Degree Programs

Upon completion of the Mechanical Engineering Technology Associate of Applied Science Degree, a student may proceed to the Mechanical Engineering Technology Bachelor of Science Degree. Please refer to the Mechanical Engineering Technology Bachelor of Science Degree Curriculum Guide for further information.

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. Transfer students should consult their Advisor to identify courses that are equivalent.



1st Year		Hours
<b>Fall Semester</b>		
2020:121	English	3
2030:154	Technical Mathematics IV	3
2920:100	Survey of Mechanical Engineering Technology <sup>1</sup>	2
2920:121	Fundamentals of Engineering Drawing (Sch. Lab)	3
3650:160	Technical Physics: Mechanics (Sch. Lab)	4
Hours		15
<b>Spring Semester</b>		
2020:222	Technical Report Writing	3
2420:263	Professional Communications and Presentations	3
2820:131	Software Applications for Technology (Sch. Lab)	1
2990:125	Statics	3
3650:163	Technical Physics: Electricity & Magnetism (Sch. Lab)	2
3650:164	Technical Physics: Heat & Light (Sch. Lab)	2
Hours		14
<b>2nd Year</b>		
<b>Fall Semester</b>		
2030:255	Technical Calculus I	3
2880:248	Introduction to CNC and Additive Manufacturing	3
2920:101	Introduction to Mechanical Design (Sch. Lab) <sup>1</sup>	3
2920:243	Kinematics <sup>1</sup>	3
2920:251	Fluid Power <sup>1</sup>	2
2990:225	Strength of Materials	3
Hours		17
<b>Spring Semester</b>		
2040:243	Contemporary Global Issues	3
2920:142	Introduction to Material Technology (Sch. Lab) <sup>2</sup>	3
2920:245	Mechanical Design II (Sch. Lab) <sup>2</sup>	5
2920:249	Applied Thermal Energy I <sup>2</sup>	2
2920:252	Thermo-Fluids Laboratory <sup>2</sup>	1
3002:256 or 3850:100 or 7750:244	Diversity in American Society or Introduction to Sociology or Death & Dying	3
Hours		17
Total Hours		63

<sup>1</sup> Traditionally Fall only (See Program Contact).

<sup>2</sup> Traditionally Spring only (See Program Contact).

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

## Mechanical Engineering Technology, BS

### Bachelor of Science in Mechanical Engineering Technology (292104BS)

More on the Mechanical Engineering Technology major (<https://www.uakron.edu/engineering/ME/>)



### Contact Information

Mr. Scott Dilling  
Program Director  
Schrank Hall (South) 123G  
330-972-6232  
sd53@uakron.edu

### Program Information

Mechanical Engineering Technology is concerned with product testing, the design of products, and the machines required to manufacture them.

Our students include: recent high school graduates, transfers from other colleges and institutions, and those students currently employed who are looking for a degree in mechanical engineering technology. As our mission statement states: "We provide high quality educational opportunities necessary to assist a diverse student population to achieve its career goals in the field of mechanical engineering technology." The Mechanical Engineering Technology, BS Degree is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>.

### Program Educational Objectives

Program educational objectives are broad statements that describe what graduates are expected to attain within a few years after graduation. Program educational objectives are based on the needs of the program's constituencies (i.e., students, alumni, employers of our students, and faculty of the program), including being able to:

1. be successfully employed in a mechanical engineering technology related field capable of earning promotions, professional registration/licensing, certification, other recognition;
2. be effective in the understanding and application of mechanical engineering technology principles;
3. effectively communicate, work, and lead cross functional teams;
4. expand their technical knowledge through professional development, continuing education, or the pursuit of a graduate degree;
5. conduct their work within the accepted standards of professional integrity and ethics; and
6. serve in technical societies and other community service areas.

### Student Outcomes

Student outcomes describe what students are expected to know and be able to do by the time of graduation. These relate to the knowledge,

skills, and behaviors that students acquire as they progress through the program, including:

1. an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
2. an ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
3. an ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
4. an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes;
5. an ability to function effectively as a member as well as a leader on technical teams.

## Placement or Optional Cooperative Education

Co-op work experiences are available on an optional basis in this academic program. To obtain additional information, contact the Career Center regarding these opportunities.

For additional information regarding career opportunities in the Mechanical Engineering Technology field, please visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) (<http://www.bls.gov>) or the Career Center at the Student Union, room 211, (330-972-7747) <http://www.uakron.edu/career> (<http://www.uakron.edu/career/>)

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33) *	22
	Required Courses	51
	Discipline Specific Courses	23
	Math and Physical/Natural Science Courses	26
	Technical Electives	5
	<b>Total Hours</b>	<b>127</b>

\* Several courses required for the major also satisfy General Education requirements. The University minimum of 34 credits are required for General Education and credit for these courses will apply to both.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
2420:263	Professional Communications and Presentations	
<i>Writing: 6 credit hours</i>		
2020:121	English	
2020:222	Technical Report Writing	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
3600:101	Introduction to Philosophy	
	or 3600:120 Introduction to Ethics	
	or 3600:170 Introduction to Logic	
7100:210	Visual Arts Awareness	
	or 7500:201 Exploring Music: Bach to Rock	
	or 7900:200 Viewing Dance	
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
3002:256	Diversity in American Society	
	or 3850:100 Introduction to Sociology	
	or 7750:244 Death & Dying	
2040:243	Contemporary Global Issues	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
2040:241	Technology & Human Values	
Critical Thinking		
3600:101	Introduction to Philosophy	
	or 3600:120 Introduction to Ethics	
	or 3600:170 Introduction to Logic	
Domestic Diversity		
3002:256	Diversity in American Society	
	or 3850:100 Introduction to Sociology	
	or 7750:244 Death & Dying	
Global Diversity		
2040:243	Contemporary Global Issues	
<i>Review the General Education Requirements page for detailed course listings.</i>		
<b>Total Hours</b>		<b>34</b>

## Required Courses

Code	Title	Hours
2920:100	Survey of Mechanical Engineering Technology <sup>1</sup>	2
2920:101	Introduction to Mechanical Design (Sch. Lab) <sup>1</sup>	3
2920:121	Fundamentals of Engineering Drawing (Sch. Lab)	3
2920:142	Introduction to Material Technology (Sch. Lab) <sup>2</sup>	3
2920:243	Kinematics (Sch. Lab) <sup>1</sup>	3
2920:245	Mechanical Design II (Sch. Lab) <sup>2</sup>	5
2920:249	Applied Thermal Energy I <sup>2</sup>	2
2920:251	Fluid Power <sup>1</sup>	2
2920:252	Thermo-Fluids Laboratory <sup>2</sup>	1
2920:310	Economics of Technology	3
2920:344	Dynamics <sup>1</sup>	3
2920:346	Mechanical Design III (Sch. Lab) <sup>2</sup>	4
2920:347	Production Machinery & Processes <sup>2</sup>	3
2920:365	Applied Thermal Energy II <sup>1</sup>	3
2920:370	Plastics Design & Process <sup>1</sup>	3
2920:402	Mechanical Projects <sup>2</sup>	2
2920:405	Introduction to Industrial Machine Control (Sch. Lab) <sup>1</sup>	3
2920:470	Plastics Processing & Testing (Sch. Lab) <sup>2</sup>	2
2920:490	Mechanical Engineering Technology Senior Seminar <sup>1</sup>	1
Total Hours		51

## Discipline Specific Courses

Code	Title	Hours
2860:242	Machinery & Controls <sup>2</sup>	3
2860:370	Survey of Electronics I (Sch. Lab) <sup>1</sup>	3
2880:241	Introduction to Quality Assurance (Sch. Lab)	3
2880:248	Introduction to CNC and Additive Manufacturing	3
2990:125	Statics	3
2990:225	Strength of Materials	3
	Technical Electives <sup>3</sup>	5
Total Hours		23

## Math and Physical/Natural Science Courses

Code	Title	Hours
2030:154	Technical Mathematics IV	3
2030:255	Technical Calculus I	3
2030:356	Technical Calculus II	3
2820:111	Introductory Chemistry (Sch. Lab) <sup>1</sup>	3
2820:112	Introductory & Analytical Chemistry <sup>2</sup>	3
2820:131	Software Applications for Technology (Sch. Lab)	1
2820:310	Programming for Technologists (Sch. Lab)	2
3650:160	Technical Physics: Mechanics (Sch. Lab)	4
3650:163	Technical Physics: Electricity & Magnetism (Sch. Lab)	2
3650:164	Technical Physics: Heat & Light (Sch. Lab)	2
Total Hours		26

## Technical Electives

Code	Title	Hours
<b>Complete 5 credits</b>		<b>5</b>
2030:345	Technical Data Analysis	
2850:100	Introduction to Corrosion Technology <sup>1,4</sup>	
2850:200	Advanced Corrosion Technology <sup>2,4</sup>	
2860:121	Introduction to Electronics and Computers	
2860:237	Digital Circuits (Sch. Lab)	
2860:238	Microprocessor Applications	
2860:360	Virtual Instrumentation and Data Acquisition	
2870:311	Facilities Planning	
2870:332	Management of Technology Based Operations	
2870:441	Advanced Quality Practices	
2870:448	CNC Programming II	
2870:480	Automated Production	
2880:130	Work Measurement & Cost Estimating	
2880:201	Robotics & Automated Manufacturing	
2880:211	Manufacturing Operations	
2880:230	3-D Modeling & Design	
2920:130	Introduction to Hydraulics and Pneumatics (Sch. Lab) <sup>1</sup>	
2920:290	Special Topics: Mechanical Engineering Technology	
2920:498	Independent Study in Mechanical Engineering Technology	
2980:101	Basic Surveying	
2990:462	Mechanical Service Systems	
2990:463	Electrical Service Systems	
Total Hours		5

## Discipline Specific General Education Courses

Code	Title	Hours
2020:121	English	
2020:222	Technical Report Writing	
2040:243	Contemporary Global Issues	
2420:263	Professional Communications and Presentations	
2040:241	Technology & Human Values	
<i>Select one of the following:</i>		
3002:256	Diversity in American Society	
3850:100	Introduction to Sociology	
7750:244	Death & Dying	
<i>Select one of the following:</i>		
3600:101	Introduction to Philosophy	
3600:120	Introduction to Ethics	
3600:170	Introduction to Logic	
	Arts or Humanities Requirement <sup>5</sup>	
<i>Select one of the following:</i>		
7100:210	Visual Arts Awareness	
7500:201	Exploring Music: Bach to Rock	
7900:200	Viewing Dance	

Arts Requirement <sup>5</sup>Humanities Requirement <sup>5</sup>

- <sup>1</sup> Traditionally Fall course (See Program Contact).
- <sup>2</sup> Traditionally Spring course (See Program Contact).
- <sup>3</sup> Mechanical Engineering Technology Approved Technical Electives: Availability dependent on enrollment demands and classroom availability.
- <sup>4</sup> The student must take both the Introduction and Advanced Corrosion Technology courses to receive the Corrosion Technology Certificate. Other requirements may be required in addition. Please check with the student advisor to be sure.
- <sup>5</sup> Must be a course in the Ohio Transfer Module.

## Recommended Sequence

### 1st Year

#### Fall Semester

		Hours
2020:121	English	3
2030:154	Technical Mathematics IV	3
2920:100	Survey of Mechanical Engineering Technology <sup>1</sup>	2
2920:121	Fundamentals of Engineering Drawing (Sch. Lab)	3
3650:160	Technical Physics: Mechanics (Sch. Lab)	4
Hours		15

#### Spring Semester

2020:222	Technical Report Writing	3
2420:263	Professional Communications and Presentations	3
2820:131	Software Applications for Technology (Sch. Lab)	1
2990:125	Statics	3
3650:163	Technical Physics: Electricity & Magnetism (Sch. Lab)	2
3650:164	Technical Physics: Heat & Light (Sch. Lab)	2
Hours		14

### 2nd Year

#### Fall Semester

2030:255	Technical Calculus I	3
2880:248	Introduction to CNC and Additive Manufacturing	3
2920:101	Introduction to Mechanical Design (Sch. Lab) <sup>1</sup>	3
2920:243	Kinematics (Sch. Lab) <sup>1</sup>	3
2920:251	Fluid Power <sup>1</sup>	2
2990:225	Strength of Materials	3
Hours		17

#### Spring Semester

2040:243	Contemporary Global Issues	3
Select one of the following:		3
3002:256	Diversity in American Society	
3850:100	Introduction to Sociology	
7750:244	Death & Dying	

2920:142	Introduction to Material Technology (Sch. Lab) <sup>2</sup>	3
2920:245	Mechanical Design II (Sch. Lab) <sup>2</sup>	5
2920:249	Applied Thermal Energy I <sup>2</sup>	2
2920:252	Thermo-Fluids Laboratory <sup>2</sup>	1
Hours		17

### 3rd Year

#### Fall Semester

2030:356	Technical Calculus II	3
2820:111	Introductory Chemistry (Sch. Lab) <sup>1</sup>	3
2820:310	Programming for Technologists (Sch. Lab)	2
2860:370	Survey of Electronics I (Sch. Lab) <sup>1</sup>	3
2920:344	Dynamics <sup>1</sup>	3
Technical Elective <sup>3</sup>		2
Hours		16

#### Spring Semester

2820:112	Introductory & Analytical Chemistry <sup>2</sup>	3
2860:242	Machinery & Controls <sup>2</sup>	3
2920:346	Mechanical Design III (Sch. Lab) <sup>2</sup>	4
2920:347	Production Machinery & Processes <sup>2</sup>	3
Technical Elective <sup>3</sup>		3
Select one of the following:		3
3600:101	Introduction to Philosophy	
3600:120	Introduction to Ethics	
3600:170	Introduction to Logic	
Arts or Humanities Requirement <sup>5</sup>		
Hours		19

### 4th Year

#### Fall Semester

2920:310	Economics of Technology	3
2920:365	Applied Thermal Energy II <sup>1</sup>	3
2920:370	Plastics Design & Process <sup>1</sup>	3
2920:405	Introduction to Industrial Machine Control (Sch. Lab) <sup>1</sup>	3
2920:490	Mechanical Engineering Technology Senior Seminar <sup>1</sup>	1
Humanities Requirement <sup>5</sup>		3
Hours		16

#### Spring Semester

2040:241	Technology & Human Values	3
2920:402	Mechanical Projects <sup>2</sup>	2
2880:241	Introduction to Quality Assurance (Sch. Lab)	3
2920:470	Plastics Processing & Testing (Sch. Lab) <sup>2</sup>	2
Select one of the following:		3
7100:210	Visual Arts Awareness	
7500:201	Exploring Music: Bach to Rock	
7900:200	Viewing Dance	
Arts Requirement <sup>5</sup>		
Hours		13
Total Hours		127

- <sup>1</sup> Traditionally Fall course (See Program Contact).
- <sup>2</sup> Traditionally Spring course (See Program Contact).
- <sup>3</sup> Mechanical Engineering Technology Approved Technical Electives: Availability dependent on enrollment demands and classroom availability.
- <sup>4</sup> The student must take both the Introduction and Advanced Corrosion Technology courses to receive the Corrosion Technology Certificate. Other requirements may be required in addition. Please check with the student advisor to be sure.
- <sup>5</sup> Must be a course in the Ohio Transfer Module.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

## Residential Building Technology, Certificate

### Certificate in Residential Building Technology (299105C)

The certificate program in Residential Building Technology is aimed at providing knowledge and skills to anyone planning to work in the building construction industry. This certificate may be earned independently of earning a degree, but all coursework can be applied to an AAS degree or the BS degree in Construction Engineering.

#### Program Contact

Professor Marcia Belcher, P.E.  
Construction Engineering Technology Program Director  
330-972-2055  
mcbelcher@uakron.edu

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Residential Building Technology" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

### Summary

Code	Title	Hours
Required Courses		16
Total Hours		16

### Required Courses

Code	Title	Hours
2990:131	Building Construction	2
2990:150	Plan Reading	2
2990:245	Construction Estimating	3
2990:310	Residential Building Construction	3
2990:312	Neighborhood Revitalization Project	3

2990:356	Safety in Construction	3
Total Hours		16

## Residential Inspection, Certificate

### Certificate in Residential Inspection (299109C)

This certificate program is aimed at developing technical knowledge and skills necessary to conduct residential inspection. This certificate may be earned independently of earning a degree, but all coursework can be applied to an A.A.S. degree or the B.S. degree in Construction Engineering.

#### Program Contact

Professor Marcia Belcher, P.E.  
Construction Engineering Technology Program Director  
330-972-2055  
mcbelcher@uakron.edu

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Residential Inspection" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

### Summary

Code	Title	Hours
Required Courses		16
Total Hours		16

### Required Courses

Code	Title	Hours
2990:131	Building Construction	2
2990:150	Plan Reading	2
2990:310	Residential Building Construction	3
2990:312	Neighborhood Revitalization Project	3
2990:462	Mechanical Service Systems	3
2990:463	Electrical Service Systems	3
Total Hours		16

## Surveying and Mapping, BS

### Bachelor of Science in Surveying and Mapping (298103BS)

More on the Surveying and Mapping major (<https://www.uakron.edu/est/survey-map-engineering-tech/>)

#### Program Contact

Mr. Gary Schuller  
Program Director

Schrank Hall South 117J  
330-972-7122  
gas1@uakron.edu

## Program Information and Program Description

The Bachelor of Science in Surveying and Mapping program is an upper level degree program designed to provide the student with additional education beyond the A.A.S. degree in Land Surveying. This degree is also designed to meet the formal education requirements for registration as a Professional Surveyor in the state of Ohio.

This upper level degree program is defined as follows:

- The first two years are completed as an AAS degree in Land Surveying (p. 439) or similarly based program.
- Two of the remaining three years are for the completion of prescribed course work.
- The remaining year of the three years is devoted to a cooperative work experience in the surveying and mapping field. The student normally enters the co-op segment between the junior and senior years.

The BS in Surveying and Mapping degree program includes classroom, laboratory, and industry experiences which stress the application of established surveying and mapping knowledge.

Accredited by the Applied and Natural Science Accreditation Commission of ABET, <http://www.abet.org>

## Requirements for Admission

Applicants for the Surveying and Mapping program must hold an associate degree in Land Surveying from an accredited program or provide an equivalent academic background. The applicant must have a minimum cumulative grade point average of out of a possible 4.0. Applicants with an associate degree in a discipline other than Land Surveying will be required to complete a specific formal set of courses as specified at the time of admission. Final approval for admission is based upon recommendations from the Director of the Surveying and Mapping Program.

## Cooperative Work Study Requirement

The required Cooperative Work Study experience of the Surveying and Mapping program consists of 52 weeks of surveying work experience which may begin after the student has completed 34 hours of course work in the Surveying and Mapping program. This program may be satisfied by any one of the following options:

1. One calendar year.
2. Three semesters (Summer I and II counts as one semester for the co-op).
3. Department review of prior or concurrent work experience.

Students having prior or concurrent work experience should submit to the Surveying and Mapping Co-op Review Committee appropriate documentation before signing their program contract. The Surveying and Mapping Co-op Review Committee will determine whether this work experience satisfies the co-op requirement. All students must be cleared through the University Co-Op Office (<http://www.uakron.edu/career/>).

## Requirements for Graduation

- Compliance with the requirements of the general studies program as outlined in the Bulletin.
- Completion of the requirements for the associate degree in Land Surveying at The University of Akron or an approved associate degree program. Students transferring from another institution must have their transcripts evaluated to ensure that they have the required number of credits in surveying courses. Those found deficient must complete lower level surveying course work before upper level surveying and mapping courses can be taken.
- Successful completion of a minimum of 124 credits in the B.S. in Surveying and Mapping program including the associate degree program, the general education courses, a one-year co-op, and the following course requirement:

## Career Information

For additional information regarding career opportunities in the Surveying and Mapping field, please visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) (<http://www.bls.gov>) or the Career Center at the Student Union, room 211, (330-972-7747) <http://www.uakron.edu/career> (<http://www.uakron.edu/career/>)

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

3rd Year		Hours
Fall Semester		
2020:222	Technical Report Writing	3
2030:345	Technical Data Analysis	2
2980:310	Survey Computations & Adjustments	2
2985:201	Intermediate Geographic and Land Information Systems	3
3600:120	Introduction to Ethics	3
2980:xxx	Surveying Elective <sup>1</sup>	2
Hours		15
Spring Semester		
2030:255	Technical Calculus I	3
2030:480	Advanced Topics in Technical Mathematics <sup>2</sup>	2
2980:315	Boundary Control & Legal Principles <sup>2</sup>	3
2980:330	Applied Photogrammetry	3
2980:427	Ohio Lands	2
3400:210	Humanities in the Western Tradition from Ancient Times to 1500	3
Hours		16

<b>4th Year</b>		
<b>Fall Semester</b>		
Cooperative Work Study		
Hours		0
<b>Spring Semester</b>		
Cooperative Work Study		
Hours		0
<b>Summer Semester</b>		
Cooperative Work Study		
Hours		0
<b>5th Year</b>		
<b>Fall Semester</b>		
2980:415	Legal Aspects of Surveying <sup>3</sup>	3
2980:422	Global Positioning System Surveying	3
2980:431	Senior Seminar	2
3350:443	Urban Applications in GIS	3
	Surveying Electives <sup>1</sup>	2
Select one of the following:		3
3370:421	Coastal Geology	
	Complex Systems Tag Requirement	
Hours		16
<b>Spring Semester</b>		
2420:103	Essentials of Management Technology	3
2980:421	Subdivision Design <sup>2</sup>	3
2980:430	Surveying Project	3
2980:xxx	Surveying Elective <sup>1</sup>	2
5550:211	First Aid & Cardiopulmonary Resuscitation	2
Select one of the following:		3
7100:210	Visual Arts Awareness	
7500:201	Exploring Music: Bach to Rock	
7900:200	Viewing Dance	
	Arts Requirement	
Hours		16
Total Hours		63

<sup>1</sup> Surveying Electives - see below.

<sup>2</sup> Traditionally Spring only (See Program Contact).

<sup>3</sup> Traditionally Fall only (See Program Contact).

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

## Surveying Electives

Code	Title	Hours
2880:151	Industrial Safety & Environmental Protection	2
2980:325	OSHA Safety Requirements for Surveyors	1
2980:335	The Business of Surveying	2
2980:420	Route Surveying	3
2980:425	Land Navigation	3
2980:426	History of Surveying To 1785	2
2980:428	History of Surveying Since 1785	2
2980:445	Applications in GIS using GPS	3

2980:450	Topics in Professional Practice	2
2980:489	Special Topics in Surveying	1-3
2980:490	Workshop in Surveying	1-3
2980:495	Internship: Surveying and Mapping	3
2980:xxx	Independent Study	1-3
2985:xxx		
2980:340	Cadastral Surveying	2
2980:497	Surveying Honors Project	3
2990:xxx		

## Surveying for Civil Engineers, Certificate

### Certificate in Surveying for Civil Engineers (298111C)

The Surveying for Civil Engineers certificate program is designed for BSCE graduates to be able to meet the academic requirements of Ohio Revised Code 4733.11 - Professional Surveyor License Qualifications. All courses taken may be applied to an A.A.S. degree in Land Surveying and/or the B.S. degree in Surveying and Mapping.

#### Program Contact

Gary Schuller  
 Director, Surveying & Mapping Program  
 Akron, OH 44325-6104  
 330-972-7122  
 gas1@uakron.edu

The following information has official approval of **The Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Surveying for Civil Engineers" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		17
Total Hours		17

## Required Courses

Code	Title	Hours
2980:222	Construction Surveying <sup>1</sup>	3
2980:225	Advanced Surveying <sup>1</sup>	3
2980:228	Boundary Surveying <sup>1</sup>	3
2980:315	Boundary Control & Legal Principles <sup>2</sup>	3
2980:415	Legal Aspects of Surveying <sup>2</sup>	3
2980:427	Ohio Lands <sup>2</sup>	2
Total Hours		17

<sup>1</sup> Courses may be offered in a web-based format.

<sup>2</sup> Courses may be offered in an online format.

## Mechanical Engineering

Two undergraduate programs are offered within the Department of Mechanical Engineering (<https://www.uakron.edu/engineering/ME/>), leading to the Bachelor of Science in Mechanical Engineering and the Bachelor of Science in Aerospace Systems Engineering. The department also offers graduate programs leading to a Master of Science in Mechanical Engineering, and an interdisciplinary Doctor of Philosophy in Engineering.

### 4600: Mechanical Engineering

Mechanical engineers design and analyze physical systems and are employed in a variety of industries in different capacities. Mechanical engineers play important roles in many types of companies, including automotive, petroleum, energy generation and conversion, aerospace, tire, consulting, chemical, electronic, and manufacturing.

The Mechanical Engineering curriculum at The University of Akron is designed to give the student knowledge of fundamental principles of the

1. thermal/fluids stem,
2. structures and motion stem, and
3. controls stem of mechanical engineering, as well as the application of these principles to pertinent problems.

A significant measure of the mechanical engineering education is the degree to which it has prepared the graduate to pursue a productive engineering career that is characterized by continued professional growth.

The Mechanical Engineering program is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org) (<http://www.abet.org/>). The program educational objectives (PEOs) for the Mechanical Engineering program are that, within a few years after graduation, our Mechanical Engineering graduates:

- Practice the mechanical engineering discipline successfully within community accepted standards
- Acquire teamwork and communications skills to develop a successful career in mechanical engineering
- Fulfill professional and ethical responsibilities in the practice of mechanical engineering, including social, environmental and economic considerations
- Engage in professional service, such as participation in professional society and community service
- Engage in life-long learning activities, such as graduate studies or professional workshops
- Develop a professional career in the prevailing market that meets personal goals, objectives and desires

To meet those program educational objectives as well as the curricular requirements specified by the American Society of Mechanical Engineers (ASME) for accreditation, the Mechanical Engineering program identifies student outcomes, which are what students are expected to achieve by the time of graduation. They are:

(1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics

(2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors

(3) an ability to communicate effectively with a range of audiences

(4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts

(5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives

(6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions

(7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

### 4900: Aerospace Systems Engineering

The Bachelor of Science in Aerospace Systems Engineering degree program is intended to produce engineers who possess both a broad, interdisciplinary knowledge of aerospace engineering fundamentals and who will be able to move quickly into the role of project managers, the precursor position to program managers and ultimately, senior managers. These engineers can lead multidisciplinary teams and bring about the integration of components in a variety of systems. The program includes basic engineering and aerospace courses and will also include specific non-engineering courses, selected to meet the goal of developing future senior technical leaders for our aerospace industries. The program features a mandatory co-op component that begins following the sophomore year. The co-op requirement is expected to fill out the student's technical background as well as provide a basis for broad personal growth that is part of the aim of the General Education requirement. Three fewer hours of General Education courses are required for Aerospace Systems Engineering due to the mandatory co-op.

The Aerospace Systems Engineering program is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org) (<http://www.abet.org/>). The program educational objectives (PEOs) for the Aerospace Systems Engineering program are that, within a few years after graduation, our Aerospace Systems Engineering graduates:

- Practice the aerospace systems engineering disciplines successfully within community accepted standards
- Acquire teamwork and communications skills to develop a successful career in aerospace systems engineering
- Fulfill professional and ethical responsibilities in the practice of aerospace systems engineering, including social, environmental, and economical considerations
- Engage in professional service, such as participation in professional society and community service
- Engage in life-long learning activities, such as graduate studies or professional workshops



- Develop a professional career in the prevailing market that meets personal goals, objectives and desires

To meet those program educational objectives as well as the curricular requirements specified by the American Institute of Aeronautics and Astronautics, the Aerospace Systems Engineering program identifies student outcomes, which are what students to achieve by the time of graduation. They are:

- (1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- (2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- (3) an ability to communicate effectively with a range of audiences
- (4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- (5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- (6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- (7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Information specific to the available program options in mechanical engineering and aerospace systems engineering is available:

- Aerospace Systems Engineering, BS (p. 452)
- Mechanical Engineering, BS (p. 453)
- Mechanical Engineering, Co-op Option, BS (p. 454)

## Mechanical Engineering (4600)

### **4600:165 Tools for Mechanical Engineering (3 Credits)**

Corequisite: 3450:149. Personal computer DOS system, word processing, spreadsheet, computer-aided drafting, math calculating package, mechanical graphics, and introduction to mechanical engineering program and curriculum.

### **4600:203 Dynamics (3 Credits)**

Prerequisite: 3450:222, 3650:291, 4300:201. Corequisite: 3450:223. Kinematics and kinetics of particles and rigid bodies. Principles of work, energy, momentum and impulse.

### **4600:260 Engineering Analysis I (2 Credits)**

Prerequisite: 3450:222; corequisite: 3450:223. Introduction to numerical methods in mechanical engineering; applications of computer tools (MatLab).

### **4600:300 Thermodynamics I (3 Credits)**

Prerequisites: 3450:223 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 3650:292. Basic concepts of thermodynamics. Pure substances, closed and open systems, the first and second laws of thermodynamics. Entropy, vapor power cycles and vapor compression refrigeration.

### **4600:301 Thermodynamics II (2 Credits)**

Prerequisites: 3450:335, 4600:300 and admission to an engineering major within the College of Engineering and Polymer Science. Absorption refrigeration. Gas cycles. Thermodynamics of state, gas mixtures and gas-vapor mixtures. Combustion.

### **4600:305 Thermal Science (2 Credits)**

Prerequisite: 3450:223 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 3650:292. Credit not allowed for both 300 and 305. Introduction to first and second laws of thermodynamics, perfect gas relationships, equations of state, cycle analysis. Introduction to conduction, convection and radiation heat transfer.

### **4600:310 Fluid Mechanics I (2 Credits)**

Prerequisites: 3450:223, 4600:203 and admission to an engineering major within the College of Engineering and Polymer Science. Properties and behavior of gases and liquids at rest and in motion. Energy equation. Flow in conduits. Forces on body submerged in moving fluid. Dimensional analysis and similitude.

### **4600:311 Fluid Mechanics II (3 Credits)**

Prerequisites: 3450:335, 4600:310 and admission to an engineering major within the College of Engineering and Polymer Science. Navier-Stokes equations. The boundary layer. External viscous flows and potential flow. Fundamentals of compressible flow. Concepts of computational fluid dynamics.

### **4600:315 Heat Transfer (3 Credits)**

Prerequisites: 4600:300, [4600:310 or 4800:360], [4600:360 or 4800:220] and admission to an engineering major within the College of Engineering and Polymer Science. Fundamentals of heat transfer by conduction, convection and radiation.

### **4600:321 Kinematics of Machines (2 Credits)**

Prerequisites: 4600:165, 4600:203 and admission to an engineering major within the College of Engineering and Polymer Science. Displacements, velocities, accelerations and introduction to plan motion mechanisms. Introduction to design of gears, gear trains and cams.

### **4600:336 Analysis of Mechanical Components (3 Credits)**

Prerequisites: 4300:202 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 3450:335. Analysis of stress and strain at a point. Mohr's circles, shear centers, elastic instability. Stresses in thick and thin cylinders. Fatigue analysis.

### **4600:337 Design of Mechanical Components (3 Credits)**

Prerequisites: [4600:336 or 4900:336] and admission to an engineering major within the College of Engineering and Polymer Science. Application of stress analysis to design of fasteners, welds, springs, ball bearings and gears. Introduction to journal bearings and lubrication. Component design projects.

### **4600:340 Systems Dynamics & Response (3 Credits)**

Prerequisites: 3450:335, 4600:203 and admission to an engineering major within the College of Engineering and Polymer Science. A unified approach to modeling, analysis, response and stability of engineering systems: analog, digital and hybrid computer simulation of interdisciplinary engineering problems are included.

**4600:360 Engineering Analysis II (2 Credits)**

Prerequisites: 3450:335, 4600:260 and admission to an engineering major within the College of Engineering and Polymer Science. Numerical methods of solution of mechanical engineering problems.

**4600:380 Introduction to Materials Science and Engineering (2 Credits)**

Prerequisites: 3150:153 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4300:202. Introduction to metallurgy and advanced engineering materials including polymers, composites and ceramics. Topics include structure of materials, macroscopic mechanical behavior, phase change and heat treatment of metals, and theories of failure.

**4600:400 Thermal System Components (3 Credits)**

Prerequisites: 4600:301, 4600:311, 4600:315 and admission to an engineering major within the College of Engineering and Polymer Science. Performance analysis and design of basic components of thermal energy exchange and conversion systems. Components studied include heat exchangers, pumps, compressors, turbines and expansion engines.

**4600:402 Senior Seminar (1 Credit)**

Prerequisite: Admission to the College of Engineering. Corequisites: 4600:400, 4600:441, 4600:460 and [4600:401 or 4600:461 or 4700:499]. Students need further education in ethics, codes and standards, intellectual property, product liability, safety issues, technical writing, diversity, and job opportunities.

**4600:410 Heating & Air Conditioning (3 Credits)**

Prerequisites: 4600:301 or permission. Corequisite: 4600:315 or permission. Thermodynamics of gas mixtures. Design and selection of air conditioning equipment. Control of gas mixtures, heating, cooling and humidity.

**4600:411 Compressible Fluid Mechanics (3 Credits)**

Prerequisites: 4600:301, 4600:311 and admission to an engineering major within the College of Engineering and Polymer Science. Subsonic and supersonic flow in nozzles, diffusers and ducts. One-dimensional reactive gas dynamics. Prandtl-Myer theory. Applications to design and analysis of compressors, turbines and propulsion devices.

**4600:412 Fundamentals of Flight (3 Credits)**

Prerequisites: 4600:311 and admission to an engineering major within the College of Engineering and Polymer Science. Introduction to basic aerodynamics, airplane performance, stability and control, astronautics and propulsion. Design considerations are emphasized.

**4600:413 Introduction to Aerodynamics (3 Credits)**

Prerequisites: 4600:311 and admission to an engineering major within the College of Engineering and Polymer Science. Introduction of aerodynamic concepts; includes conformal transformations, theory of thin airfoils, two-dimensional airfoil theory, wings of finite span, lifting line theories, lumped vortex, vortex lattice, and panel methods.

**4600:414 Introduction to Aerospace Propulsion (3 Credits)**

Prerequisites: 4600:311 and admission to an engineering major within the College of Engineering and Polymer Science. Introduction to propulsion systems currently used in aerospace fields; propulsion principles for turbojets, turbofans, ramjets, chemical rockets, and electrical rocket propulsion.

**4600:415 Energy Conversion (3 Credits)**

Prerequisites: 4600:301 or permission. Corequisite: 4600:315 or permission. Topics from fields of internal combustion engines, cycle analysis, modern conversion devices.

**4600:416 Heat Transfer Processes (3 Credits)**

Prerequisite: 4600:315 or permission. Analysis, design of extended surfaces. Natural convection and mixed convection, combined modes of heat transfer and heat transfer with phase changes.

**4600:420 Introduction to Finite Element Method (3 Credits)**

Prerequisites: 4300:202, [4600:315 or 4800:362], and admission to an engineering major within the College of Engineering and Polymer Science. Introduction to matrix and finite element methods. Stiffness and flexibility formulations in solid mechanics and thermal sciences. Basic finite element methods and its implementation.

**4600:422 Experimental Stress Analysis I (3 Credits)**

Prerequisite: 4600:336 or permission. Experimental methods of determining stress or strain: brittle lacquer, strain gages, photoelasticity, full field techniques.

**4600:430 Machine Dynamics (3 Credits)**

Prerequisite: 4600:321 or permission. Static and dynamic forces in machines, products of inertia, dynamic equivalence, flywheels. Balancing of rotating, reciprocating, cyclic plane motion. Computer simulation of transient mechanism dynamics, other topics in advanced dynamics.

**4600:431 Fundamentals of Mechanical Vibrations (3 Credits)**

Prerequisites: 3450:335, 4600:203 and admission to an engineering major within the College of Engineering and Polymer Science or permission. Undamped and forced vibrations of systems having one or two degrees of freedom.

**4600:432 Vehicle Dynamics (3 Credits)**

Prerequisites: 4600:203 or permission and 3450:335 or permission. Application of dynamic systems analysis techniques to road vehicles. Newtonian and Lagrangian methods. Tire/road interface. Ride characteristics, handling and stability. Digital simulation.

**4600:440 System Dynamics & Control (4 Credits)**

See department for course description.

**4600:441 Control Systems Design (3 Credits)**

Prerequisites: 4600:340 and admission to an engineering major within the College of Engineering and Polymer Science or permission. Methods of feedback control design such as minimized error, root-locus, frequency domain. Compensation techniques. Multivariable and nonlinear design methods and computer-aided control design.

**4600:442 Industrial Automatic Control (3 Credits)**

Prerequisite: 4600:441 or permission. Operation of basic control mechanisms. Study of mechanical, hydraulic, pneumatic, fluidic control systems, including application areas. Tuning of control devices for optimum performance of system. Case studies on control applications from industry, e.g. boilers, furnaces, process heaters.

**4600:443 Optimization Methods in Mechanical Engineering (3 Credits)**

Prerequisite: 4600:360 or permission. Development and method of solution of optimization problems in mechanical engineering. The use of dynamic programming and operational research methods for optimization including computer utilization and applications.

**4600:444 Robot Design, Control & Application (3 Credits)**

Prerequisites: [4600:321 or 4600:441] or permission. Robot design and control. Kinematic transformations, velocities and accelerations, path trajectories and dynamics, control and sensing in robotics. The automated factory with robot applications.

**4600:450 Introduction to Computational Fluid Flow & Convection (3 Credits)**

Prerequisites: 4600:315 or permission, 4600:360 or permission. Numerical modeling of fluid/thermal systems; numerical solution of the momentum and thermal boundary layer equations; flow simulation using advanced heat transfer/fluid/graphics packages.

**4600:460 Concepts of Design (3 Credits)**

Prerequisites: 4600:337 and admission to an engineering major within the College of Engineering and Polymer Science. Design process. Creativity and inventiveness. Tools of decision making, engineering economics, reliability, optimization. Case studies.

**4600:461 ME Senior Design Project I (2 Credits)**

Prerequisite: Admission to an engineering major within the College of Engineering and Polymer Science. Corequisites: 4600:400, 4600:441 and 4600:460. Detailed senior design project. Design, feasibility, and cost analysis.

**Gen Ed:** Tier 3 - Complex Systems

**4600:462 Pressure Vessel Design (3 Credits)**

Prerequisite: 4600:336 or permission. Introduction to modern pressure vessel technology. Topics include basic structural considerations, materials and their environment and design-construction features.

**4600:463 Computer Aided Design & Manufacturing (3 Credits)**

Prerequisites: 4600:165 or permission, 4600:360 or permission. The use of computer systems to assist in the creation, modification, analysis, or optimization of engineering designs, and to plan, manage, and control manufacturing plants.

**4600:465 Technology Based Startups: Ideate, Invent and Innovate (3 Credits)**

Prerequisite: Permission of the department. This course will provide students with the opportunity to extend their fundamental knowledge of entrepreneurship within the specific interdisciplinary context of technology commercialization. Working in interdisciplinary groups the student teams/groups will be taught design thinking approaches that put the customer at the center of the creative process. Brainstorming exercises will be held to solve open ended problems on special topics (e.g. biomimicry, software, medical devices, sensors etc.) so that teams can ideate and conceptualize product, process or service based ideas that solve real problems. In some cases, students can be assigned known research technologies and learn how to come up with applications that have commercialization potential. The evaluation will include, but not be limited to, evaluation of the underlying technology, determination of potential customer value proposition(s), determination of market feasibility, examination of licensing/spin-off options, identification of potential licensees, estimation of potential market size and value, and development of recommendations for further funding, growth (or abandonment). By working in teams, students will learn how to create/invent a product prototype, learn how to listen to potential customers and come back to describe the value proposition that will make the startup successful.

**4600:471 ME Senior Design Project II (2 Credits)**

Prerequisites: 4600:461 and admission to an engineering major within the College of Engineering and Polymer Science. Detailed senior design project. Final design and implementation.

**4600:480 Materials Selection in Design (3 Credits)**

Prerequisites: [4200:305 or 4600:380] and admission to an engineering major within the College of Engineering and Polymer Science or permission. Materials selection from the perspective of design including material properties, processing approaches, shape considerations, hybrid materials, and tradeoffs including environmental and cost.

**4600:482 Fundamentals of Composite Processing and Mechanics (3 Credits)**

Prerequisites: 3450:335, 4300:202, and admission to an engineering major within the College of Engineering and Polymer Science. Polymer-matrix composite processing, manufacturing, and mechanics. The emphasis is on discontinuous fiber reinforcements.

**4600:483 Measurements Laboratory (2 Credits)**

Prerequisites: 4600:300, 4600:310 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4600:340. Development of methods to measure temperature, pressure, flow rate, viscosity and motion. Includes both lecture and laboratory experience and emphasizes calibration and accuracy of appropriate instruments.

**4600:484 Mechanical Engineering Laboratory (2 Credits)**

Prerequisite: 4600:301, 4600:311, 4600:315, 4600:380, 4600:431, 4600:483 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4600:441. Laboratory experiments in area of dynamics, vibrations, thermodynamics, fluids, heat transfer and controls.

**4600:485 3D Printing and Additive Manufacturing (3 Credits)**

Prerequisites: 4600:165, 4600:360, and junior or greater standing or permission. Introduction to 3D Printing and Additive Manufacturing including various processes, materials, and applications; Hands-on practice and design/manufacturing project; State of the art of 3D Printing.

**4600:486 Special Topics: Mechanical Engineering (1-3 Credits)**

Prerequisite: Permission. Brief description of current content to be announced in schedule of classes.

**4600:497 Honors Project in Mechanical Engineering (4 Credits)**

Prerequisite: senior standing in Honors Program. Individual creative project in thermal science, mechanics or design relevant to mechanical engineering, supervised by faculty member of the department.

**Gen Ed:** Tier 3 - Complex Systems

**4600:498 Experimental Investigation in Mechanical Engineering (1-2 Credits)**

Individual independent laboratory investigations in areas relevant to mechanical engineering. Student suggests a project and makes appropriate arrangements with faculty for supervision.

## Aerospace Systems Engineering (4900)

**1500:113 Heritage and Values I (1 Credit)**

Survey course introducing the U.S. Air Force and ROTC. Officership and military customs and courtesies are discussed. Foundations of Air Force communication are covered.

**1500:114 Heritage and Values II (1 Credit)**

Survey course covering the origin and organization of the Air Force. Selected topics contributing to an understanding of the Air Force are covered.

**1500:115 Leadership Laboratory (1 Credit)**

Prepares an individual to undertake a broad range of technical tasks. Optional for academic credit; Mandatory for Air Force ROTC credit for scholarship/commissioning.

**1500:253 Team & Leadership Fundamentals I (1 Credit)**

Survey course examining air and space power from an historical perspective. Course covers early flight and World War I to the Korean War and ICBMS.

**1500:254 Team & Leadership Fundamentals II (1 Credit)**

Survey course examining air and space power from the Vietnam War to the Gulf War plus a look at the Air Force of the future.

**1500:255 Leadership Laboratory (1 Credit)**

Prepares an individual to undertake a broad range of technical tasks. Optional for academic credit; Mandatory for Air Force ROTC credit for scholarship/commissioning.

**1500:303 Leading People/Effective Communication I (3 Credits)**

Prerequisite: Permission of instructor. Study of leadership, professional knowledge and communication skills required for an Air Force officer. The roles of a leader as supervisor and counselor are discussed.

**1500:304 Leading People/Effective Communication II (3 Credits)**

Prerequisite: Permission of instructor. Study of quality management fundamentals and communication skills for the Air Force officer. The Air Force personnel evaluation system and military ethics are discussed.

**1500:305 Leadership Laboratory (1 Credit)**

Prepares an individual to undertake a broad range of technical tasks. Optional for academic credit; Mandatory for Air Force ROTC credit for scholarship/commissioning.

**1500:453 Leading National Security/Leadership Responsibilities I (3 Credits)**

Prerequisite: Permission of instructor. Examines political, economic and social constraints on national security and defense structure. The role of the military, including joint operations and regional defense, are discussed.

**1500:454 Leading National Security/Leadership Responsibilities II (3 Credits)**

Prerequisite: Permission of instructor. Roles of the military, regional defense, current Air Force issues, and other topics relevant to preparing an Air Force officer for active duty are covered.

**1500:455 Leadership Laboratory (1 Credit)**

Prepares an individual to undertake a broad range of technical tasks. Optional for academic credit; Mandatory for Air Force ROTC credit for scholarship/commissioning.

## Aerospace Systems Engineering, BS

### Bachelor of Science in Aerospace Systems Engineering (490005BS)

Completion of degree requirements for the Aerospace Systems Engineering program requires that students complete several required semester-long cooperative education assignments with corporations or governmental entities in the aerospace industry. Based on aerospace industry requirements for full-time and cooperative education placement, full admission to the Aerospace Systems Engineering program is limited to citizens or permanent resident aliens of the United States.

The following information has official approval of the **Department of Mechanical Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer

process is completed through an appointment with your academic advisor.

**1st Year**

Fall Semester		Hours
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4900:165	Tools for Aerospace Systems Engineering	2
General Education or Honors Distribution <sup>4</sup>		3
Hours		16

**Spring Semester**

3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4900:166	Aerospace Systems Project Management	1
Second Writing Course <sup>1,3</sup>		3
General Education or Honors Distribution <sup>4</sup>		3
Hours		15

**2nd Year**

Fall Semester		Hours
3250:244	Introduction to Economic Analysis	3
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:292	Elementary Classical Physics II <sup>1</sup>	4
4300:201	Statics <sup>1</sup>	3
General Education or Honors Distribution <sup>4</sup>		3
Hours		17

**Spring Semester**

3450:335	Introduction to Ordinary Differential Equations	3
4300:202	Introduction to Mechanics of Solids	3
4400:307	Basic Electrical Engineering	4
4600:203	Dynamics <sup>1</sup>	3
4600:260	Engineering Analysis I	2
Hours		15

**Summer Semester**

4100:300	Cooperative Education Work Period	0
Hours		0

**3rd Year**

Fall Semester		Hours
4600:300	Thermodynamics I	3
4600:310	Fluid Mechanics I	2
4600:360	Engineering Analysis II	2
4900:240	Aerospace Systems Engineering I	3
4900:336	Aerospace Structures	3
6200:201	Accounting Principles I	3
Hours		16

**Spring Semester**

4100:301	Cooperative Education Work Period	0
Hours		0

**Summer Semester**

4600:337	Design of Mechanical Components	3
4900:340	Avionics I	3

4900:380	Aerospace Materials	3
	Hours	9
<b>4th Year</b>		
<b>Fall Semester</b>		
4100:302	Cooperative Education Work Period	0
	Hours	0
<b>Spring Semester</b>		
4600:315	Heat Transfer	3
4600:411	Compressible Fluid Mechanics	3
4600:413	Introduction to Aerodynamics	3
4600:483	Measurements Laboratory	2
4800:470	Human Factors Engineering	3
	General Education or Honors Distribution <sup>4</sup>	3
	Hours	17
<b>Summer Semester</b>		
4100:403	Cooperative Education Work Period	0
	Hours	0
<b>5th Year</b>		
<b>Fall Semester</b>		
4600:400	Thermal System Components	3
4600:412	Fundamentals of Flight	3
4600:414	Introduction to Aerospace Propulsion	3
4600:460	Concepts of Design	3
4900:320	Aerospace Systems Engineering II	3
	Hours	15
<b>Spring Semester</b>		
4900:420	Object Oriented Design & Management	3
4900:440	Avionics II	3
4900:450	Aerospace Computations	3
4900:460	Aerospace Systems Manufacturing	3
4900:490	Aerospace Design Project	2
	General Education or Honors Distribution <sup>4</sup>	3
	General Electives	2
	Hours	19
	Total Hours	139

<sup>1</sup> Honors sections may be available; check the schedule of classes.

<sup>2</sup> The Mechanical Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.

<sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.

<sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.

## Mechanical Engineering, BS

### Bachelor of Science in Mechanical Engineering (460000BS)

This option of the undergraduate program in Mechanical Engineering does not include a cooperative education component.

The following information has official approval of the **Department of Mechanical Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

#### 1st Year

Fall Semester	Hours
3150:151 Principles of Chemistry I <sup>1</sup>	3
3150:152 Principles of Chemistry I Laboratory	1
3300:111 English Composition I <sup>1,2,3</sup>	3
3450:221 Analytic Geometry-Calculus I <sup>1</sup>	4
4600:165 Tools for Mechanical Engineering	3
Hours	14

#### Spring Semester

3150:153 Principles of Chemistry II <sup>1</sup>	3
3450:222 Analytic Geometry-Calculus II <sup>1</sup>	4
Second Writing Course <sup>1,3</sup>	3
General Education or Honors Distribution <sup>4</sup>	3
General Education or Honors Distribution <sup>4</sup>	3
Hours	16

#### 2nd Year

Fall Semester	Hours
3250:244 Introduction to Economic Analysis	3
3450:223 Analytic Geometry-Calculus III <sup>1</sup>	4
3650:291 Elementary Classical Physics I <sup>1</sup>	4
4300:201 Statics <sup>1</sup>	3
General Education or Honors Distribution <sup>4</sup>	3
Hours	17

#### Spring Semester

3450:335 Introduction to Ordinary Differential Equations	3
3650:292 Elementary Classical Physics II <sup>1</sup>	4
4300:202 Introduction to Mechanics of Solids	3
4600:203 Dynamics <sup>1</sup>	3
4600:260 Engineering Analysis I	2
Hours	15

#### 3rd Year

Fall Semester	Hours
3470:401 Probability and Statistics for Engineers	2

4600:300	Thermodynamics I	3
4600:310	Fluid Mechanics I	2
4600:321	Kinematics of Machines	2
4600:336	Analysis of Mechanical Components	3
4600:360	Engineering Analysis II	2
Hours		14

**Spring Semester**

4600:301	Thermodynamics II	2
4600:315	Heat Transfer	3
4600:337	Design of Mechanical Components	3
4600:340	Systems Dynamics & Response	3
4600:483	Measurements Laboratory	2
General Education or Honors Distribution		3
Hours		16

**Summer Semester**

4600:311	Fluid Mechanics II	3
4600:380	Introduction to Materials Science and Engineering	2
4600:431	Fundamentals of Mechanical Vibrations	3
Hours		8

**4th Year****Fall Semester**

4600:400	Thermal System Components	3
4600:402	Senior Seminar	1
4600:441	Control Systems Design	3
4600:460	Concepts of Design	3
4600:461	ME Senior Design Project I <sup>6</sup>	2
4600:484	Mechanical Engineering Laboratory	2
Mechanical Engineering Elective <sup>5</sup>		3
Hours		17

**Spring Semester**

4400:307	Basic Electrical Engineering	4
4600:471	ME Senior Design Project II <sup>7</sup>	2
Mechanical Engineering Elective <sup>5</sup>		3
Mechanical Engineering Elective <sup>5</sup>		3
General Education or Honors Distribution <sup>4</sup>		3
General Electives		4
Hours		19
Total Hours		136

<sup>1</sup> Honors sections may be available; check the schedule of classes.

<sup>2</sup> The Mechanical Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.

<sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.

<sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.

<sup>5</sup> Mechanical Engineering Electives must include three credits Mechanical Engineering design elective, three credits Technical elective, and three credits Mechanical Engineering technical elective.

<sup>6</sup> Students following the Honors Track will complete part of the Honors Distribution instead of 4600:461 ME Senior Design Project I.

<sup>7</sup> Students following the Honors Track will complete the 4-credit Honors Project instead of 4600:471 ME Senior Design Project II.

## Mechanical Engineering, Co-op Option, BS

### Bachelor of Science in Mechanical Engineering with Co-op (460005BS)

This option of the undergraduate program in Mechanical Engineering includes a cooperative education component.

The following information has official approval of the **Department of Mechanical Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

**1st Year**

Fall Semester		Hours
3150:151	Principles of Chemistry I <sup>1</sup>	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I <sup>1,2,3</sup>	3
3450:221	Analytic Geometry-Calculus I <sup>1</sup>	4
4600:165	Tools for Mechanical Engineering	3
Hours		14

**Spring Semester**

3150:153	Principles of Chemistry II <sup>1</sup>	3
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
Second Writing Course <sup>1,3</sup>		3
General Education or Honors Distribution <sup>4</sup>		3
General Education or Honors Distribution <sup>4</sup>		3
Hours		16

**2nd Year****Fall Semester**

3250:244	Introduction to Economic Analysis	3
3450:223	Analytic Geometry-Calculus III <sup>1</sup>	4
3650:291	Elementary Classical Physics I <sup>1</sup>	4
4300:201	Statics <sup>1</sup>	3
General Education or Honors Distribution <sup>4</sup>		3
Hours		17

**Spring Semester**

3450:335	Introduction to Ordinary Differential Equations	3
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3650:292	Elementary Classical Physics II <sup>1</sup>	4
4300:202	Introduction to Mechanics of Solids	3
4600:203	Dynamics <sup>1</sup>	3
4600:260	Engineering Analysis I	2
Hours		15
<b>Summer Semester</b>		
4100:300	Cooperative Education Work Period (Possible)	0
Hours		0
<b>3rd Year</b>		
<b>Fall Semester</b>		
3470:401	Probability and Statistics for Engineers	2
4600:300	Thermodynamics I	3
4600:310	Fluid Mechanics I	2
4600:321	Kinematics of Machines	2
4600:336	Analysis of Mechanical Components	3
4600:360	Engineering Analysis II	2
Hours		14
<b>Spring Semester</b>		
4100:301	Cooperative Education Work Period	0
Hours		0
<b>Summer Semester</b>		
4600:311	Fluid Mechanics II	3
4600:380	Introduction to Materials Science and Engineering	2
4600:340	Systems Dynamics & Response	3
Hours		8
<b>4th Year</b>		
<b>Fall Semester</b>		
4100:302	Cooperative Education Work Period	0
Hours		0
<b>Spring Semester</b>		
4400:307	Basic Electrical Engineering	4
4600:301	Thermodynamics II	2
4600:315	Heat Transfer	3
4600:337	Design of Mechanical Components	3
4600:431	Fundamentals of Mechanical Vibrations	3
4600:483	Measurements Laboratory	2
Hours		17
<b>Summer Semester</b>		
4100:403	Cooperative Education Work Period	0
Hours		0
<b>5th Year</b>		
<b>Fall Semester</b>		
4600:400	Thermal System Components	3
4600:402	Senior Seminar	1
4600:441	Control Systems Design	3
4600:460	Concepts of Design	3
4600:484	Mechanical Engineering Laboratory	2
4600:461	ME Senior Design Project I (Non Honors Track) <sup>6</sup>	2

Mechanical Engineering Elective <sup>5</sup>		3
Hours		17
<b>Spring Semester</b>		
4600:471	ME Senior Design Project II (Non Honors Track) <sup>7</sup>	2
Mechanical Engineering Elective <sup>5</sup>		3
Mechanical Engineering Elective <sup>5</sup>		3
General Education Course (Non Honors Track) <sup>4,8</sup>		3
General Education Course (Non Honors Track) <sup>4,8</sup>		3
General Electives		4
Hours		18
Total Hours		136

- <sup>1</sup> Honors sections may be available; check the schedule of classes.
- <sup>2</sup> The Mechanical Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.
- <sup>3</sup> Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.
- <sup>4</sup> Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.
- <sup>5</sup> Mechanical Engineering Electives must include three credits Mechanical Engineering design elective, three credits Technical elective, and three credits Mechanical Engineering technical elective.
- <sup>6</sup> Students following the Honors Track will complete part of the Honors Distribution instead of 4600:461 ME Senior Design Project I.
- <sup>7</sup> Students following the Honors Track will complete the 4-credit Honors Project instead of 4600:471 ME Senior Design Project II.
- <sup>8</sup> Students following the Honors Track will complete part of the Honors Distribution instead of General Education. Course credits hours vary between General Education and Honors Distribution.

## Polymer Science and Polymer Engineering

An undergraduate minor in Polymer Science and Polymer Engineering is available for undergraduate science and engineering majors. Research experiences for one to three credits per semester are also offered, starting at the freshman level.

- Polymer Science and Polymer Engineering, Minor (p. 456)

### Polymer Engineering (9841)

#### 9841:321 Polymer Fluid Mechanics (3 Credits)

Prerequisite: 4600:310 or equivalent. Rheological properties and flow characteristics of polymer fluid systems; non-Newtonian viscosity, viscoelasticity.

**9841:422 Polymer Processing (3 Credits)**

Prerequisites: [4200:321 and 4200:351] or [4600:310 and 4600:315]. Polymer processing technology. Basic studies of flow in extrusion, molding, and other processing methods.

**9841:425 Introduction to Blending & Compounding Polymers (3 Credits)**

Prerequisites: 4200:321 or 4600:310 or permission. Nature of polymer blends and compounds and their applications. Preparation and technology using batch and continuous mixers, mixing mechanisms.

**9841:427 Mold Design (3 Credits)**

Prerequisites: 4200:321 or 4600:310 or permission. Molding methods to manufacture polymeric products. Machinery, materials, molds, equipment, computer-aided design.

**9841:450 Engineering Properties of Polymers (3 Credits)**

Prerequisites: 4200:408 or 4300:202 or 9821:301. Mechanical behavior of solid polymers including elastic and plastic deformation, viscoelasticity, fatigue and failure.

**9841:451 Polymer Engineering Laboratory (2 Credits)**

Prerequisite: 4200:408 or 9821:202. Laboratory experiments on the rheological characterization of polymer melts, fabrication of engineering products, structural investigation of polymeric parts.

**9841:497 Honors Project (2 Credits)**

Prerequisite: Senior standing in the Honors Program. Individual creative project in mechanical polymer engineering, supervised by faculty member of the department. This course must be designed oriented if used in place of 4700:499.

**9841:498 Research Problems in Polymer Engineering (1-9 Credits)**

Prerequisite: Permission of Department Chair. Faculty-supervised undergraduate research problems in polymer engineering culminating in a written report.

**9841:499 Polymer Engineering Design Project (2 Credits)**

Corequisite: 4600:400. Analysis and design of mechanical polymer systems.

## Polymer Science (9871)

**9871:313 Physics of Living Systems (3 Credits)**

Introduction to the interdisciplinary study of biological systems through the lens of the physical sciences. Learn how discovery-driven research between biology and physics leads to biomimetic advances and applications.

**9871:401 Introduction to Elastomers (3 Credits)**

Prerequisites: 3150:314 (or equivalent) or permission. An introduction to the science and technology of elastomeric materials and gels, including hydrogels. Lecture and laboratory.

**9871:402 Introduction to Plastics (3 Credits)**

Prerequisite: 3150:314 (or equivalent) or permission. An introduction to the science and technology of plastic materials. Lecture and laboratory.

**9871:403 Polymer Chemistry (3 Credits)**

Prerequisites: 3150:263 and 3150:313 or permission. Mechanisms of polymerization reactions of monomers and molecular mass distributions of products; principles of molecular mass determination; relationship of physical properties/applications to structure and composition.

**9871:404 Polymer Physics (3 Credits)**

Prerequisites: 4200:408 or 9821:301 or [3150:313 and 3450:223]. Advanced overview of polymer physics including scaling theories, chain dynamics, rubber elasticity, glassy polymers and crystallization.

**9871:405 Polymer Science Laboratory (3 Credits)**

Prerequisites: 4200:408 or 9821:301 or 9871:403 or permission. Laboratory course with experiments on the synthesis and characterization of polymers.

**9871:407 Polymer Science (4 Credits)**

Prerequisite: 3150:314 or 3650:301 or permission. Principles of polymerization processes and relationships between molecular structures and physical behavior of polymers. Molecular weight distributions of macromolecules discussed and methods of determining molecular weights utilized.

**9871:497 Honors Project in Polymer Science (1-3 Credits)**

Prerequisites: Sophomore, junior, or senior standing in Honors College and permission of honors preceptor in the home department. Independent research leading to completion of honors thesis under guidance of project adviser. May be repeated for a total of 10 credits.

**9871:499 Research Problems in Polymer Science (1-9 Credits)**

Prerequisite: Permission. Faculty-supervised undergraduate research problems in polymer science, culminating in a written report.

## Polymer Science and Polymer Engineering, Minor

### Minor in Polymer Science and Polymer Engineering (982100M)

A Minor in Polymer Science and Polymer Engineering provides a broad foundation in the synthesis, characterization, processing and design of polymers. Polymers are large molecules (i.e. macromolecules) that are ubiquitous in the world, ranging from plastics and rubber to protein and DNA.

The following information has official approval of **The School of Polymer Science & Polymer Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Polymer Science and Polymer Engineering" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Core		9
	Laboratory Experience	3
	Electives	6
Total Hours		18

## Core

Code	Title	Hours
9821:201	Introduction to Polymer Science	3
9821:202	Introduction to Polymer Engineering	3



9821:301	Polymer Materials Science and Engineering	3
Total Hours		9

- Speech-Language Pathology and Audiology (p. 514)
- Sport Science and Wellness Education (p. 524)

## Laboratory Experience

Code	Title	Hours
<b>Complete three credits</b>		<b>3</b>
9841:451	Polymer Engineering Laboratory	
9841:497	Honors Project	
9841:498	Research Problems in Polymer Engineering <sup>1</sup>	
9841:499	Polymer Engineering Design Project	
9871:405	Polymer Science Laboratory	
9871:497	Honors Project in Polymer Science <sup>1</sup>	
9871:499	Research Problems in Polymer Science <sup>1</sup>	

<sup>1</sup> May be taken multiple semesters to satisfy 3 credit requirement

## Electives <sup>2</sup>

Code	Title	Hours
<b>Complete six credits</b>		<b>6</b>
4200:408	Polymer Engineering	
4800:300	Biomaterials	
9841:422	Polymer Processing	
9841:450	Engineering Properties of Polymers	
9871:403	Polymer Chemistry	
9871:404	Polymer Physics	

<sup>2</sup> Elective courses in other departments (e.g. Biomedical Engineering, Chemical and Biomolecular Engineering, Chemistry, Physics) may be taken as elective courses with permission

## College of Health Professions

The College of Health Professions brings together undergraduate degrees in the School of Nursing, School of Nutrition/Dietetics, School of Social Work, School of Speech-Language Pathology and Audiology, and School of Sport Science and Wellness Education for interprofessional real-world health education. Learn more about the schools and their admissions requirements:

- School of Allied Health (<https://www.uakron.edu/allied-health/>)
- School of Nursing (<https://www.uakron.edu/nursing/>)
- School of Nutrition/Dietetics (<https://www.uakron.edu/nutritiondietetics/>)
- School of Social Work (<https://www.uakron.edu/socialwork/>)
- School of Speech-Language Pathology and Audiology (<https://www.uakron.edu/sslpa/>)
- School of Sport Science and Wellness Education (<https://www.uakron.edu/sswe/>)
- Allied Health (p. 457)
- Child and Family Development (p. 465)
- Disaster Science and Emergency Services (p. 472)
- Nursing (p. 487)
- Nutrition and Dietetics (p. 498)
- Social Work (p. 505)

## Allied Health

### Bachelor of Science in Allied Health Care Administration (275002BS)

More on the Allied Healthcare Administration (<https://www.uakron.edu/allied-health/baha/>)

#### Contact Information

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### Bachelor of Science in Respiratory Therapy (279002BS)

More on the Respiratory Therapy (<https://www.uakron.edu/allied-health/respiratory-care/>)

#### Contact Information

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### Certificate in Healthcare Services Coding and Reimbursement (275003C)

#### Contact Information

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- Allied Health Care Administration, BS (p. 460)
- Health Care Services Coding and Reimbursement, Certificate (p. 462)
- Respiratory Therapy, BS (p. 462)

## Allied Healthcare Administration (2750)

### 2750:120 Medical Terminology (3 Credits)

Medical Terminology includes the study of medical prefixes, suffixes, word roots, combining forms, and with an emphasis on pronunciation, spelling, and abbreviations. Medical Terminology related to the body systems will be emphasized. The purpose of the course is to equip the student with a basic understanding of the tools needed to learn medical terminology as it relates to the body systems with an emphasis on spelling and pronunciation.

### 2750:121 Study of Disease Processes (3 Credits)

Prerequisite: 2750:120. This course studies human disease and the disease process including treatments, causes, incidence, signs and symptoms, and diagnosis.

**2750:122 Emergency Responder I (1 Credit)**

Theory and practice in recognition and response to emergencies by the medical professional including but not limited to: breathing difficulty, cardiac arrest, heart attack, stroke, bleeding, wound care, musculoskeletal injuries, burns, poisonings, heat and cold exposure, and diabetic care.

**2750:200 Health Record Content (3 Credits)**

Introduction to the contents and design of health records (paper and electronic) and discussion of how clinical documentation facilitates the function of the delivery system.

**2750:226 Healthcare Statistics and Registries (3 Credits)**

Prerequisites: 2030:130 and 2440:105. This course covers computations of routine healthcare institutional statistics, the presentation and interpretation of healthcare data, and the use of disease and procedural registries.

**2750:227 Basic Procedural Coding (3 Credits)**

Prerequisite: 2750:120. Class focuses on converting the procedural language into industry standard character strings for purposes of reimbursement CPT and HCPCS codes; learning how to convert procedural statements into CPT and HCPCS codes; learning how to apply carrier rules for reimbursement.

**2750:229 Basic Diagnostic Coding (3 Credits)**

Prerequisite: 2750:120. This class focuses on converting the diagnostic language into industry standard character strings ICD-10-CM for purposes of reporting, research, and reimbursement.

**2750:230 Basic Pharmacology (3 Credits)**

This course is an introduction to pharmacology, organized and presented by therapeutic classification. Topics will include pharmacokinetics, factors which influence drug actions, routes or administration, and adverse effects.

**2750:301 Quality Management in Healthcare (2 Credits)**

Prerequisites: 2750:200 and 2750:328. An introduction of the methods used to define, implement, and monitor total quality management in health care.

**2750:302 Clinical Information Systems (3 Credits)**

Prerequisite: 2740:127. Discussion of clinical systems including history of EHR and EMR, the theories behind systems, implementation, evaluation pathways, "Meaningful Use" and the architecture in different settings.

**2750:303 Advanced Coding II (3 Credits)**

Prerequisites: 2750:227 and 2750:229. Through case studies, the class is intended to prepare the student for either the AAPC CPC or the AHIMA CCS-P certification exam.

**2750:304 Healthcare Management Foundations (3 Credits)**

Prerequisite: 2420:300. This course focuses on the circumstances unique to the health care industry management as manifested by patient privacy, outsourcing, and telecommunications.

**2750:310 Healthcare Finance (3 Credits)**

Prerequisites: 2420:211, 2420:213, 2750:227, and 2750:328. Integration of principles learned in accounting, coding, and insurance prerequisites into an exploration of financial management in the sector of the economy that is healthcare.

**2750:328 Medical Insurance (3 Credits)**

Prerequisites: 2750:120, 2570:227, and 2750:229. This course examines the nature of medical insurance reimbursement for medical services. Students will be equipped with an understanding of insurance and reimbursement methodologies.

**2750:331 Advanced Coding I (3 Credits)**

Prerequisites: 2750:120, 2750:227, and 2750:229. An advanced coding course that builds on the CPT and HCPCS codes sets and the ICD-10-CM code set and introduces a series of detailed management topics related to coding.

**2750:336 Legal Concepts of Healthcare (2 Credits)**

Prerequisite: 2740:127. Study of legal principles related to patient care and patient records.

**2750:350 Coding Practicum (3 Credits)**

Prerequisites: 2750:227, 2750:229, 2750:303, and 2750:331. The coding practicum course provides professional experience in an approved site under the direction of a coding or HIM faculty member and an onsite coordinator.

**2750:401 Management Information Systems (3 Credits)**

Prerequisites: 2740:127, 2750:235, 2750:301 and 2750:302. This senior level course focuses on the management of HIM through case studies and textbook work.

**2750:410 Healthcare Research (3 Credits)**

Prerequisites: 2020:222 and 3470:260. Through review of research, HIM students in this class will learn how to support clinicians' data needs while research is conducted.

**2750:412 Current Topics in HIM (3 Credits)**

Prerequisites: 2750:200, 2750:301, 2750:302, 2750:303, 2750:304, 2750:310, 2750:331, and 2750:336. Concepts of HIM are integrated and applied through the analysis of case studies and the completion of a capstone project.

**2750:420 HIM Capstone (4 Credits)**

Prerequisites: 2750:200, 2750:226, 2750:301, 2750:302, 2750:303, 2750:304, 2750:310, 2750:331, and 2750:336. This course prepares senior HIM students for the Registered Health Information Administrator (RHIA) national certification examination.

**2750:450 HIM Practicum (3 Credits)**

Prerequisites: 2750:200, 2750:301, 2750:302, 2750:303, 2750:304, 2750:310, 2750:331, and 2750:336. The HIM practicum course provides professional experience in an approved site under the direction of a coding or HIM faculty member and an onsite coordinator.

## Allied Health (2780)

**2780:102 Overview of Simulation Healthcare (4 Credits)**

An overview of the use of simulation technology in healthcare education: simulation design, development, implementation and evaluation. Department consent is needed.

**2780:201 Simulation Technology Basic Repair (4 Credits)**

Prerequisites: 2440:247, 2750:121, and 2780:102. Use of simulation technology from manufacturing to use in healthcare education, clinical practice, maintenance and repair.

**2780:206 Applied Human Anatomy & Physiology I (3 Credits)**

This course is designed to familiarize students to the structure, function, and physiology of the human body. Topics covered include organization of the body, chemistry, cells, tissues, integumentary system, the skeletal, articulations, muscular system, respiratory system, blood, and cardiovascular system.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**2780:207 Applied Human Anatomy & Physiology II (3 Credits)**

This course is designed to familiarize students the structure, function, and physiology of the human body. This course is the second portion of a two part course. Topics covered include the following body systems: nervous system, senses, endocrine system, lymphatic system, immune system, digestive system, urinary system, male reproductive system, female reproductive, and life span development.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**2780:210 Applied Human Anatomy & Physiology Lab I (1 Credit)**

Pre/Corequisite: 2780:206. This course is an adjunct to the lecture of the structure and function of the human body. This course will be hands on learning to assist in the understanding of anatomy and physiology. Topics covered include organization of the body, chemistry, cells, tissues, skeletal system, muscular system, hematology, cardiovascular, and respiratory systems.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**2780:211 Applied Human Anatomy & Physiology Lab II (1 Credit)**

Pre/Corequisite: 2780:207. This course is an adjunct course of an introduction to the structure and function of the human body. This course will be hands on learning to assist in the learning of anatomy and physiology. Topics covered include the following body systems; nervous, senses, endocrine, digestive, urinary, reproductive, lymphatic, and human development.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**2780:290 Special Topics: Allied Health (1-2 Credits)**

Prerequisite: Permission. Selected topics or subject areas of interest in allied health. (May be repeated for a total of four credits)

## Respiratory Care (2790)

**2790:100 Concepts in Respiratory Therapy (3 Credits)**

Prerequisites: 2030:152 and 2030:153. Introductory concepts regarding the practice and application of the theories employed in respiratory therapy, including career information, equipment (lecture/discussion)

**2790:210 Respiratory Therapy Procedures I (3 Credits)**

Prerequisites: [2790:100, 2750:120, and 2780:206] or [3100:200 and 3100:201]. Application of oxygen and aerosol therapy equipment. Lecture/laboratory.

**2790:215 Respiratory Therapy Pharmacology (3 Credits)**

Prerequisites: 2790:100, 3150:110, and 3150:111. Pharmacologic actions and effects of medications delivered by respiratory therapists, and routes of administration.

**2790:290 Special Topics: Respiratory Care (1-3 Credits)**

Prerequisite: Permission. Selected topics or subject areas of interest in respiratory therapy technology. (May be repeated for a maximum of three credits)

**2790:301 Cardiopulmonary Assessment Techniques (2 Credits)**

Prerequisites: 2780:207 or [3100:202 and 3100:203]. Overall patient assessment, with concentration on the cardiopulmonary systems. Overview of common illness and related clinical manifestations. Lecture/laboratory.

**2790:302 Cardiopulmonary Anatomy and Physiology (3 Credits)**

Prerequisites: [2790:210 and 2780:207] or [3100:202 and 3100:203]. Corequisite: 2790:301. Study of normal anatomy and physiology of cardiopulmonary systems.

**2790:303 Cardiopulmonary Pathology (4 Credits)**

Prerequisites: 2790:301 and 2790:302. Discussion of diseases of the heart and lungs, and their relationship to the role of the respiratory therapist.

**2790:311 Respiratory Therapy Procedures II (3 Credits)**

Prerequisites: [2790:210 and 2780:207] or [3100:202 and 3100:203]. Airway Care and Lung Inflation Techniques. Lecture/laboratory.

**2790:312 Diagnostics I (3 Credits)**

Prerequisite: 2790:210. Corequisites: 2790:301, 2790:302, and 2790:311. Bedside screening studies for the evaluation of cardiopulmonary diseases. Lecture/laboratory.

**2790:313 Diagnostics II (3 Credits)**

Prerequisites: 2790:311 and 2790:312. Corequisite: 2790:303. Laboratory diagnostic studies for the evaluation of cardiopulmonary diseases. Lecture/laboratory.

**2790:315 Advanced Pharmacology for Respiratory Therapy (3 Credits)**

Prerequisite: 2790:215. Pharmacologic actions and effects of Cardiopulmonary Medications.

**2790:320 Neonatal/Pediatrics for Respiratory Therapy I (3 Credits)**

Prerequisite: 2790:301. In depth coverage of neonatal & pediatric respiratory care concepts. Emphasis placed on anatomy and physiology, assessment, and therapeutics.

**2790:325 Mechanical Ventilation (4 Credits)**

Prerequisites: 2790:303, 2790:312, 2790:315, 2790:320, and 2790:341. Introduction to mechanical ventilation and equipment. Lecture/lab.

**2790:340 Application of Clinical Concepts (2 Credits)**

Prerequisite: 2790:210. Corequisite: 2790:301. Introduction to basic respiratory therapy in a hospital setting, and hands-on practice with respiratory therapy equipment, including CPR for the professional. Lecture/clinical.

**2790:341 RT Clinical Experience I (3 Credits)**

Prerequisites: 2790:215, 2790:311, and 2790:340. Application of clinical procedures in a hospital setting, with emphasis on basic therapeutic interventions. Clinical. 225 clinical hours.

**2790:342 RT Clinical Experience II (2 Credits)**

Prerequisites: 2790:315, 2790:325, and 2790:341. Application of clinical procedures in a hospital setting, with emphasis on mechanical ventilation techniques. 150 clinical hours.

**2790:413 Respiratory Therapy in Alternate Settings (3 Credits)**

Prerequisite: 2790:313. Pulmonary rehabilitation and home care, as well as care in alternate settings. Lecture/lab.

**2790:420 Neonatal/Pediatrics for Respiratory Therapy II (3 Credits)**

Prerequisite: 2790:320. Detailed study of airway management, pathophysiology and treatment modalities as they relate to neonatal/pediatrics.

**2790:421 ACLS & PALS (3 Credits)**

Prerequisites: 2790:303, 2790:315, 2790:320, and 2790:340. Advanced Cardiac Life Support and Pediatric Advanced Life Support, with mega codes and case studies.

**2790:430 Problems in Respiratory Therapy (4 Credits)**

Prerequisites: 2790:313, 2790:420, and 2790:443. Capstone course, applies the concepts from clinical situations, using computer simulations and cases and evaluates research in Respiratory therapy.

**2790:443 RT Clinical Experience III (4 Credits)**

Prerequisite: 2790:342. Rotation to a variety of Health care facilities to practice specialty procedures in each institution. 300 clinical hours.

**2790:444 RT Clinical Experience IV (4 Credits)**

Prerequisite: 2790:443. Rotation to a variety of health care facilities to practice specialty procedures from each institution. Clinical (total of 300 hours).

# Allied Health Care Administration, BS

## Bachelor of Science in Allied Health Care Administration (275002BS)

M (<https://www.uakron.edu/allied-health/allied-health-administration/>)ore on the Allied Health Care Administration major (<https://www.uakron.edu/allied-health/baha/>)

### Contact Information

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### Program Description

Allied Health Care Administration managers work closely with clinical and administrative staff as they process, analyze and report information vital to the delivery of health care. Through our program, **you will gain knowledge and experience in both the clinical and business sides of health care.**

The Bachelor of Allied Health Care Administration degree allows new students and those holding an Associate of Applied Science degree to earn a bachelor's degree, often a requirement to move into supervisory or management roles.

This degree can also put you on a path toward master's and doctoral-level work in many health-care related professions.

The following information has official approval of the **Department of Allied Health** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

### Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33) *	29
	Core Courses	51
	Other Required Courses	21
	Electives	19
	<b>Total Hours</b>	<b>120</b>

\* Several courses required for the major also satisfy General Education requirements. The University minimum of 34 credits are required for General Education and credit for these courses will apply to both.

### Recommended General Education Courses

Code	Title	Hours
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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

The specific courses listed below may satisfy degree requirements as well as General Education requirements. To facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

#### Tier I: Academic Foundations 12

*Quantitative Reasoning: 3 credit hours*

3450:145 Algebra for Calculus

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

2020:121 English

2020:222 Technical Report Writing

#### Tier II: Disciplinary Areas 22

*Arts/Humanities: 9 credit hours*

3600:120 Introduction to Ethics

*Natural Sciences: 7 credit hours*

*Social Sciences: 6 credit hours*

#### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

3600:361 Biomedical Ethics

3750:425 Psychology of Hate

3850:320 Social Inequalities

Critical Thinking

3600:120 Introduction to Ethics

Domestic Diversity

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours	34
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### Core Courses

Code	Title	Hours
2750:120	Medical Terminology	3
2750:121	Study of Disease Processes	3
2750:122	Emergency Responder I	1
2750:200	Health Record Content	3
2750:227	Basic Procedural Coding	3
2750:229	Basic Diagnostic Coding	3
2750:230	Basic Pharmacology	3
2750:301	Quality Management in Healthcare	2
2750:302	Clinical Information Systems	3
2750:303	Advanced Coding II	3
2750:304	Healthcare Management Foundations	3
2750:310	Healthcare Finance	3

2750:328	Medical Insurance	3
2750:331	Advanced Coding I	3
2750:336	Legal Concepts of Healthcare	2
2750:401	Management Information Systems	3
2780:106	<sup>1</sup>	
2780:107	<sup>1</sup>	
2780:110		
2780:111		
Total Hours		44

### Other Required Courses

Code	Title	Hours
2020:121	English <sup>1</sup>	3
2020:222	Technical Report Writing (or equivalent) <sup>1</sup>	3
2420:211	Essentials of Financial Accounting	3
2420:212	Basic Accounting II	3
2420:270	Business Software Applications	3
2440:105	Introduction to Computers and Application Software	3
3450:145	Algebra for Calculus (or equivalent) <sup>1</sup>	4
3600:120	Introduction to Ethics <sup>1</sup>	3
Total Hours		25

### Electives

Code	Title	Hours
<b>Select 19 credits:</b>		<b>19</b>
2235:305	Principals of Emergency Management and Homeland Security	
2235:401	Crisis Leadership	
2420:301	Information Design	
2420:310	Leadership Principles & Practices	
2750:350	Coding Practicum	
2750:450	HIM Practicum	
2870:332	Management of Technology Based Operations	
3400:487	Science and Technology in World History	
3600:361	Biomedical Ethics <sup>2</sup>	
3700:303	Introduction to Political Thought	
3750:380	Industrial/Organizational Psychology	
3750:425	Psychology of Hate <sup>2</sup>	
3760:301	Consumer Education	
3850:320	Social Inequalities <sup>2</sup>	
3980:416	Personnel Management in the Public Sector	
3980:417	Leadership and Decision-Making	
7760:316	Science of Nutrition	
Total Hours		19

<sup>1</sup> This course is required for the degree program. It also satisfies a General Education requirement.

<sup>2</sup> One of these courses will also satisfy the Tier III Complex Systems General Education requirement.

### Recommended Sequence

<b>1st Year</b>		<b>Hours</b>
<b>Fall Semester</b>		
2020:121	English	3
2750:120	Medical Terminology	3
2440:105	Introduction to Computers and Application Software	3
2780:106		3
2780:110		1
Quantitative Reasoning Requirement		3
Hours		16
<b>Spring Semester</b>		
2020:222	Technical Report Writing ((or equivalent))	3
2420:211	Essentials of Financial Accounting	3
2780:107		3
2780:111		1
3600:120	Introduction to Ethics	3
Speaking Requirement		3
Hours		16
<b>2nd Year</b>		
<b>Fall Semester</b>		
2750:230	Basic Pharmacology	3
2420:270	Business Software Applications	3
Domestic Diversity Requirement		3
Arts/Humanities Requirement		4
Social Science Requirement		3
Hours		16
<b>Spring Semester</b>		
2750:121	Study of Disease Processes	3
2420:212	Basic Accounting II	3
Electives		3
Complex Systems Requirement		3
Arts/Humanities Requirement		3
Hours		15
<b>3rd Year</b>		
<b>Fall Semester</b>		
2750:200	Health Record Content	3
2750:227	Basic Procedural Coding	3
2750:229	Basic Diagnostic Coding	3
xxxx:3xx/4xx	Elective <sup>1</sup>	3
Social Science/Domestic Diversity Requirement		3
Hours		15
<b>Spring Semester</b>		
2750:301	Quality Management in Healthcare	2
2750:302	Clinical Information Systems	3
2750:328	Medical Insurance	3
2750:331	Advanced Coding I	3
xxxx:3xx/4xx	Elective	3
Elective		1
Hours		15

**4th Year****Fall Semester**

2750:122	Emergency Responder I	1
2750:304	Healthcare Management Foundations	3
2750:336	Legal Concepts of Healthcare	2
2750:401	Management Information Systems	3
xxxx:3xx/4xx	Elective <sup>1</sup>	3
	Global Diversity Requirement	3
	Hours	15

**Spring Semester**

2750:310	Healthcare Finance	3
2750:303	Advanced Coding II	3
xxxx:3xx/4xx	Elective	3
xxxx:3xx/4xx	Elective <sup>1</sup>	3
	Hours	12
	Total Hours	120

<sup>1</sup> Recommended 3xx/4xx Elective List:

- 2235:305 Principals of Emergency Management and Homeland Security
- 2235:401 Crisis Leadership
- 2420:301 Information Design
- 2420:310 Leadership Principles & Practices
- 2870:332 Management of Technology Based Operations
- 3400:487 Science and Technology in World History
- 3600:361 Biomedical Ethics
- 3700:303 Introduction to Political Thought
- 3750:380 Industrial/Organizational Psychology
- 3750:425 Psychology of Hate
- 3760:301 Consumer Education
- 3850:320 Social Inequalities
- 3980:416 Personnel Management in the Public Sector
- 3980:417 Leadership and Decision-Making
- 7760:316 Science of Nutrition

## Health Care Services Coding and Reimbursement, Certificate

### Certificate in Health Care Services Coding and Reimbursement (275003C)

The Health Care Services Coding and Reimbursement certificate is designed to provide graduates an in-depth understanding of how healthcare services are reimbursed by insurance. In the case of those graduates who will bill for their services, that understanding will make them more attractive to healthcare system employers. In the case of graduates seeking to move into a managerial role in their department or operational setting, that understanding is fundamental to maximizing the department's revenue stream, again making the UA graduate a more attractive employee manager.

**Program Contact**

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The following information has official approval of the **School of Allied Health** and the **College of Health Professions**, but is intended only as a

guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

## Summary

Code	Title	Hours
Required Courses		24
Total Hours		24

## Required Courses

Code	Title	Hours
2750:120	Medical Terminology	3
2750:227	Basic Procedural Coding	3
2750:229	Basic Diagnostic Coding	3
2750:303	Advanced Coding II	3
2750:328	Medical Insurance	3
2780:206	Applied Human Anatomy & Physiology I	3
2780:207	Applied Human Anatomy & Physiology II	3
8200:217	Pathophysiology for Nurses	3
	or 2750:121 Study of Disease Processes	
Total Hours		24

## Respiratory Therapy, BS

### Bachelor of Science in Respiratory Therapy (279002BS)

More on the Respiratory Therapy major (<https://www.uakron.edu/allied-health/respiratory-care/>)

## Contact Information

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Associate Professor and Program Director of Respiratory Therapy  
330-972-7906  
stacia@uakron.edu

## Program Description

**Respiratory Therapists:** assess, treat and care for patients with breathing disorders. Primary responsibilities include initiation of and monitoring of therapeutic procedures, maintaining patient records, selecting, assembling, operating and maintaining respiratory and life-support equipment.

Respiratory Therapists may be employed by hospitals, clinics, long-term acute care facilities, physician offices, pulmonary rehabilitation centers, home-care agencies, sleep-labs, durable medical equipment sales companies, as well as participate in intra-facility transport at some hospitals. According to the United States Bureau of Labor Statistic 2010, Respiratory Therapists earn a median hourly wage of \$26.86 with the bottom 10% at \$39,990 and the top 10% earning greater than \$73,410. (Mean annual wage of \$52,700 in Ohio).

The job outlook for a Respiratory Therapist is good with faster than average growth projected. The increased demand will come from the therapist's expanding role and increase in number of older persons.

Related occupations include: Athletic Trainers, Occupational Therapists, Physical Therapists, Radiation Therapists, and Registered Nurses.

**Accreditation:** The Bachelor of Science in Respiratory Therapy program at The University of Akron is accredited by the Commission on Accreditation for Respiratory Care (CoARC); 777 Cannon Drive, P. O. Box 54876, Hurst, TX 76054-4876 USA.

**Application Deadline:** Application deadline is November 30th for those students who will complete all of the pre-admission courses<sup>1</sup> by the end of fall semester with a minimum 2.3 GPA or higher.

Application to the program is competitive but varies each year by applicant pool. Acceptance is based on overall grade point average as well as grades earned in required math and science courses. Application to the program requires a criminal background check (FBI and BCI). Twenty (20) students are selected each year. Applications will be administered to students while they are enrolled in 2790:100 Concepts in Respiratory Therapy, or may be picked up in the School of Allied Health, Polsky 265 at any time.

<sup>1</sup> Pre-admission coursework, students must apply by November 30th (see Application Deadline/Requirements).

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## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33) *	10
	Prerequisite Courses	40
	Core Courses	71
	Total Hours	121

\* Several courses required for the major also satisfy General Education requirements. The University minimum of 34 credits are required for General Education and credit for these courses will apply to both.

## Recommended General Education Courses

Code	Title	Hours
	Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.	

The specific courses listed below may satisfy degree requirements as well as General Education requirements. To facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
3450:145	Algebra for Calculus	
<i>Speaking: 3 credit hours</i>		
7600:105	Introduction to Public Speaking	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	
3300:112	English Composition II	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
3600:120	Introduction to Ethics	
<i>Natural Sciences: 7 credit hours</i>		
3150:110	Introduction to General, Organic & Biochemistry I (Lecture)	
	or 3150:151 Principles of Chemistry I	
3150:111	Introduction to General, Organic & Biochemistry I (Laboratory)	
	or 3150:152 Principles of Chemistry I Laboratory	
3100:130	Principles of Microbiology	
3100:200	Human Anatomy & Physiology I	
3100:202	Human Anatomy & Physiology II	
<i>Social Sciences: 6 credit hours</i>		
3750:100	Introduction to Psychology	
3850:100	Introduction to Sociology	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
3600:361	Biomedical Ethics	
Critical Thinking		
3600:120	Introduction to Ethics	
Domestic Diversity		
3850:100	Introduction to Sociology	
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## Prerequisite Courses

Code	Title	Hours
3450:145	Algebra for Calculus <sup>1,2</sup>	4
3750:100	Introduction to Psychology	3
3850:100	Introduction to Sociology	3
3150:110	Introduction to General, Organic & Biochemistry I (Lecture) <sup>1</sup>	3
	or 3150:151 Principles of Chemistry I	
3150:111	Introduction to General, Organic & Biochemistry I (Laboratory) <sup>1</sup>	1
	or 3150:152 Principles of Chemistry I Laboratory	
2420:300	Supervision	3

3600:120	Introduction to Ethics	3
3600:361	Biomedical Ethics	3
3100:130	Principles of Microbiology <sup>1</sup>	3
3100:200	Human Anatomy & Physiology I <sup>1</sup>	3
3100:202	Human Anatomy & Physiology II	3
3100:201	Human Anatomy & Physiology Laboratory I <sup>1</sup>	1
3100:203	Human Anatomy & Physiology Laboratory II	1
2750:120	Medical Terminology <sup>1</sup>	3
7600:105	Introduction to Public Speaking	3
Total Hours		40

<sup>1</sup> Course required for application

<sup>2</sup> Completing 1) 3470:250 Statistics for Everyday Life or, 2) 2030:153 Technical Mathematics III and 2030:154 Technical Mathematics IV satisfies this requirement.

## Core Courses

Code	Title	Hours
2790:100	Concepts in Respiratory Therapy <sup>1</sup>	3
2790:210	Respiratory Therapy Procedures I	3
2790:215	Respiratory Therapy Pharmacology	3
2790:301	Cardiopulmonary Assessment Techniques	2
2790:302	Cardiopulmonary Anatomy and Physiology	3
2790:303	Cardiopulmonary Pathology	4
2790:311	Respiratory Therapy Procedures II	3
2790:312	Diagnostics I	3
2790:313	Diagnostics II	3
2790:315	Advanced Pharmacology for Respiratory Therapy	3
2790:320	Neonatal/Pediatrics for Respiratory Therapy I	3
2790:325	Mechanical Ventilation	4
2790:340	Application of Clinical Concepts	2
2790:341	RT Clinical Experience I	3
2790:342	RT Clinical Experience II	2
2790:413	Respiratory Therapy in Alternate Settings	3
2790:420	Neonatal/Pediatrics for Respiratory Therapy II	3
2790:421	ACLS & PALS	3
2790:430	Problems in Respiratory Therapy	4
2790:443	RT Clinical Experience III	4
2790:444	RT Clinical Experience IV	4
3300:111	English Composition I	3
3300:112	English Composition II	3
Total Hours		71

<sup>1</sup> Course required for application

## Recommended Sequence

1st Year		Hours
Fall Semester		
3150:110	Introduction to General, Organic & Biochemistry I (Lecture) <sup>1,2</sup>	3
3150:111	Introduction to General, Organic & Biochemistry I (Laboratory) <sup>1,2</sup>	1
3300:111	English Composition I <sup>1</sup>	3

3850:100	Introduction to Sociology <sup>1</sup>	3
	Math Requirement <sup>1,3</sup>	3
Hours		13

### Spring Semester

2750:120	Medical Terminology <sup>1,2</sup>	3
2790:100	Concepts in Respiratory Therapy (Currently available in Spring and Fall) <sup>1,2</sup>	3
3300:112	English Composition II <sup>1</sup>	3
3750:100	Introduction to Psychology <sup>1</sup>	3
7600:105	Introduction to Public Speaking <sup>1</sup>	3
	or 7600:106 or Effective Oral Communication	
Hours		15

### 2nd Year

#### Fall Semester

3100:130	Principles of Microbiology <sup>1,2</sup>	3
3600:120	Introduction to Ethics	3
Arts Requirement		3
Select one of the following options:		3-4
2780:206	Applied Human Anatomy & Physiology I	
3100:200 & 3100:201	Human Anatomy & Physiology I and Human Anatomy & Physiology Laboratory I <sup>1,2</sup>	
Hours		12-13

#### Spring Semester

2790:210	Respiratory Therapy Procedures I	3
2790:215	Respiratory Therapy Pharmacology	3
Arts or Humanities Requirement		3
Critical Thinking Requirement		3
Select one of the following options:		3-4
2780:207	Applied Human Anatomy & Physiology II	
3100:202 & 3100:203	Human Anatomy & Physiology II and Human Anatomy & Physiology Laboratory II <sup>2</sup>	
Hours		15-16

### Summer Semester

2790:301	Cardiopulmonary Assessment Techniques	2
Hours		2

### 3rd Year

#### Fall Semester

2790:302	Cardiopulmonary Anatomy and Physiology	3
2790:311	Respiratory Therapy Procedures II	3
2790:312	Diagnostics I	3
2790:340	Application of Clinical Concepts	2
3600:361	Biomedical Ethics	3
Hours		14

#### Spring Semester

2790:303	Cardiopulmonary Pathology	4
2790:313	Diagnostics II	3
2790:315	Advanced Pharmacology for Respiratory Therapy	3
2790:320	Neonatal/Pediatrics for Respiratory Therapy I	3



2790:341	RT Clinical Experience I	3
	Hours	16
<b>Summer Semester</b>		
2790:325	Mechanical Ventilation	4
2790:342	RT Clinical Experience II	2
	Hours	6
<b>4th Year</b>		
<b>Fall Semester</b>		
2420:300	Supervision	3
2790:421	ACLS & PALS	3
2790:420	Neonatal/Pediatrics for Respiratory Therapy II	3
2790:443	RT Clinical Experience III	4
	Domestic Diversity Requirement	3
	Hours	16
<b>Spring Semester</b>		
2790:413	Respiratory Therapy in Alternate Settings (lab)	3
2790:430	Problems in Respiratory Therapy	4
2790:444	RT Clinical Experience IV	4
	Global Diversity Requirement	3
	Hours	14
	Total Hours	123-125

<sup>1</sup> Pre-admission coursework, students must apply by November 30th (see Application Deadline/Requirements).

<sup>2</sup> All courses must be completed with a grade of C or better and may only be repeated one time.

<sup>3</sup> 3450:145 Algebra for Calculus is preferred.

**Policy Alert: By the end of your first 48 credit hours attempted, you should have completed your *required* General Education English, Math, and Communications (Speech) requirements.**

## Child and Family Development

Students in the Child and Family Development program complete coursework in human development, family dynamics, health and nutrition, diversity, consumer issues, early childhood programming, applied skills, and much more. Faculty members advise every student and help them maximize their degree by incorporating possible minors and certificates into their program. Students complete a capstone experience which gives them the opportunity to work with professionals and apply their academic knowledge to real-world settings.

- Case Management for Children and Families, Certificate (p. 467)
- Child and Family Development, BAT (p. 467)
- Child Development, Minor (p. 469)
- Early Childhood Programs, Certificate (p. 469)
- Family Development, Minor (p. 470)
- Home Based Intervention Therapy, Certificate (p. 471)
- Parent and Family Education, Certificate (p. 471)

## Child and Family Development (3760)

### 3760:110 Foundations in Early Childhood Education (3 Credits)

Overview of model early care and education programs, emphasizing interactions between home and school that impact children's development. Online section available. (field hours required)

### 3760:147 Orientation to Child & Family Development (1 Credit)

Introduction to academic programs, careers, and professional skills related to Child & Family Development. Open to all majors. Online sections available.

### 3760:201 Intimate Relationships (3 Credits)

Love, intimacy, relationship development, sexuality, marriage, and parenting are studied in lifespan perspective.

### 3760:245 Infant/Toddler Care and Education Programs (3 Credits)

Prerequisite: 3760:265. Survey of infant/toddler development. Principles of infant/toddler early care. Design of environment and curriculum based on child's needs. Online section available. (field hours required)

### 3760:246 Multicultural Issues in Child Care (3 Credits)

The study of cultural differences in child care and preschool settings to improve caregiving practices and enhance communication between caregivers and families.

### 3760:247 Diversity in Early Childhood Literacy (3 Credits)

Examination and analysis of children's books and materials on diversity reflecting differences and similarities of groups of people that make up our society.

### 3760:250 Observing & Recording Children's Behavior (3 Credits)

Prerequisite: 3760:265. Develops observing and recording skills, evaluates multiple methods of assessment for children's development and behavior. (field hours required)

### 3760:255 Fatherhood: Parent Role (3 Credits)

Prerequisites: 3760:201 or 3760:265. Historic evolution of the father role, its changing social definition, and father's potential effects on a child's development—birth through adolescence.

### 3760:265 Child Development (3 Credits)

Physical, cognitive, language, social, emotional, and personality development of the child from prenatal through adolescence (field hours required).

### 3760:270 Theory & Guidance of Play (3 Credits)

Prerequisite: 3760:265. The influence of play on child development, theories of child development as they relate to play, and facilitating development through play. (field hours required)

### 3760:280 Early Childhood Curriculum Methods (3 Credits)

Prerequisite: 3760:265. Planning, presenting, evaluating creative activities aligned with learning standards in art, music, movement, language arts, mathematics, and science. Adult-child interactions emphasized. (field hours required)

### 3760:290 Special Topics: Child & Family Development (1-3 Credits)

Selected topics/workshops on subject areas of interest in early childhood development. May be repeated up to 4 credits.

### 3760:295 Early Childhood Practicum (5 Credits)

Prerequisites: 2200:245, 5200:360, 5200:370, 3760:265, 3760:270, and 3760:280. Supervised practicum in an early childhood/preschool educational setting designed for Early Childhood Development students only.

**3760:297 Independent Study (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission. Selected topics and special areas of study under supervision and evaluation of selected faculty member with whom specific arrangements have been made.

**3760:300 Legal Environment of Families (3 Credits)**

Introduction to legal concepts and procedures with particular emphasis on how the legal system impacts families.

**3760:301 Consumer Education (3 Credits)**

Examines consumer needs vs. wants, short- and long-term consumer concerns, and problems experienced by individual consumers as they navigate through society. Online section available.

**3760:303 Children As Consumers (3 Credits)**

Study of the consumer role of children three through eighteen years. Emphasizes research data on children as consumers and consumer education for children.

**3760:360 Parent-Child Relations (3 Credits)**

Prerequisite: 3750:230 or 3760:265. The study of interactive parent-child relations from infancy through adulthood and the internal and environmental forces which impact family dynamics. Online section available.

**3760:362 Family Resource Management (3 Credits)**

Introduction to the application and resulting impact of resource management theories, decision-making models, processes, and principles to individual and family well-being.

**3760:365 Infant Development (3 Credits)**

Prerequisite: 3750:230 or 3760:265. In depth examination of physical, cognitive, language, social, and emotional development beginning in prenatal development and throughout infancy. (field hours required)

**3760:370 Teaching in the Early Childhood Classroom (2 Credits)**

Prerequisite: 3760:280. Corequisite: 3760:375. Assists students with the integration of research and applied skills needed as a professional working with young children.

**3760:375 Teaching in the Early Childhood Classroom Lab (2 Credits)**

Prerequisite: 3760:280. Corequisite: 3760:370. An integrated practical experience in child development centers under the direction of experienced early childhood professionals.

**3760:401 American Families in Poverty (3 Credits)**

Prerequisites: [3750:230 or 3760:201 or 3760:265], and senior standing or higher. Overview of the issues, trends and social policies affecting American families living in poverty. Online section available.

**Gen Ed:** Tier 3 - Complex Systems

**3760:404 Middle Childhood and Adolescence (3 Credits)**

Prerequisites: 3760:201 and [3750:230 or 3760:265]. In depth examination of physical, cognitive, language, social, and emotional development in middle childhood and adolescence. Online section available.

**3760:406 Family Financial Management (3 Credits)**

Practical life skills in financial management such as budgeting strategies, how to save, invest, and plan for financial future. Online section available.

**3760:421 Special Problems in Family & Consumer Sciences (1-3 Credits)**

Additional study or apprentice experience in specialized field or preparation; group and individual experimentation.

**3760:440 Family Crisis (3 Credits)**

Prerequisite: 3760:201. Examines family stress and crisis, the influence of internal and external variables on disorganization, coping, and recovery. Includes theory, research, and application. Online section available.

**3760:441 Family Relationships in Middle and Later Years (3 Credits)**

Exploration of family and individual development of communication and education during the middle and later years of life. Emphasis on issues related to intimacy, economics, social policies, psychological and biological changes.

**3760:442 Human Sexuality (3 Credits)**

Prerequisite: 3750:230 or 3760:201. An examination of human sexuality across the lifespan.

**3760:446 Culture, Ethnicity & Family (3 Credits)**

Prerequisites: 3760:201 or 3760:265, and senior status. Study of the role of culture and ethnicity in adaptation of the family system to environment. Online section available.

**3760:447 Senior Seminar: Critical Issues in FCS Professional Develop (1 Credit)**

Prerequisites: FCS major & senior standing. Consideration of family and consumer sciences as a profession and its impact on the quality of life of individuals, families and their environments. Analysis of challenges facing the profession and all home economists.

**3760:448 Before & After School Child Care (2 Credits)**

Study of the development, implementation and evaluation of school-age child-care programs for before and after school and vacation periods.

**3760:450 Families, Individuals & Environments (3 Credits)**

Prerequisite: FCS major, senior standing or completion of 90 credits or permission of instructor. Integrative exploration of issues affecting the well-being of individuals, families, and communities in the multiple environments in which they function.

**3760:460 Organization & Supervision of Child Care Centers (3 Credits)**

Theory, principles and procedures involved in establishing and operating centers for infants, toddlers, preschool and school-age children.

**3760:461 Case Management for Children & Families I (3 Credits)**

Provides an overview of Case Management basics in a multi-systems collaborative context. Includes roles, values, principles, state and service systems, and service coordination.

**3760:462 Case Management for Children & Families II (3 Credits)**

Prerequisite: 3760:461 or 3760:561. Provides in-depth exploration of Case Management principles and practice. Emphasis on process and functions, assessment, cross-system service planning and coordination, advocacy, and cultural diversity.

**3760:463 Practicum in Cross-Systems Case Management for Children & Families (3-5 Credits)**

Prerequisites: 3760:461, 3760:462, and six hours of electives. Provides on-site opportunities to apply skills in cross- systems collaborative Case Management with children and families. Includes review of strategies, ethics, and survival skills, and supervision.

**3760:485 Seminar in Child and Family Development (1-3 Credits)**

Exploration and evaluation of current research on a selected contemporary topic. (May be repeated for a total of six credits)

**3760:490 Workshop in Child & Family Development (1-3 Credits)**

Prerequisite: Junior or higher standing or permission of instructor. Investigation of an issue or topic in a selected area. May involve off-campus activity and/or on-campus group meeting.

**3760:494 Internship: Child and Family Development (1-6 Credits)**

Prerequisite: Permission of the instructor. In depth field experience in business or community agencies relating to children and families (40 hours required per credit).

**3760:496 Parent Education (3 Credits)**

Prerequisite: 3760:265, comparable course or permission of instructor. Practical application that reviews and analyzes parent education methods with major emphasis on the evaluation of parent education programs. Online section available.

**3760:499 Senior Honors Project in Child & Family Development (1-3 Credits)**

Prerequisites: senior standing in Honors Program and approval of honors preceptor. Individual study supervised by adviser. Student and preceptor develop goals, objectives and methodology. (May be repeated for a total of six credits)

## Case Management for Children and Families, Certificate

### Certificate in Case Management for Children and Families (H40202C)

**Program Contact**

Dr. Pamela Schulze  
 Director, Center for Family Studies  
 Professor, Child & Family Development  
 330-972-7725  
 Email schulze@uakron.edu

The following information has official approval of **The Department of Child & Family Development** and **The College of Health Professions**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Case Management for Children and Families" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

### Summary

Code	Title	Hours
Core Courses		9
Electives		6
Total Hours		15

### Core Courses

Code	Title	Hours
3760:461	Case Management for Children & Families I	3
3760:462	Case Management for Children & Families II	3
3760:463	Practicum in Cross-Systems Case Management for Children & Families	3
Total Hours		9

### Electives

Code	Title	Hours
<b>Select a minimum of 6 credits of the following:</b>		<b>6</b>
1820:403	Home-Based Intervention Theory	
1820:404	Home-Based Intervention Techniques & Practice	
3760:401	American Families in Poverty	

3760:404	Middle Childhood and Adolescence	
3760:440	Family Crisis	
3760:446	Culture, Ethnicity & Family	
Total Hours		6

## Child and Family Development, BAT Bachelor of Arts in Child and Family Development (H40108BAT)

Students in Child and Family Development are prepared to work in a variety of settings:

- Social service and intervention programs such as homeless shelters, drug/alcohol programs, information and referral agencies, rape crisis programs, retirement homes, child and family advocacy programs, foster care and adoption programs, family financial programs, consumer education programs.
- Government and legal programs such as community outreach, child care services for military installations, guardian ad litem programs.
- Educational settings, such as child development centers, parent education programs, children's museums, Head Start programs, preschools, libraries.

Students in the Child and Family Development program complete coursework in human development, family dynamics, health and nutrition, diversity and poverty, financial and consumer issues, and early childhood programming, and practical and/or research applications. Faculty provide one-on-one mentoring and advising. Because students are required to pursue a certificate or minor (which is possible without exceeding the 120 hours needed for graduation) and complete an internship at an agency that aligns with their career goals, students are competitive in the job market after graduation, with over 90% of students surveyed pursuing careers in their chosen profession.

The following information has official approval of **The Department of Child and Family Development** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Students are encouraged to visit the Department of Child and Family Development their freshman year to obtain preliminary information regarding the program requirements and to learn more about on-campus opportunities available to students.

1st Year		
Fall Semester		Hours
3300:111	English Composition I <sup>1</sup>	3
	Quantitative Reasoning Requirement <sup>2</sup>	3-4
3760:201	Intimate Relationships <sup>3</sup>	3
3760:265	Child Development <sup>3</sup>	3

3750:100	Introduction to Psychology <sup>4</sup>	3
Hours		15-16
<b>Spring Semester</b>		
3300:112	English Composition II <sup>1</sup>	3
7600:105 or 7600:106	Introduction to Public Speaking or Effective Oral Communication	3
	Natural Science Requirement	3
	Human Development Course <sup>5</sup>	3-4
3760:147	Orientation to Child & Family Development <sup>6</sup>	1
	Social Science Requirement <sup>7</sup>	3
Hours		16-17

**2nd Year**

**Fall Semester**

	Natural Science Requirement with Lab <sup>8</sup>	4
	Arts Requirement	3
	CFD: Health and Nutrition Course <sup>9</sup>	2-3
	CFD: Early Childhood Programming Course <sup>10</sup>	3
	Humanities Requirement	3
Hours		15-16

**Spring Semester**

	CFD: Family Financial and Consumer Issues Course <sup>11</sup>	3
	Arts or Humanities Requirement	3
	Minor, Certificate, or approved coursework requirement <sup>12</sup>	3
	Minor, Certificate, or approved coursework requirement <sup>12</sup>	2-3
	Domestic Diversity (DD) or Global Diversity (GD) Tagged course <sup>13</sup>	3
Hours		14-15

**3rd Year**

**Fall Semester**

	Minor, Certificate, or Approved coursework requirement <sup>12</sup>	3
3760:xxx <sup>14</sup>		3
	CFD: Family Dynamics course <sup>15</sup>	3
	CFD: Human Development course <sup>5</sup>	3-4
	CFD: Applications in Child and Family Development course <sup>16</sup>	3-4
Hours		15-17

**Spring Semester**

	Minor, Certificate, or Approved coursework requirement <sup>12</sup>	3
	Minor, Certificate, or Approved coursework requirement <sup>12</sup>	3
3760:xxx <sup>14</sup>		3
	CFD: Family Dynamics course <sup>15</sup>	3
3760:485	Seminar in Child and Family Development	3
Hours		15

**4th Year**

**Fall Semester**

	Minor, Certificate, or Approved coursework requirement <sup>12</sup>	3
3760:401 or 3760:446 or 3760:246	American Families in Poverty (Recommended) or Culture, Ethnicity & Family or Multicultural Issues in Child Care	3
3760:xxx <sup>14</sup>		3
3760:xxx <sup>14</sup>		3
	Upper Level Elective <sup>17</sup>	3
Hours		15

**Spring Semester**

1820:405 or 3760:463 or 3760:494	Home-Based Intervention Internship <sup>18</sup> or Practicum in Cross-Systems Case Management for Children & Families or Internship: Child and Family Development	5
	CFD: Diversity Issues <sup>19</sup>	3
	Upper Level Elective <sup>17</sup>	3
	Free Elective <sup>17</sup>	4
Hours		15

Total Hours

120-126

- <sup>1</sup> For English Composition I, 3300:111 English Composition I is the recommended course to meet the General Education Writing requirement. However, 2020:121 English also fulfills the English Composition I Writing requirement. For English Composition II, 3300:112 English Composition II is the recommended course to meet the General Education Writing requirement. However, 2020:222 Technical Report Writing also fulfills the English Composition II Writing requirement.
- <sup>2</sup> The Child and Family Development recommends 3470:250 Statistics for Everyday Life or 3470:260 Basic Statistics to meet the General Education Quantitative Reasoning requirement.
- <sup>3</sup> A grade of "C" or better is required in order to be accepted into the Child and Family Development program.
- <sup>4</sup> 3750:100 Introduction to Psychology is a required course Child and Family Development majors must take as one of their General Education Social Science requirements.
- <sup>5</sup> 6 credits are required from Human Development: 3750:230 Developmental Psychology, 3760:270 Theory & Guidance of Play, 3750:430 Psychological Disorders of Children, 3760:365 Infant Development, 3750:475 Psychology of Adulthood & Aging, 3760:404 Middle Childhood and Adolescence
- <sup>6</sup> Alternate option: Take 7400:447 Senior Seminar: Critical Issues in FCS Professional Develop in 4th year
- <sup>7</sup> Recommended: 3850:100 Introduction to Sociology (DD) Tagged Course; or 3230:251 Human Diversity Global Diversity (GD) Tagged Course
- <sup>8</sup> Recommended: 3230:151 Human Evolution
- <sup>9</sup> 2 credits are required from Health and Nutrition: 3230:420 The Anthropology of Food, 5550:211 First Aid & Cardiopulmonary Resuscitation, 5550:130 Physical Education Activities for Children, 5570:101 Personal Health, 5550:150 Concepts in Health & Fitness, 7760:132 Early Childhood Nutrition, 7760:133 Nutrition Fundamentals, 7760:141 Food for the Family

- 10 3 credits are required from Early Childhood Programming: 3760:245 Infant/Toddler Care and Education Programs, 3760:250 Observing & Recording Children’s Behavior, 3760:280 Early Childhood Curriculum Methods, 3760:460 Organization & Supervision of Child Care Centers
- 11 3 credits are required from Family Financial and Consumer Issues: 3760:301 Consumer Education, 3760:303 Children As Consumers, 3760:362 Family Resource Management, 3760:406 Family Financial Management, 7300:259 Family Housing, 7400:450 Families, Individuals & Environments
- 12 All Child and Family Development majors are required to complete one of the following:
  - 1) Minor
  - 2) Certificate
  - 3) \*12 credits of coursework in a single discipline outside of Child and Family Development
 \*Child and Family Development majors may not minor in Child Development or Family Development.
- 13 Course selection depends on which tagged course met the Social Science requirement.
- 14 Child and Family Development Electives: Complete 12 credits of coursework from any 3760 courses not elsewhere applied in the major. No more than 2 credits of 3760:490 Workshop in Family & Consumer Sciences can be applied towards the elective requirement. Please check your DPR for course list (See “Child and Family Electives” section in DPR)
- 15 6 credits are required from Family Dynamics: 3760:255 Fatherhood: Parent Role, 3760:360 Parent-Child Relations, 3760:440 Family Crisis, 3760:441 Family Relationships in Middle and Later Years, 3760:442 Human Sexuality
- 16 3 credits are required from Applications in Child and Family Development: 1820:403 Home-Based Intervention Theory, 3750:110 Quantitative Methods in Psychology, 3760:300 Legal Environment of Families, 3760:461 Case Management for Children & Families I, 3760:496 Parent Education, 3850:301 Methods of Social Research I
- 17 Free Electives can be any course not already required by your major. Upper Level electives (300/400 level courses) can be any course in or outside your major excluding General Education courses and workshops.
- 18 A grade of “C” or better must be earned in the Capstone Experience course for a total of 5 credits
- 19 6 credits are required from Diversity Issues: 3760:246 Multicultural Issues in Child Care, 3760:401 American Families in Poverty, 3760:446 Culture, Ethnicity & Family

for the minor to be noted on the student’s record. A minor in Child Development may only be awarded at the time a student receives a baccalaureate degree. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		6
Electives		12
Total Hours		18

## Required Courses

Code	Title	Hours
3760:201	Intimate Relationships	3
3760:265	Child Development	3
Total Hours		6

## Electives <sup>1</sup>

Code	Title	Hours
<b>Select 12 credits of the following (a minimum of six credits must be at 300/400 level):</b>		
3760:255	Fatherhood: Parent Role	
3760:270	Theory & Guidance of Play	
3760:280	Early Childhood Curriculum Methods	
3760:360	Parent-Child Relations	
3760:365	Infant Development	
3760:401	American Families in Poverty	
3760:404	Middle Childhood and Adolescence	
3760:446	Culture, Ethnicity & Family	
3760:460	Organization & Supervision of Child Care Centers	
3760:496	Parent Education	
Total Hours		12

<sup>1</sup> For the elective courses, 9 of the 12 elective credits must be courses not required in the student’s major program.

## Early Childhood Programs, Certificate Certificate in Early Childhood Programs (520200C)

This certificate program provides basic vocational training for childcare practitioners. The course of study is a means of meeting the short range goals of students interested in acquiring skills for job placement in early childhood settings.

This certificate may be attained independent of earning a degree.

The following information has official approval of **The Department of Child & Family Development** and **The College of Health Professions**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

## Child Development, Minor Minor in Child Development (H40207M)

The following information has official approval of **The Department of Child & Family Development** and **The College of Health Professions**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a “Minor in Child Development” and must be completed with a minimum grade point average of 2.0 overall

The following courses constitute a “Early Childhood Programs Certificate” and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student’s record. At least 9 credits throughout the certificate must be taken outside of the student’s major coursework.

## Summary

Code	Title	Hours
Required Courses		16
Electives		6
Total Hours		22

## Required Courses

Code	Title	Hours
3760:265	Child Development	3
3760:280	Early Childhood Curriculum Methods	3
3760:370	Teaching in the Early Childhood Classroom <sup>1</sup>	2
3760:375	Teaching in the Early Childhood Classroom Lab <sup>1</sup>	2
5610:225	Introduction to Exceptionalities <sup>2</sup>	3
7760:132	Early Childhood Nutrition	3
Total Hours		16

<sup>1</sup> 3760:370 Teaching in the Early Childhood Classroom and 3760:375 Teaching in the Early Childhood Classroom Lab are coreqs and students must have a C or higher to pass each.

<sup>2</sup> 5610:225 Introduction to Exceptionalities has a prerequisite of 5100:200 Introduction to Education, or student may complete form online to be permitted: [https://akron.qualtrics.com/jfe/form/SV\\_bf7DgDCzC2D90MB](https://akron.qualtrics.com/jfe/form/SV_bf7DgDCzC2D90MB) ([https://akron.qualtrics.com/jfe/form/SV\\_bf7DgDCzC2D90MB/](https://akron.qualtrics.com/jfe/form/SV_bf7DgDCzC2D90MB/)).

## Electives

Code	Title	Hours
<b>Complete 6 credits from the following courses:</b>		<b>6</b>
3750:430	Psychological Disorders of Children	
3760:110	Foundations in Early Childhood Education	
3760:245	Infant/Toddler Care and Education Programs	
3760:246	Multicultural Issues in Child Care	
3760:250	Observing & Recording Children’s Behavior	
3760:270	Theory & Guidance of Play	
3760:290	Special Topics: Early Childhood Development	
3760:448	Before & After School Child Care	
3760:460	Organization & Supervision of Child Care Centers	
5100:220	Educational Psychology	
5200:215	The Child, the Family, and the School	
5200:319	Integrated Expressive Arts in Primary Grades	
5200:325	Early Childhood Inclusive Practicum	
5500:240	Foundations of Literacy	
5500:241	Word Study, Phonics & Spelling	
5550:204	Individual and Team Sports	
5550:211	First Aid & Cardiopulmonary Resuscitation	
5550:245	Adapted Physical Education	
5550:447	Instructional Techniques for Children in Physical Education & Health Education	

5550:450	Organization & Administration of Physical Education, Intramural and Athletics	
5610:439	Collaboration with Families and Professionals in Early Childhood	
5610:448	Individuals with Moderate/Intensive Educational Needs: Characteristics and Implications	
5610:467	Management Strategies in Special Education	
7500:339	Teaching General Music I	
7500:340	Teaching General Music II	
7700:230	Language Science & Acquisition	
7700:330	Language Disorders	
7700:430	Aspects of Normal Language Development	
7750:302	Assessment, Play and Therapeutic Interventions with Children	
7900:361	Learning Theory for Dance	
7900:362	Instructional Strategies for Dance	
Total Hours		6

## Family Development, Minor Minor in Family Development (H40206M)

The following information has official approval of **The Department of Child & Family Development** and **The College of Health Professions**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a “Minor in Family Development” and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student’s record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		6
Electives		12
Total Hours		18

## Required Courses

Code	Title	Hours
3760:201	Intimate Relationships	3
3760:265	Child Development	3
Total Hours		6

## Electives <sup>1</sup>

Code	Title	Hours
<b>Select 12 credits of the following:</b>		<b>12</b>
3760:255	Fatherhood: Parent Role	
3760:300	Legal Environment of Families	
3760:360	Parent-Child Relations	
3760:362	Family Resource Management	
3760:401	American Families in Poverty	

3760:404	Middle Childhood and Adolescence
3760:440	Family Crisis
3760:441	Family Relationships in Middle and Later Years
3760:442	Human Sexuality
3760:446	Culture, Ethnicity & Family
3760:496	Parent Education
<hr/>	
Total Hours	12

<sup>1</sup> A total of 9 of these 12 elective credits must be courses not required in the student's major program.

## Home Based Intervention Therapy, Certificate

### Certificate in Home Based Intervention Therapy (H40200C)

**Program Contact**

Dr. Pamela Schulze  
 Director, Center for Family Studies  
 Professor, Child & Family Development  
 330-972-7725  
 Email schulze@uakron.edu

The following information has official approval of **The Department of Child & Family Development** and **The College of Health Professions**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Home Based Intervention Therapy" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. This certificate will be placed on a student's record only at the time a baccalaureate degree is awarded and only if a graduation application is submitted.

### Summary

Code	Title	Hours
Core		9-11
Eligibility Courses		9
Electives		9
<hr/>		
Total Hours		27-29

### Core

Code	Title	Hours
1820:403	Home-Based Intervention Theory	3
1820:404	Home-Based Intervention Techniques & Practice	3
1820:405	Home-Based Intervention Internship	3-5
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Total Hours		9-11

### Eligibility Courses

Code	Title	Hours
<b>Select one course from each of the following disciplines (min. 9 credits):</b>		<b>9</b>

<i>Psychology</i>	
3750:100	Introduction to Psychology
3750:230	Developmental Psychology
3750:335	Dynamics of Personality
<i>Child and Family Development</i>	
3760:265	Child Development
3760:360	Parent-Child Relations
3760:362	Family Resource Management
<i>Sociology/Social Work</i>	
3850:100	Introduction to Sociology
3850:340	The Family
7750:276	Introduction to Social Welfare
7750:455	Social Work Practice with African American Families
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Total Hours	9

### Electives

Code	Title	Hours
<b>Select one course from three different disciplines outside major degree area (min. 9 credits):</b>		<b>9</b>

<i>Psychology</i>	
3750:400	Personality
3750:420	Abnormal Psychology
3750:430	Psychological Disorders of Children
<i>Child and Family Development</i>	
3760:401	American Families in Poverty
3760:404	Middle Childhood and Adolescence
3760:440	Family Crisis
3760:442	Human Sexuality
<i>Sociology</i>	
3850:410	Social Structures & Personality
3850:412	Socialization: Child to Adult
3850:430	Juvenile Delinquency
3850:450	Sociology of Mental Health and Well-Being
<i>Special Education</i>	
5610:440	Developmental Characteristics of Exceptional Individuals
5610:459	Collaboration & Consultation in Schools & Community
<i>Social Work</i>	
7750:451	Social Work in Child Welfare
7750:452	Social Work in Mental Health
7750:454	Social Work in Juvenile Justice
<hr/>	
Total Hours	9

## Parent and Family Education, Certificate

### Certificate in Parent and Family Education (H40203C)

**Program Contact**  
 Dr. Pamela Schulze

Director, Center for Family Studies  
 Professor, Child & Family Development  
 330-972-7725  
 schulze@uakron.edu

The following information has official approval of **The Department of Child & Family Development** and **The College of Health Professions**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Parent and Family Certificate" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Core		9
Electives		6
Total Hours		15

## Core

Code	Title	Hours
3760:265	Child Development <sup>1</sup>	3
3760:360	Parent-Child Relations <sup>1</sup>	3
3760:496	Parent Education <sup>1</sup>	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select 6 credits from the following:</b> <sup>2</sup>		
<i>Child &amp; Family Development</i>		
3760:201	Intimate Relationships	
3760:255	Fatherhood: Parent Role	
3760:362	Family Resource Management	
3760:401	American Families in Poverty	
3760:404	Middle Childhood and Adolescence	
3760:440	Family Crisis	
3760:441	Family Relationships in Middle and Later Years	
3760:442	Human Sexuality	
3760:446	Culture, Ethnicity & Family	
<i>Social Work</i>		
7750:270	Diversity and Social Work	
7750:276	Introduction to Social Welfare	
7750:455	Social Work Practice with African American Families	
<i>Psychology</i>		
3750:230	Developmental Psychology	
3750:335	Dynamics of Personality	
3750:430	Psychological Disorders of Children	
<i>Sociology</i>		
3850:340	The Family	
3850:412	Socialization: Child to Adult	
<i>Special Education</i>		

5610:460	Family Dynamics & Communication in the Educational Process	
Total Hours		6

- Grades of "C" or better must be earned in the three core courses
- Students must successfully complete six credits of coursework selected from the various departmental courses listed. These credits shall be chosen from departments outside the student's disciplines.

## Disaster Science and Emergency Services

The Department of Disaster Science and Emergency Services offers programs for individuals seeking careers in three in-demand areas: Emergency Management and Homeland Security, Emergency Medical Services, and Fire Protection Technology. Courses are available online, in traditional classrooms, and in distance learning classes. Students gain hands-on, real-world experience through participation in internships, simulations, and field trips.

The Department's programs in **Emergency Management and Homeland Security** (BS) and **Fire Protection Technology** (AAS) are nationally accredited. The **Fire/Medic** option in the **Emergency Medical Services** associate program is in response to a growing demand from emergency service providers.

### Training Center for Fire and Hazardous Materials

This training center brings the University, government agencies, and industries together into one comprehensive regional center to integrate educational programs, fire and hazardous materials training, and other related applications of fire and safety technology.

### The University of Akron / Summit County Sheriff's Office Police Academy

The University of Akron/Summit County Sheriff's Office OPOTA Certified Training Academy is a unique collaboration in law enforcement training. The instructors consist of both experienced law enforcement officers and well-respected University of Akron faculty members.

## 2230: Fire Protection Technology

This program prepares persons to serve governmental, industrial, and other fire protection agencies in firefighting and prevention, property protection, and handling emergency situations.

This program is accredited by:

International Fire Service Accreditation Congress (IFSAC)

Oklahoma State University,

1700 West Tyler,

Stillwater, OK 74078-8075

(405)744-8802

ifsac.org (<https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fifsac.org%2F&data=02%7C01%7Csjj%40uakron.edu%7Ccc%73de4654a0492292ce08d6da19ff65%7Ce8575dedd7f94ecea4aa0b32991ae%7C0%7C0%7C636936202523725337&sdata=8WyoUmmoyecWxB6eNaDHcc%2FgSkWmtuUqTJ9pArS4TXM%3D&reserved=0>)



## 2235: Emergency Management and Homeland Security

Emergency Management and Homeland Security studies events or threats, such as natural disasters, terrorist incidents, and technological hazards. Students will acquire specialized knowledge in disaster management through prevention/mitigation, preparedness, response, and recovery actions utilizing an All-Hazards focused approach. This dynamic discipline prepares graduates for careers in the governmental, corporate, public health, and nonprofit sectors. Emergency Management and Homeland Security can be a career that makes a difference in people's lives.

The program offers a Bachelor of Science degree, along with a minor and certificate, which is accredited by the International Fire Service Accreditation Congress (IFSAC). Students can step-up from a responder-related associate degree, such as criminal justice or fire protection.

This program is accredited by:

International Fire Service Accreditation Congress (IFSAC)

Oklahoma State University,  
1700 West Tyler,  
Stillwater, OK 74078-8075  
(405)744-8802

ifsac.org (<https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fifsac.org%2F&data=02%7C01%7Csjj%40uakron.edu%7Ccc%73de4654a0492292ce08d6da19ff65%7Ce8575dedd7f94ecea4aa0b3290aedd%7C0%7C0%7C636936202523725337&sdata=8WyoUmmoyecWxB6eNaDHCC%2FgSkWmtuUqTJ9pArS4TXM%3D&reserved=0>)

## 2240: Emergency Medical Services Technology

This program is for Certified National Registry Emergency Medical Technician-Paramedics seeking to better understand social values and to develop technical knowledge and skills.

- Computer Forensics, Certificate (p. 476)
- Computer Forensics, Minor (p. 477)
- Computer Information Systems, Digital Forensics Technology Option, BS (p. 477)
- Cyber Disaster Management, Certificate (p. 479)
- Emergency Management and Homeland Security, 4-Year Option, BS (p. 479)
- Emergency Management and Homeland Security, Certificate (p. 481)
- Emergency Management and Homeland Security, Minor (p. 481)
- Emergency Management and Homeland Security, Step-up Option, BS (p. 482)
- Emergency Medical Services Technology, EMT/Paramedic Option, AAS (p. 483)
- Emergency Medical Services Technology, Fire/Medic Option, AAS (p. 484)
- Fire Protection Technology, AAS (p. 485)
- Fire Protection Technology, Certificate (p. 486)
- Fire Protection Technology, Minor (p. 487)

## Fire Protection Technology (2230)

### 2230:100 Introduction to Fire Protection (4 Credits)

History and philosophy of fire protection; introduction to agencies involved; current legislative developments; discussion of current related problems, expanding future of fire protection and career orientation.

### 2230:102 Fire Safety in Building Design & Construction (3 Credits)

Exploration of building construction and design with emphasis on fire protection concerns; review of related statutory and suggested guidelines local, state and national scope.

### 2230:104 Fire Investigation Methods (4 Credits)

History of fire investigation; gathering of evidence and development of technical reports; fundamentals of arson investigation; processing of criminal evidence and procedures related to local and state statutes.

### 2230:202 Incident Management for Emergency Responders (4 Credits)

Efficient and effective use of human resources, equipment and systems. Emphasis on preplanning, incident management, problem solving related to emergency preparation and response.

### 2230:204 Fire and Life Safety Education (3 Credits)

Application and analysis necessary for the implementation of the Life Safety Code Handbook.

### 2230:205 Fire Detection & Suppression Systems (3 Credits)

Design, installation, maintenance and utilization of portable fire extinguishing appliances and pre-engineered automatic systems; fire detection and alarm signaling systems operational capabilities, requirements.

### 2230:206 Fire Sprinkler System Design (3 Credits)

Design, installation and operation of automatic fire suppression systems. Includes sprinkler, foam, carbon dioxide, dry chemical, halogenated agent systems.

### 2230:250 Hazardous Materials (4 Credits)

Prerequisite: 2230:100. Study of chemical characteristics and reactions related to storage, transportation and handling of hazardous materials. Emphasis on emergency situations, firefighting and control.

### 2230:254 Fire Prevention (3 Credits)

Prerequisite: 2230:100. Fire codes and standards relative to fire prevention, inspection, and code enforcement.

### 2230:257 Fire & Safety Issues for Business & Industry (3 Credits)

Industrial fire and safety issues related to specialized hazards, federal and state regulations. Emphasis on emergency response team preparedness, confined space entry, and rescue.

### 2230:260 Fundamentals of Firefighting (3 Credits)

Prerequisites: Must be accepted into the Fire Academy, possess a valid driver's license, and permission of the department. Corequisites: 2230:261, 2230:262, and 2230:263. Course 1 of 4: Minimum training level to function as a firefighter in the State of Ohio, identified in the National Fire Protection Association standards, NFPA 1001.

### 2230:261 Firefighter I (4 Credits)

Prerequisites: Must be accepted into the Fire Academy, possess a valid driver's license, and permission of the department. Corequisites: 2230:260, 2230:262, and 2230:263. Course 2 of 4: Minimum training level to function as a firefighter in the State of Ohio, identified in the National Fire Protection Association standards, NFPA 1001.

**2230:262 Firefighter II (4 Credits)**

Prerequisites: Must be accepted into the Fire Academy, possess a valid driver's license, and permission of the department. Corequisites: 2230:260, 2230:261, and 2230:263. Course 3 of 4: Minimum training level to function as a firefighter in the State of Ohio, identified in the National Fire Protection Association standards, NFPA 1001.

**2230:263 Emergency Vehicle Operations (1 Credit)**

Prerequisites: Must be accepted into the Fire Academy, possess a valid driver's license, and permission of the department. Corequisites: 2230:260, 2230:261, and 2230:262. Course 4 of 4: Proper operation of an emergency vehicle is critical for fire service providers. The Ohio Emergency Vehicle Operations Course (EVOOC) is designed to enhance safe vehicle operation by stressing theory and principles of defensive driving in both emergency and non-emergency situations. Students will learn safe driving practices, defensive driving principles, the responsibilities of an emergency vehicle driver, how to safely operate emergency vehicles during emergent responses, and the difficulties of driving fire apparatus. The course include hands-on driving exercises that will enhance the ability of a student to operate a vehicle during an emergency situation by teaching personal and vehicle control limitations. The course is a requirement to qualify for Ohio Firefighter I and Firefighter II certification.

**2230:280 Fire Service Administration (4 Credits)**

Prerequisite: 2230:100. Fire officer professional qualifications; federal, state regulations governing department operations-OSHA, EPA; emergency and non-emergency operations procedures-ICS, IMS, Emergency Operations Center are presented.

**2230:290 Special Topics: Fire Science Technology (1-4 Credits)**

(May be repeated for a total of four credits) Prerequisite: Permission. Selected topics or subject areas of interest in fire protection technology.

**2230:294 Advanced Fire Investigation Methods (3 Credits)**

Prerequisites: 2230:100, 2230:104, 2230:205, and 2230:206. Designed to meet student and in service fire investigators need to understand new/ updated technology and methodology in managing fire investigations.

**2230:295 Field Experience I (2 Credits)**

Prerequisites: 30 credit hours of successfully completed course work in the Fire Protection Technology program which includes 2230:100, 2230:102, 2230:104, 2230:204, 2230:205, and 2230:280 and permission. Course designed to measure the knowledge, skills and abilities required to become a graduate of The University of Akron, Fire Protection Program.

**2230:296 Field Experience II (2 Credits)**

Prerequisites: 30 credit hours of successfully completed course work in the Fire Protection Technology program which includes 2230:100, 2230:102, 2230:104, 2230:204, 2230:205, and 2230:280. If not currently an active fire fighter, you must take 2230:295 first. Course designed to measure the knowledge, skills and abilities required to become a front line supervisor, work in hazmat bureau or beginning arson investigator.

**2230:297 Independent Study: Fire Protection (1-3 Credits)**

Prerequisite: 2230:100 and permission. Selected topics and special areas of study in fire protection technology under the supervision and evaluation of a selected faculty who assigns specific arrangements.

## Emergency Management and Homeland Security (2235)

**2235:100 Introduction to Digital Forensics (3 Credits)**

An overview of digital forensics and computer-related issues facing government and businesses. Specific focus on forensic examinations and methodologies used in the field.

**2235:105 Introduction to Disaster, Hazards & Risk (3 Credits)**

Provides a research based and practitioner overview of how people perceive and react to extreme events before, during, and after disasters.

**2235:201 Police Academy: Administration & Legal (3 Credits)**

Prerequisite: Acceptance into the Police Academy. Corequisites: 2235:202, 2235:203, 2235:204 and 2235:205. Overview of the administration and legal issues of becoming an Ohio Peace Officer.

**2235:202 Police Academy: Homeland Security (3 Credits)**

Prerequisite: Acceptance into the Police Academy. Corequisites: 2235:201, 2235:203, 2235:204 and 2235:205. Overview of human relations, civil disorders, investigation, and homeland security involved in becoming an Ohio Peace Officer.

**2235:203 Police Academy: Traffic (3 Credits)**

Prerequisite: Acceptance into the Police Academy. Corequisites: 2235:201, 2235:202, 2235:204 and 2235:205. Overview of motor vehicle offenses, traffic crash investigation, speed measuring and sobriety testing required to pass the Ohio Peace Officer Training program.

**2235:204 Police Academy: Practicals I (3 Credits)**

Prerequisite: Acceptance into the Police Academy. Corequisites: 2235:201, 2235:202, 2235:203 and 2235:205. Classroom and practical skills training in firearms, patrol, and driving to satisfy all state requirements for the Ohio Peace Officer Training Program.

**2235:205 Police Academy: Practicals II (3 Credits)**

Prerequisite: Acceptance into the Police Academy. Corequisites: 2235:201, 2235:202, 2235:203 and 2235:204. Classroom and skills in defense tactics, physical fitness and First Aid/CPR/AED & WMD Awareness to satisfy requirements to become an Ohio Peace Officer.

**2235:210 Occupational Safety & Risk (3 Credits)**

Introduction to the field of health and safety as related to business and industrial operations. Emphasis is placed on hazard/risk analysis and the regulatory environment.

**2235:220 Environmental Law & Regulations (3 Credits)**

Introduction to the legal system and to the laws and regulations dealing with water, air, land, noise and other sources of pollution.

**2235:221 Environmental Law & Regulations II (3 Credits)**

Prerequisite: 2235:220 and permission. Designed to provide students the opportunity to apply common regulatory reporting mechanisms in a practical manner utilizing a variety of software programs recognized in the environmental field.

**2235:230 Water & Atmospheric Pollution (3 Credits)**

Prerequisites: 2235:105 and 3100:104. Basic concepts of aquatic and atmospheric systems and the processes which pollute them. Emphasis on control and monitoring of cultural, industrial, and agricultural pollution sources. Laboratory.

**2235:232 Environmental Sampling Laboratory (2-3 Credits)**

Corequisite: 2235:230. Field experience with a wide range of environmental sampling techniques and equipment.

**2235:280 Cybercrime (3 Credits)**

Examines crime and deviance in cyberspace. Particular focus is on the prevention of computer intrusion in the workplace.

**2235:281 Computer Forensic Methods (3 Credits)**

Prerequisite: 2235:100. Examination of computer forensic methods employed to identify, collect, recover, authenticate, preserve, analyze, and document electronic evidence for criminal or civil legal purposes.

**2235:282 Digital Forensic Imaging (3 Credits)**

This course cover the general principles of photography and practical elements and advanced concepts of forensic photography.

**2235:283 Cyber Warfare (3 Credits)**

Prerequisite: 2235:100 or 3800:100. Examines the participants, tools and techniques in digital conflicts and explores how to defend against espionage, hactivism, non-state actors and terrorists.

**2235:284 Windows Forensics (3 Credits)**

Prerequisite: 2235:281. An examination of the tools, methodology, and advanced digital forensic analysis of the Windows Registry and the Microsoft Windows operating systems.

**2235:285 Disasters in Film and Media (3 Credits)**

Examines how contemporary culture perpetuates myths of natural and technological disasters. Students deconstruct and analyze reality from the myths in various types of media.

**2235:305 Principals of Emergency Management and Homeland Security (3 Credits)**

An overview of emergency management and homeland security history, theory, terms, concepts, organization, and roles. Emphasizes natural and technological hazards, and risk assessment processes.

**2235:340 Disaster Research Methods (3 Credits)**

Introduction to scientific method and processes, research ethics, and qualitative and quantitative methods. Use of research for appropriate decision making.

**2235:350 Disaster Preparedness & Response (3 Credits)**

Prerequisite: 2235:305. Legal requirement, planning formats, and response procedures are presented. Special focus community risk assessment: hazard analysis, vulnerability assessment, and community response capability assessment.

**2235:360 Introduction to Terrorism (3 Credits)**

Corequisite: 2235:305. Examines terrorism from historical, international, transnational, and domestic perspectives. Includes political and religious terrorism along with emergency management considerations.

**2235:365 Disaster Mitigation (3 Credits)**

Prerequisite: 2235:305. Examines disaster prevention and risk reduction. Focuses on such concepts as sustainability, resiliency, non-structural and structural mitigation and various sectors' responsibilities.

**2235:367 Disaster Recovery (3 Credits)**

Prerequisite: 2235:305. Provides foundations for disaster relief and recovery planning, stages of recovery, resources used, and formation of public/private partnerships for recovery action and resource allocation.

**2235:368 Professionalism in Emergency Management and Homeland Security (3 Credits)**

Prepares students for career entry into Emergency Management and Homeland Security areas. Professionalism, resume building, interview techniques, and resource sites will be examined.

**2235:370 Hazard Science and Management (3 Credits)**

Overview of hazards theory, the science of hazard development, and various hazard types. Emphasis on emergency management and homeland security perspectives in regard to various hazard management related topics.

**2235:381 Computer Forensic Methods II (3 Credits)**

Prerequisite: 2220:281. Obtaining and analyzing digital information from computer storage media to determine details of origin and content.

**2235:382 File System Analysis (3 Credits)**

Prerequisite: 2235:281. The analysis of volumes, partitions, and data files to understand the design of file systems and data structures.

**2235:383 Ethical Hacking (3 Credits)**

Prerequisite: 2235:283. An examination of the tools, methods, and structured approaches to conducting basic security testing to protect computer networks from attacks.

**2235:384 Intelligence: Cyber and Homeland Security (3 Credits)**

This course introduces students to the role and operation of the intelligence community within the homeland security framework: History, mission, structure, capabilities, and methods.

**2235:401 Crisis Leadership (3 Credits)**

This course presents leadership research from an interdisciplinary perspective. Content is drawn the fields of business, training, simulation, organizational theory, government, and others. This course covers early leadership theory, horizontal theories, crisis training models and approaches, and crisis cognitive processing strategies. Students will examine the overall system of building better crisis leaders.

**2235:406 Disaster Management Technology (3 Credits)**

Prerequisite: 2235:305. Provides an overview of the various types of technology utilized in disasters, emergency management and homeland security. Topics include communications, watches, warnings, and operational challenges.

**2235:407 Hazardous Weather Observations (3 Credits)**

Overview of meteorological variables and weather data useful to EM including meteorological instruments, forecasts, model, radar and satellite imagery, thunderstorms, tornadoes, winter storms and hurricanes.

**2235:420 Disaster Vulnerability (3 Credits)**

Prerequisite: 2235:305. Analysis of citizen actions regarding major disasters including perspectives of individuals and emergency managers using case studies, theories, and social problems.

**2235:425 Private Sector Disaster Applications (3 Credits)**

Prerequisite: 2235:305. Examines emergency management and homeland security business components in the private and public sectors. Emphasizes business continuity plans along with case studies in hazards and disasters.

**2235:430 Contemporary Issues in Emergency Management and Homeland Security (3 Credits)**

Discussion of relevant issues impacting the field of emergency management and homeland security by analyzing various case studies.

**2235:435 Cyber Issues in Emergency Management and Homeland Security (3 Credits)**

Prerequisite: 2235:305. Discussion and analysis of cyber issues impacting the public, private, and nonprofit sectors of emergency management and homeland security.

**2235:440 Intrusion Detection (3 Credits)**

Prerequisites: 2440:340 and 2440:388, both with a grade of C or better, and junior or greater standing. This course will introduce students to the various methods used to detect external and internal intrusion of computer systems.

**2235:441 Network Forensics I (3 Credits)**

Prerequisites: 2220:281 with a grade of C or better and junior or greater standing. This course will provide the student with basic knowledge of surveillance of networking devices, identifying and preventing attacks and incident response.

**2235:442 Wireless Forensics (3 Credits)**

Prerequisite: 2235:441 with a grade of C or better and junior or greater standing. The forensic identification and tracking of attacks on wireless networks and mobile communications devices.

**2235:443 Network Forensics II (3 Credits)**

Prerequisite: 2235:441 with a grade of C or better or junior or greater standing. Deployment, building and running an NSM operation using open source software and vendor neutral tools with the Linx Operating System.

**2235:480 Emergency Management & Homeland Security Capstone (3 Credits)**

Prerequisite or Corequisite: 2235:495. Ties together relevant concepts in emergency management and homeland security to help prepare graduates for professional careers integrating theory and applications.

**2235:490 Current Topics in Emergency Management (1-4 Credits)**

Prerequisites: 2235:305 and 2235:350. A variety of course topics on current subjects related to emergency management and disaster preparedness. May be repeated for up to 12 credits.

**2235:495 Emergency Management & Homeland Security Internship (3 Credits)**

Prerequisite: 30 hours in program and permission from program director. Supervised work experience in emergency management and/or homeland security to increase student understanding by applying program education to an applied work experience.

**2235:497 Independent Study in Emergency Management (1-4 Credits)**

Prerequisites: 2235:305 and 2235:350. Selected topics, special areas of study in emergency management, disaster preparedness under the supervision of a faculty member with whom specific arrangements have been made.

## Emergency Medical Services (2240)

**2240:100 Introduction to EMT Training (3 Credits)**

Corequisites: 2240:101 and 2240:102. Overview of the EMS System, safety/well being of an EMT, medical/legal and ethical issues in providing emergency care.

**2240:101 EMT-B Fundamentals (2 Credits)**

Corequisite: 2240:100. Develop skills required of EMT-Basic for Assessment, air way management, patient evaluation for shock, trauma/ special needs patient, learn appropriate interventions for all situations.

**2240:102 EMT-B Fundamentals II (2 Credits)**

Corequisites: 2240:100 and 2240:101. Provide students with the tools to start the EMT-Basic course and will prepare students to achieve national certification as an EMT-Basic.

**2240:201 Fundamentals of EMT-Paramedic I (3 Credits)**

Corequisites: 2240:202, 2240:203, 2240:204, and 2240:205. Introduction to emergency medical care-paramedic, the well-being of the EMT-paramedic, and illness and injury prevention.

**2240:202 Fundamentals of EMT-Paramedic II (3 Credits)**

Corequisites: 2240:201, 2240:203, 2240:204, and 2240:205. Instruction in medical/legal issues, ethics, and the paramedic, and general principles of anatomy and physiology.

**2240:203 Fundamentals of EMT-Paramedic III (3 Credits)**

Corequisites: 2240:201, 2240:202, 2240:204, and 2240:205. Instruction in medical math, pharmacology, venous access, and medication administration.

**2240:204 Fundamentals of EMT-Paramedic IV (3 Credits)**

Corequisites: 2240:201, 2240:202, 2240:203, and 2240:205. Instruction includes therapeutic communications, life span development, and airway management/ventilation.

**2240:205 Fundamentals of EMT-Paramedic V (3 Credits)**

Corequisites: 2240:201, 2240:202, 2240:203, and 2240:204. Skill Session Practices, competency Testing from skills learned throughout the semester.

**2240:206 Fundamentals of EMT-Paramedic VI (3 Credits)**

Prerequisites: 2240:201, 2240:202, 2240:203, 2240:204, and 2240:205. Corequisites: 2240:207, 2240:208, 2240:209, and 2240:211. Instruction is respiratory emergencies and cardiovascular emergencies.

**2240:207 Fundamentals of EMT-Paramedic VII (3 Credits)**

Prerequisites: 2240:201, 2240:202, 2240:203, 2240:204, and 2240:205. Corequisites: 2240:206, 2240:208, 2240:209, and 2240:211. Instruction in cardiovascular emergencies, diabetic emergencies, and allergic reactions.

**2240:208 Fundamentals of EMT-Paramedic VIII (3 Credits)**

Prerequisites: 2240:201, 2240:202, 2240:203, 2240:204, and 2240:205. Corequisites: 2240:206, 2240:207, 2240:209, and 2240:211. Instruction in paramedic skills, practical trauma, and medical skills practical.

**2240:209 Fundamentals of EMT-Paramedic IX (3 Credits)**

Prerequisites: 2240:201, 2240:202, 2240:203, 2240:204, and 2240:205. Corequisites: 2240:206, 2240:207, 2240:208, and 2240:211. Medical skills practical and skills testing.

**2240:211 Fundamentals of EMT-Paramedic X (3 Credits)**

Prerequisites: 2240:201, 2240:202, 2240:203, 2240:204, and 2240:205. Corequisites: 2240:206, 2240:207, 2240:208, and 2240:209. Practical skills testing, client orientation, and written skills testing.

## Computer Forensics, Certificate Certificate in Computer Forensics (225001C)

The Computer Forensics Certificate provides an educational foundation in both the legal and technical aspects of computer crime investigation. Students explore the criminology of high technology crime, criminal law as it applies to digital evidence, the investigative process, and professional communication. Students will gain hands-on experience with contemporary forensic tools and receive technical instruction in computer hardware, networks, and operating systems. Individuals working in the legal and investigative fields that seek to enhance their technical skills and beginners with a general interest in the subject area are welcome.

This certificate may be earned independent of earning a degree.

**Program Contact**

Stanley Smith  
Polsky 318  
330-972-6950  
shsmith@uakron.edu

The following information has official approval of **The Department of Disaster Sciences and Emergency Services** and **The College of Health Professions**, but is intended only as a guide. Completion of this

certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Computer Forensics" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		21
Total Hours		21

## Required Courses

Code	Title	Hours
2235:280	Cybercrime	3
2235:281	Computer Forensic Methods	3
2440:145	Introduction to Unix/Linux	3
2440:201	Networking Basics	3
2440:247	Hardware Support	3
3800:100	Introduction to Criminal Justice	3
3800:286	Courtroom Communication	3
Total Hours		21

## Computer Forensics, Minor

### Minor in Computer Forensics (225001M)

The Computer Forensics Minor provides an educational foundation in both the legal and technical aspects of computer crime investigation. Students explore the criminology of high technology crime, criminal law as it applies to digital evidence, the investigative process, and professional communication. Students will gain hands-on experience with contemporary forensic tools and receive technical instruction in computer hardware, networks, and operating systems. Individuals working in the legal and investigative fields that seek to enhance their technical skills and beginners with a general interest in the subject area are welcome.

#### Program Contact

Stanley Smith  
Polsky 318  
330-972-6950  
shsmith@uakron.edu

The following information has official approval of **The Department of Disaster Sciences and Emergency Services** and **The College of Health Professions**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Computer Forensics" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		21
Total Hours		21

## Required Courses

Code	Title	Hours
2235:280	Cybercrime	3
2235:281	Computer Forensic Methods	3
2440:145	Introduction to Unix/Linux	3
2440:201	Networking Basics	3
2440:247	Hardware Support	3
3800:100	Introduction to Criminal Justice	3
3800:286	Courtroom Communication	3
Total Hours		21

## Computer Information Systems, Digital Forensics Technology Option, BS

### Bachelor of Science in Computer Information Systems, Digital Forensics (244304BS)

More on the Computer Information Systems major (<https://www.uakron.edu/bit/cis/>)

## Program Contacts

- Mr. Stanley Smith (shsmith@uakron.edu), 330-972-6950
- Dr. John Nicholas (jn@uakron.edu), 330-972-2563

## Program Description

The Computer Information Systems (CIS) offers associate and baccalaureate programs that introduce students to basic computing concepts while allowing them to develop the applied skills required the workforce. Courses start the student along the path for professional certifications. There are options, minors, and certificates available. CIS courses are taught in cutting edge computer labs so students can learn and practice skills. The CIS program offers high level training for the information technology professionals. Schedules offer a range of day and evening classes.

## Department Policy

- **Students must attain a "C" or better in each course in their major area (2440).**
- A cumulative GPA of 2.0 GPA and a minimum of 15 earned credit hours for Inter- and Intra- College Transfer into all Associate and Bachelor's degree programs.
- Prior to enrolling in classes for the B.S. degree you must contact an advisor in Polsky 301.

## Career Information

Graduates of the BS CIS – Digital Forensics Technology program are expected to qualify for such positions as law enforcement professionals, computer forensic specialists, data security analysts, systems security administrators, and network security administrators in government, business, information technology, and other industries.

For additional information please visit the Bureau of Labor Statistics ([www.bls.gov](http://www.bls.gov) (<http://www.bls.gov>)) or visit the Career Center at Simmons Hall Room 301 (<http://www.uakron.edu/career> (<http://www.uakron.edu/career/>)).

The following information has official approval of **The Department of Disaster Sciences and Emergency Services** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. The College of Applied Science and Technology recommends that students take the General Education courses listed in this recommended sequence. Transfer students should consult their Advisor to identify courses that are equivalent.

### 1st Year

Fall Semester		Hours
2020:121	English	3
2030:152	Technical Mathematics II	2
2030:153	Technical Mathematics III	2
2420:104	Introduction to Business	3
2440:247	Hardware Support <sup>1</sup>	3
3800:100	Introduction to Criminal Justice	3
Hours		16

### Spring Semester

2020:222	Technical Report Writing	3
2030:154	Technical Mathematics IV	3
2440:145	Introduction to Unix/Linux	3
3800:102	Principles of Criminal Law	3
3800:105	Introduction to Police Studies	3
Hours		15

### 2nd Year

#### Fall Semester

2040:240 or 2040:247	Human Relations or Survey of Basic Economics	3
2235:280	Cybercrime	3
2420:263	Professional Communications and Presentations	3
3800:104	Evidence & Criminal Legal Process	3
	Natural Science Requirement with Lab	4
Hours		16

#### Spring Semester

2040:242	American Urban Society	3
2040:243	Contemporary Global Issues	3

2235:281	Computer Forensic Methods	3
3800:298	Applied Ethics in Criminal Justice	3
Select one Elective:		3
2030:xxx	Applied Mathematics	
2440:xxx	Computer Information Systems	
3450:xxx	Mathematics	
3460:xxx	Computer Science	
3470:xxx	Statistics	
3700:xxx	Political Science	
3800:xxx	Criminal Justice	
3850:xxx	Sociology	
Hours		15

### 3rd Year

#### Fall Semester

2030:361	Applied Cryptography	3
2235:381	Computer Forensic Methods II	3
2235:382	File System Analysis <sup>1</sup>	3
2440:340	Network Forensics I <sup>1</sup>	3
	Humanities Requirement <sup>3</sup>	3
Hours		15

#### Spring Semester

2030:345	Technical Data Analysis	2
2220:480	Digital and Scientific Evidence	3
2440:306	Ethics & Law in Information Technology <sup>2</sup>	3
2440:388	Advanced UNIX/Linux <sup>2</sup>	3
2440:443	Network Forensics II <sup>2</sup>	3
	Natural Science Requirement	3
Hours		17

### 4th Year

#### Fall Semester

2040:241	Technology & Human Values	3
2440:430	Network Monitoring and Management <sup>1</sup>	3
2440:441	Cyber Security <sup>1</sup>	3
2440:442	Wireless Forensics <sup>1</sup>	3
	Arts Requirement <sup>3</sup>	3
Hours		15

#### Spring Semester

2040:256	Diversity in American Society	3
2440:440	Intrusion Detection <sup>2</sup>	3
2440:450	Applied Data Mining <sup>2</sup>	3
2440:451	Senior Programming Projects <sup>2</sup>	3
	Arts or Humanities Requirement <sup>3</sup>	3
Hours		15
Total Hours		124

<sup>1</sup> Traditionally Fall Only (See Program Contact).

<sup>2</sup> Traditionally Spring Only (See Program Contact).

<sup>3</sup> All students pursuing a bachelor's degree at the University of Akron must complete the General Education requirements. For efficient completion of UA General Education requirements, it is recommended that students choose an Arts or Humanities course to fulfill the Global Diversity tag for CIS bachelor's programs.

**Policy Alert:** By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.

**Note:**

- Students entering the Computer Information Systems programs (Cybersecurity, Digital Forensics, Networking, and Programming) must pass department placement exams or complete the following bridge course prior to enrolling in the program.
  - Bridge Course: 2440:105 Introduction to Computers and Application Software

## Cyber Disaster Management, Certificate

### Certificate in Cyber Disaster Management (223503C)

**Program Contact**

Dr. Stacey Willett  
Polsky 314  
330-972-8317  
smuffet@uakron.edu

The following information has official approval of **The Department of Disaster Sciences and Emergency Services** and **The College of Health Professions**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Cyber Disaster Management" and must be completed with a minimum grade point average of 2.0 over-all for the certificate to be noted on the student's record. The granting of this certificate does not require completion of a degree.

## Summary

Code	Title	Hours
Required Courses		18
Total Hours		18

## Required Courses

Code	Title	Hours
2235:100	Introduction to Digital Forensics	3
2235:283	Cyber Warfare	3
2235:305	Principals of Emergency Management and Homeland Security	3
2235:360	Introduction to Terrorism	3
2235:384	Intelligence: Cyber and Homeland Security	3
2235:435	Cyber Issues in Emergency Management and Homeland Security	3
Total Hours		18

## Emergency Management and Homeland Security, 4-Year Option, BS

### Bachelor of Science in Emergency Management and Homeland Security, 4-Year Option (223501BS)

#### Program Contact

Dr. Stacy Willett  
Program Lead Faculty  
The Polsky Building 314  
330-972-8317  
smuffet@uakron.edu

#### Program Information

Emergency Management and Homeland Security studies events or threats such as natural disasters, terrorist incidents, and technological hazards. Students will acquire specialized knowledge in disaster management through prevention/mitigation, preparedness, response, and recovery actions utilizing an "All-Hazards" focused approach. This dynamic discipline prepares graduates for careers in the governmental, corporate, public health, and nonprofit sectors. Emergency Management and Homeland Security can be a career that makes a difference in people's lives. The program offers a Bachelor of Science degree, along with a minor and certificate. There are two program pathways: Students can step-up from responder related Associates Degrees such as criminal justice or fire protection or students can choose to follow a traditional bachelor's degree curriculum. All university general education requirements must be completed as outlined in this Bulletin.

This program is accredited by:

International Fire Service Accreditation Congress (IFSAC)  
Oklahoma State University  
1700 West Tyler  
Stillwater, OK 74078-8075  
Phone: (405) 744-8802  
www.ifsac.org (<http://www.ifsac.org>).

## Career Information

The Bachelor's degree in Emergency Management and Homeland Security prepares students to enter and advance in the field of emergency management through the acquisition of specialized knowledge of disaster planning, preparedness, emergency response, mitigation and recovery. Service learning is incorporated in course work with joint projects involving county emergency management/ homeland security agencies as well as schools and non-profit agencies. In addition, The University of Akron has faculty who are nationally recognized in the field of emergency management, homeland security, geography, hazards, business, education, and leadership.

This degree program supports the primary goal of the Federal Emergency Management Agency (FEMA) Higher Education Project to encourage and support the implementation of emergency management and homeland security education in colleges and universities across the United States. This program has incorporated disaster based research as an area of specialization which will make this program unique from other emergency

management and homeland security programs. In addition, disaster management is taught from a well-rounded perspective that includes the public and private sector equally.

For additional information visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) (<http://www.bls.gov>) or the Career Center at the Student Union, room 211.

The following information has official approval of **The Department of Disaster Sciences and Emergency Services** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. The College of Applied Science and Technology recommends that students take the General Education courses listed in this recommended sequence. Transfer students should consult their Advisor to identify courses that are equivalent.

**1st Year**

Fall Semester		Hours
2020:121	English	3
or 3300:111	or English Composition I	
2235:105	Introduction to Disaster, Hazards & Risk	3
3470:250	Statistics for Everyday Life	4
	Natural Science Requirement with Lab	4
Hours		14

**Spring Semester**

2020:222	Technical Report Writing	3
or 3300:112	or English Composition II	
3700:336	Homeland Security Policy and Process	3
3850:100	Introduction to Sociology	3
or 3350:100	or Introduction to Geography	
	Natural Science Requirement	3
Select one of the following:		3
2420:263	Professional Communications and Presentations	
	Speaking Requirement	
Hours		15

**2nd Year**

Fall Semester		Hours
2235:360	Introduction to Terrorism	3
or 3700:337	or Terrorism: Perpetrators, Politics and Response	
2985:101	Introduction to Geographic & Land Information Systems	3
or 3350:405	or Geographic Information Systems	
3600:120	Introduction to Ethics	3
	Specialty Block Credits	6
Hours		15

**Spring Semester**

2235:305	Principals of Emergency Management and Homeland Security	3
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2980:445	Applications in GIS using GPS	3
3400:210	Humanities in the Western Tradition from Ancient Times to 1500	3
or 3400:221	or Humanities in the World since 1300	
	Specialty Block Credits	3
Select one of the following:		3
3002:256	Diversity in American Society	
7750:244	Death & Dying	
	Domestic Diversity Tag Course	
Hours		15

**3rd Year**

**Fall Semester**

2235:340	Disaster Research Methods	3
2235:350	Disaster Preparedness & Response	3
2235:365	Disaster Mitigation	3
2235:xxx	Emergency Management and Homeland Security Approved Elective	3
Select one of the following:		3
7100:210	Visual Arts Awareness	
7500:201	Exploring Music: Bach to Rock	
7900:200	Viewing Dance	
	Arts Requirement	
Hours		15

**Spring Semester**

2235:367	Disaster Recovery	3
2235:370	Hazard Science and Management	3
2235:xxx	Emergency Management and Homeland Security Approved Elective	3
	Specialty Block Credits	6
Hours		15

**4th Year**

**Fall Semester**

2235:401	Crisis Leadership	3
2235:420	Disaster Vulnerability	3
2235:495	Emergency Management & Homeland Security Internship <sup>1</sup>	3
2235:xxx	Emergency Management and Homeland Security Approved Elective	6
Hours		15

**Spring Semester**

2040:241	Technology & Human Values	3
2040:243	Contemporary Global Issues	3
2235:480	Emergency Management & Homeland Security Capstone	3
2235:xxx	Emergency Management and Homeland Security Approved Elective	6
Hours		15
Total Hours		119



<sup>1</sup> Students should be aware that most internship sites require a background check. If students are unable to pass a background check, internship placement cannot be guaranteed. Accordingly, job placement will be difficult. Please meet with the Program Lead to discuss this.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your *required* General Education English, Mathematics, and Communications (Speech) requirements.**

## Emergency Management and Homeland Security, Certificate

### Certificate in Emergency Management and Homeland Security (223102C)

The discipline of emergency management continues to evolve. Emergency management is becoming more complex and there is a demand for well-educated individuals in both the private and public sectors.

These courses provide emergency management foundations which can be applied to many careers including but not limited to: crisis management, business continuity, health services, public administration, political science, geography, homeland security, communications, and computer information systems or related areas. The courses offered provide emergency management skills useful in many careers whether as a student or a practitioner looking to expand their knowledge.

The granting of this certificate does not require completion of a degree.

#### Program Contact

Dr. Stacy Willett  
 Program Lead Faculty  
 Polsky 314  
 330-972-8317  
 smuffet@uakron.edu

The following information has official approval of **The Department of Disaster Sciences and Emergency Services** and **The College of Health Professions**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Emergency Management and Homeland Security" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		9
Electives		12
Total Hours		21

## Required Courses

Code	Title	Hours
2235:305	Principals of Emergency Management and Homeland Security	3
2235:350	Disaster Preparedness & Response	3
2235:370	Hazard Science and Management	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select 12 credits of the following Emergency Management Electives: 12</b>		
2235:285	Disasters in Film and Media	
2235:340	Disaster Research Methods	
2235:360	Introduction to Terrorism	
2235:365	Disaster Mitigation	
2235:367	Disaster Recovery	
2235:401	Crisis Leadership	
2235:425	Private Sector Disaster Applications	
2235:490	Current Topics in Emergency Management	
Total Hours		12

## Emergency Management and Homeland Security, Minor

### Minor in Emergency Management and Homeland Security (223500M)

This discipline of emergency management continues to evolve, becoming more complex. There is a demand for well-educated individuals in both the private and public sectors.

This minor allows students in other disciplines to incorporate an emergency management background with their degree program. Some of the disciplines that complement a minor in Emergency Management include communications, computer information sciences, political science, geography, public health, sociology and business. The courses offered will provide Emergency Management foundations useful in many careers and disciplines.

A minor in EMHS may only be awarded at the time a student receives a baccalaureate degree.

#### Program Contact

Dr. Stacy Willett  
 Polsky 314  
 330-972-8317  
 smuffet@uakron.edu

The following information has official approval of **The Department of Disaster Sciences and Emergency Services** and **The College of Health Professions**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Emergency Management and Homeland Security" and must be completed with a minimum grade

point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		9
Electives		9
Total Hours		18

## Required Courses

Code	Title	Hours
2235:305	Principals of Emergency Management and Homeland Security	3
2235:350	Disaster Preparedness & Response	3
2235:370	Hazard Science and Management	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Select nine credits of the following Emergency Management Electives:</b>		9
2235:285	Disasters in Film and Media	
2235:340	Disaster Research Methods	
2235:360	Introduction to Terrorism	
2235:365	Disaster Mitigation	
2235:367	Disaster Recovery	
2235:401	Crisis Leadership	
2235:420	Disaster Vulnerability	
2235:425	Private Sector Disaster Applications	
2235:490	Current Topics in Emergency Management	
Total Hours		9

# Emergency Management and Homeland Security, Step-up Option, BS

## Bachelor of Science in Emergency Management and Homeland Security, Step-up Option (223500BS)

### Program Contact

Dr. Stacy Willett  
 Program Lead Faculty  
 The Polsky Building 314  
 330-972-8317  
 smuffet@uakron.edu

### Program Information

Emergency Management and Homeland Security studies events or threats such as natural disasters, terrorist incidents, and technological hazards. Students will acquire specialized knowledge in disaster management through prevention/mitigation, preparedness, response, and

recovery actions utilizing an All-Hazards focused approach. This dynamic discipline prepares graduates for careers in the governmental, corporate, public health, and nonprofit sectors. Emergency Management and Homeland Security can be a career that makes a difference in people's lives. The program offers a Bachelor of Science degree along with a minor and certificate which is accredited by the International Fire Service Accreditation Congress (IFSAC). Students can step-up from responder related Associates Degrees such as criminal justice or fire protection. Students can also choose to follow a traditional college program with little or no bridgework. All university general education requirements must be completed as outlined in this Bulletin.

This program prepares students who have completed a minimum of 60 semester hours in subjects including, but not limited to, fire protection, criminal justice, community services, environmental health and safety, or other related areas to enter the field of emergency management in either the public or private sectors. Students will acquire specialized knowledge in preparedness, mitigation, response, and recovery in regard to an all hazards approach. **Students without this coursework must meet with the program director or an academic adviser to discuss required "bridge" coursework.**

This program is accredited by:

International Fire Service Accreditation Congress (IFSAC)  
 Oklahoma State University  
 1700 West Tyler  
 Stillwater, OK 74078-8075  
 Phone: (405) 744-8802  
[www.ifsac.org](http://www.ifsac.org) (<http://www.ifsac.org/>)

## Career Information

The Bachelor's degree in Emergency Management and Homeland Security prepares students to enter and advance in the field of emergency management through the acquisition of specialized knowledge of disaster planning, preparedness, emergency response, mitigation and recovery. As a "Step-Up" degree, it is built upon strong technical programs. Service learning is incorporated in course work with joint projects involving county emergency management agencies as well as schools and non-profit agencies. In addition, The University of Akron has faculty who are nationally recognized in the field of emergency management as well as geography, hazards, business, education, and leadership.

This degree program supports the primary goal of the Federal Emergency Management Agency (FEMA) Higher Education Project to encourage and support the implementation of emergency management education in colleges and universities across the United States. We have incorporated emergency management and homeland security research as our area of specialization which will make us unique from other programs. In addition, we teach emergency management and homeland security from a well-rounded perspective that includes the public and private sector equally.

For additional information visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) (<http://www.bls.gov>) or the Career Center at the Student Union, room 211.

The following information has official approval of **The Department of Disaster Sciences and Emergency Services** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer

to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. The College of Applied Science and Technology recommends that students take the General Education courses listed in this recommended sequence. Transfer students should consult their Advisor to identify courses that are equivalent.

**3rd Year**

Fall Semester		Hours
2040:243	Contemporary Global Issues	3
2235:305	Principals of Emergency Management and Homeland Security	3
2235:340	Disaster Research Methods	3
2235:360	Introduction to Terrorism <sup>1</sup>	3
3470:250	Statistics for Everyday Life	4
Hours		16

**Spring Semester**

2235:350	Disaster Preparedness & Response	3
2235:370	Hazard Science and Management	3
3400:210 or 3400:221	Humanities in the Western Tradition from Ancient Times to 1500 or Humanities in the World since 1300	3
2985:101	Introduction to Geographic & Land Information Systems	3
7750:244 or 3002:256	Death & Dying or Diversity in American Society	3
Domestic Diversity Tag Requirement		
Hours		15

**4th Year**

**Fall Semester**

2235:365	Disaster Mitigation	3
2235:367	Disaster Recovery	3
2980:445	Applications in GIS using GPS	3
2985:201 or 2985:205	Intermediate Geographic and Land Information Systems or Building Geodatabases	3
3600:120	Introduction to Ethics	3
Select one of the following:		3
2235:490	Current Topics in Emergency Management <sup>2</sup>	
2235:xxx	Approved Emergency Management Elective <sup>2</sup>	
Hours		18

**Spring Semester**

2235:420	Disaster Vulnerability	3
2235:495	Emergency Management & Homeland Security Internship	3
Natural Science Requirement		3-4
Complex Systems Tag Requirement		3
Select one of the following:		3
7100:210	Visual Arts Awareness	

7500:201	Exploring Music: Bach to Rock	
7900:200	Viewing Dance	
Arts Requirement		
Select one of the following:		3
2235:490	Current Topics in Emergency Management <sup>2</sup>	
2235:xxx	Approved Emergency Management Electives <sup>2</sup>	
Hours		18-19
Total Hours		67-68

- <sup>1</sup> Traditionally offered Fall only (see program contact).
- <sup>2</sup> A student must take 3 to 6 credits in either 2235:490 Current Topics in Emergency Management or 2235:xxx Emergency Management and Homeland Security electives for a minimum of 6 credits.

Total Credits for Degree = 127 minimum (including 1st and 2nd year credits)

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

## Emergency Medical Services Technology, EMT/Paramedic Option, AAS

### Associate of Applied Science in Emergency Medical Services Technology, EMT/Paramedic (224002AAS)

#### Contact Information

Mr. Dennis Ragins MPA, EMTP  
 Associate Professor of Practice and Lead Faculty Member  
 The Polsky Building 316  
 330-972-2051  
 dragins@uakron.edu

#### Program Information

The Emergency Medical Services Technology, EMT/Paramedic Option program offers both professional certification and a quality education. It not only goes beyond providing training required for certification, but it also recognizes the amount of learning associated with a Licensed Paramedic Program. Graduates of the program will have state certification as an EMT-Paramedic, which will enable them to provide the highest level of emergency medical service available.

The AAS in Emergency Medical Services offers both professional certification and education. It not only goes beyond providing training required for certification, but it also recognizes the amount of learning associated with a Licensed Paramedic Program. These programs enhance the skills service components with the additional critical thinking, problem solving, and cultural diversity awareness attributes of higher education.

Upon application and matriculation to the University and a concurrent presentation of an official paramedic transcript from an accredited EMS training facility with a graduation date of 1985 or thereafter, academic

transfer credit will be awarded to individuals for certified paramedic education as part of the Emergency Medical Services Technology degree Fire/Medic option.

## Career Information

The AAS in Emergency Medical Services (both options) offers both professional certification and education. It goes beyond providing training required for certification; it also recognizes the amount of learning associated with a Licensed Paramedic Program. These programs enhance the skills service components with the additional critical thinking, problem solving, and cultural diversity awareness attributes of higher education.

## Salary Information

- Occupation Code: 29-2041
- Occupation Title: Emergency Medical Technicians and Paramedics

## Employment Estimates

- Employment: 460
- Employment RSE: 11.1%
- Employment per 1000 jobs: 1.487
- Location Quotient: 0.852

## Wage Estimates

- Median Hourly: \$12.81
- Mean Hourly: \$13.61
- Mean Annual: \$28,310
- Mean RSE: 2.9%

The following information has official approval of **The Department of Disaster Sciences and Emergency Services** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. Transfer students should consult their Advisor to identify courses that are equivalent.

1st Year		
Fall Semester		Hours
2020:121	English	3
2030:161 or 3470:250	Mathematics for Modern Technology or Statistics for Everyday Life	4
2230:100	Introduction to Fire Protection	4
2750:120	Medical Terminology	3
7750:230	Human Relations	3
	Hours	17
Spring Semester		
2230:202	Incident Management for Emergency Responders	4
2230:257	Fire & Safety Issues for Business & Industry	3
2420:263	Professional Communications and Presentations	3

2780:206	Applied Human Anatomy & Physiology I	3
	Hours	13
	Total Hours	30

**30 Block credit for State of Ohio, Department of Public Safety / EMT-Paramedic Certification from an accredited paramedic training facility.**

Code	Title	Hours
2240:201	Fundamentals of EMT-Paramedic I	3
2240:202	Fundamentals of EMT-Paramedic II	3
2240:203	Fundamentals of EMT-Paramedic III	3
2240:204	Fundamentals of EMT-Paramedic IV	3
2240:205	Fundamentals of EMT-Paramedic V	3
2240:206	Fundamentals of EMT-Paramedic VI	3
2240:207	Fundamentals of EMT-Paramedic VII	3
2240:208	Fundamentals of EMT-Paramedic VIII	3
2240:209	Fundamentals of EMT-Paramedic IX	3
2240:211	Fundamentals of EMT-Paramedic X	3
	Total Hours	30

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your *required* General Education English, Mathematics, and Communications (Speech) requirements.**

# Emergency Medical Services Technology, Fire/Medic Option, AAS

## Associate of Applied Science in Emergency Medical Services Technology, Fire/Medic (224003AAS)

## Contact Information

Mr. Dennis Ragins MPA, EMTP  
Associate Professor of Practice and Lead Faculty Member  
The Polsky Building 316  
330-972-2051  
dragins@uakron.edu

## Program Information

The Emergency Medical Services Technology, Fire/Medic Option program offers both professional certification and a quality education. It not only goes beyond providing training required for certification, but it also recognizes the amount of learning associated with a Licensed Paramedic Program. Graduates of the program will have state certification as an EMT-Paramedic, which will enable them to provide the highest level of emergency medical service available.

The AAS in Emergency Medical Services program offers both professional certification and education. It not only goes beyond providing training required for certification, but it also recognizes the amount of learning associated with a Licensed Paramedic Program. These programs enhance the skills service components with the additional critical thinking, problem solving, and cultural diversity awareness attributes of higher education.

Upon application and matriculation to the University and a concurrent presentation of an official paramedic transcript from an accredited EMS

training facility with a graduation date of 1985 or thereafter, academic transfer credit will be awarded to individuals for certified paramedic education as part of the Emergency Medical Services Technology degree Fire/Medic option.

## Career Information

The AAS in Emergency Medical Services (both options) offers both professional certification and education. It goes beyond providing training required for certification; it also recognizes the amount of learning associated with a Licensed Paramedic Program. These programs enhance the skills service components with the additional critical thinking, problem solving, and cultural diversity awareness attributes of higher education.

## Salary Information

- Occupation Code: 29-2041
- Occupation Title: Emergency Medical Technicians and Paramedics

## Employment Estimates

- Employment: 460
- Employment RSE: 11.1%
- Employment per 1000 jobs: 1.487
- Location Quotient: 0.852

## Wage Estimates

- Median Hourly: \$12.81
- Mean Hourly: \$13.61
- Mean Annual: \$28,310
- Mean RSE: 2.9%

## Cooperative Education

As a fire protection student, you may participate in a 15-week internship. The internship consists of a full-time assignment in a fire protection agency. The Internship program provides valuable fire related experience with regional fire organizations such as fire departments, private fire investigation organizations, hazardous material compliance organizations and others.

Also, our Fire Protection Technology majors are encouraged to participate in special projects such as fire training, educational tours and fire related research projects. It will provide you with first-hand experience, help you learn what a career in that area of fire protection is all about, and aid you in making important career decisions.

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1st Year		
Fall Semester		Hours
2020:121	English	3
2030:161	Mathematics for Modern Technology	4
2230:100	Introduction to Fire Protection	4
2750:120	Medical Terminology	3
7750:230	Human Relations	3
Hours		17
Spring Semester		
2230:254	Fire Prevention	3
2230:295	Field Experience I	2
2230:296	Field Experience II	2
2420:263	Professional Communications and Presentations	3
2780:206	Applied Human Anatomy & Physiology I	3
Hours		13
Total Hours		30

### 30 Block credit for State of Ohio, Department of Public Safety / EMT-Paramedic Certification from an accredited paramedic training facility.

Code	Title	Hours
2240:201	Fundamentals of EMT-Paramedic I	3
2240:202	Fundamentals of EMT-Paramedic II	3
2240:203	Fundamentals of EMT-Paramedic III	3
2240:204	Fundamentals of EMT-Paramedic IV	3
2240:205	Fundamentals of EMT-Paramedic V	3
2240:206	Fundamentals of EMT-Paramedic VI	3
2240:207	Fundamentals of EMT-Paramedic VII	3
2240:208	Fundamentals of EMT-Paramedic VIII	3
2240:209	Fundamentals of EMT-Paramedic IX	3
2240:211	Fundamentals of EMT-Paramedic X	3
Total Hours		30

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your *required* General Education English, Mathematics, and Communications (Speech) requirements.**

## Fire Protection Technology, AAS Associate of Applied Science in Fire Protection Technology (223001AAS) Contact Information

Mr. Dennis Ragins MPA, EMTP  
Professor of Practice and Lead Faculty Member  
The Polsky Building 316  
330-972-2051  
dragins@uakron.edu

## Career Information

Graduates of the fire protection program have a wide selection of career opportunities. Your education will assist you in becoming an expert in many areas including fire protection, recognition and correction of fire

hazards, design and application of fire extinguishing equipment, and utilization of fire codes and standards.

The program is designed to prepare you for a career in fire protection in municipal, industrial, state, federal, and private fire protection agencies. It also provides instruction for service fire fighters wishing to prepare for career advancement.

## Salary Information: National Estimates for this Occupation

Employment estimate and mean wage estimates for this occupation:

- Employment: 302,400
- Employment RSE: 1.0%
- Mean hourly wage: \$22.95
- Mean annual wage: \$47,730
- Wage RSE: 1.0%

Percentile wage estimates for this occupation:

### Hourly Wage

- 10% = \$11.08
- 25% = \$15.38
- 50% (Median) = \$21.76
- 75% = \$28.80
- 90% = \$36.25

### Annual Wage

- 10% = \$23,050
- 25% = \$31,990
- 50% (Median) = \$45,250
- 75% = \$59,900
- 90% = \$75,390

The following information has official approval of **The Department of Disaster Sciences and Emergency Services** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor. Transfer students should consult their Advisor to identify courses that are equivalent.

#### 1st Year

Fall Semester		Hours
2020:121	English	3
2030:161	Mathematics for Modern Technology	4
2230:100	Introduction to Fire Protection	4
2230:104	Fire Investigation Methods	4
Hours		15

#### Spring Semester

2020:222	Technical Report Writing	3
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2230:102	Fire Safety in Building Design & Construction	3
2230:202	Incident Management for Emergency Responders	4
2230:206	Fire Sprinkler System Design	3
2230:254	Fire Prevention	3
Hours		16

#### 2nd Year

##### Fall Semester

2230:204	Fire and Life Safety Education	3
2230:205	Fire Detection & Suppression Systems	3
2230:280	Fire Service Administration	4
2420:263	Professional Communications and Presentations	3
2820:105	Basic Chemistry	3
Hours		16

##### Spring Semester

2230:250	Hazardous Materials	4
2230:257	Fire & Safety Issues for Business & Industry	3
2230:295	Field Experience I	2
2230:296	Field Experience II	2
7750:230 or 2040:242	Human Relations or American Urban Society	3
Hours		14

Total Hours 61

**Policy Alert:** By the end of your first 48 credit hours attempted, you must have completed your *required* General Education English, Mathematics, and Communications (Speech) requirements.

## Fire Protection Technology, Certificate

### Certificate in Fire Protection Technology (223001C)

Fire continues to be a problem in the United States even though the loss of lives is declining due to new, innovative public education programs, rigorous enforcement of building and fire code enforcement and the application of advanced technology related to fire detection and suppression systems. However, with the loss of civilian lives ranging from 4,050 to 4,440 each year and property loss continuing to escalate, the need for well-educated firefighters becomes more important as community resources are reallocated. The Fire Protection Technology certificate will assist the student in acquiring the knowledge and skills necessary to function effectively as a fire protection specialist.

This certificate may be earned independent of earning a degree.

#### Program Contact

Mr. Dennis Ragins MPA, EMTP  
Associate Professor of Practice and Lead Faculty Member  
The Polsky Building 316  
330-972-2051  
dragins@uakron.edu

The following information has official approval of **The Department of Disaster Sciences and Emergency Services** and **The College of**

**Health Professions**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Fire Protection Technology" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

## Summary

Code	Title	Hours
Required Courses		25
Total Hours		25

## Required Courses

Code	Title	Hours
2230:100	Introduction to Fire Protection	4
2230:102	Fire Safety in Building Design & Construction	3
2230:104	Fire Investigation Methods	4
2230:202	Incident Management for Emergency Responders	4
2230:204	Fire and Life Safety Education	3
2230:205	Fire Detection & Suppression Systems	3
2230:250	Hazardous Materials	4
Total Hours		25

## Fire Protection Technology, Minor Minor in Fire Protection Technology (223001M)

### Program Contact

Mr. Dennis Ragins MPA, EMTP  
Associate Professor of Practice and Lead Faculty Member  
The Polsky Building 316  
330-972-2051  
dragins@uakron.edu

The following information has official approval of **The Department of Disaster Sciences and Emergency Services** and **The College of Health Professions**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Fire Protection Technology" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		17
Total Hours		17

## Required Courses

Code	Title	Hours
2230:100	Introduction to Fire Protection	4
2230:102	Fire Safety in Building Design & Construction	3
2230:104	Fire Investigation Methods	4
2230:204	Fire and Life Safety Education	3
2230:205	Fire Detection & Suppression Systems	3
Total Hours		17

Note:

- A minor in Fire Protection may only be awarded at the time a student receives a baccalaureate degree.

## Nursing

### Baccalaureate in Nursing Program (BSN)- Traditional option

The Traditional Baccalaureate program is designed for students pursuing their first degree in nursing. The baccalaureate curriculum is a six-semester sequence of courses that students take after completing University and School of Nursing prerequisites. Students have practice experiences in a variety of settings including hospitals, clinics, rehabilitation agencies, long-term care facilities, community health agencies, mental health agencies, pediatric agencies and home care settings.

### Accelerated Option for the Baccalaureate in Nursing Program

The accelerated option is designed for those students with completed baccalaureate degree program and prerequisites to earn a Bachelor of Science Degree in Nursing in four semesters - one academic year and two summers.

### LPN/BSN Sequence

This sequence is designed for LPNs who completed a practical nursing curriculum and licensed as a practicing LPN, as well as LPNs with bachelor's degrees in an area other than nursing. The pathway provides learning activities that build on prior knowledge and experience.

### RN to BSN Program

(This sequence is limited to registered nurse graduates of Associate Degree and Diploma nursing programs.)

The RN to BSN program is designed for the registered nurse with a diploma or associate degree of nursing. It is specifically designed for those who are interested in obtaining the baccalaureate degree in nursing and/or continuing on to a master's degree in nursing. The RN program consists of 31 hours of upper-division baccalaureate coursework. During the RN-BSN program, students may opt to take up to 3 graduate courses for a total of 8 credits towards their MSN. Continuation in the graduate program is predicated on meeting graduate program requirements and acceptance into the graduate nursing program.

- Nursing, BSN (p. 489)
- Nursing, BSN Accelerated (p. 492)

- Nursing, LPN/BSN (p. 494)
- Nursing, RN/BSN (p. 497)

## Nursing (8200)

### 8200:100 Introduction to Nursing (1 Credit)

Introduces students to influences of past, present, and future political, legal, social, and cultural processes on the nursing profession and the roles of nurses.

### 8200:211 Foundations of Nursing Practice I (5 Credits)

Prerequisite: Admission to the School of Nursing. This course focuses on basic concepts and skills needed by novice nursing students in order to care for clients. This course will focus on nurse-client relationships, communication, nursing process, psychomotor skills, and beginning pharmacology. Clinical experiences will reflect these concepts and skills.

### 8200:212 Foundations of Nursing Practice II (5 Credits)

Prerequisite: 8200:211. Builds on Foundations of Nursing Practice I focusing on promoting holistic well being across the lifespan. Clinicals are with children and adults, acute and non-acute settings.

### 8200:216 Transition to Baccalaureate Nursing (3 Credits)

Prerequisite: Admission to School of Nursing. This course emphasizes the transition from Licensed Practical Nurse to professional nurse. The LPN is introduced to the discipline of nursing from the baccalaureate perspective.

### 8200:217 Pathophysiology for Nurses (3 Credits)

Prerequisite: Admission to the School of Nursing. Develop understanding of basic concepts related to pathophysiologic mechanisms of health, illness as applied to nursing. Emphasis on application to nursing using the nursing process.

### 8200:225 Health Assessment (3 Credits)

Prerequisite: Admission to the School of Nursing. The skills of taking health histories and performance of basic physical assessment. Supervised practice in the Learning Resource Center.

### 8200:230 Nursing Pharmacology (3 Credits)

Prerequisite: Admission to the School of Nursing. Emphasis on fundamental concepts of pharmacology as applied to major drug classes, actions and effects. Application of nursing process to drug therapy across the lifespan.

### 8200:336 Concepts of Professional Nursing - RN Only (3 Credits)

Prerequisite: Admission to the RN/BSN sequence. Introduces the RN to baccalaureate nursing. Focuses on the relationship of concepts and theories to the role of the professional nurse.

### 8200:337 Health Assessment/RN - RN Only (3 Credits)

Prerequisite or corequisite: 8200:336. This three hour health assessment course is designed for the registered nurse. The course consists of both theory and independent laboratory practice.

### 8200:341 Professional Role Development (3 Credits)

Prerequisites: Admission to the School of Nursing and all sophomore level courses in the program of study. A professional engagement course designed to expose students to the essentials of the professional role of the baccalaureate generalist nurse.

### 8200:350 Nursing of the Childbearing Family (5 Credits)

Prerequisite: Satisfactory completion of Sophomore level nursing courses. A theoretical and clinical basis for care of the childbearing family in varying degrees of health and in a variety of settings.

### 8200:360 Nursing Care of Adults (5 Credits)

Prerequisite: Satisfactory completion of Sophomore level nursing courses. Acute nursing care of adults with nutrition, elimination, metabolic, sexual, reproductive, and immunological concerns. Includes theory and practice at the advanced beginner level.

### 8200:370 Nursing Care of Older Adults (5 Credits)

Prerequisite: Satisfactory completion of Sophomore level nursing courses. Acute nursing care of older adults with mobility, perception, circulation, and oxygenation concerns. Includes theory and practice at the advanced beginner level.

### 8200:380 Mental Health Nursing (5 Credits)

Prerequisite: Satisfactory completion of Sophomore level nursing courses. Assists students in developing knowledge and skills for providing care to individuals with mental health needs in a variety of settings.

### 8200:401 RN Transition (1 Credit)

Prerequisites: 8200:350, 8200:360, 8200:370, 8200:380 and 8200:341. Corequisites: any two, including 8200:410, 8200:430, 8200:435, 8200:440 and 8200:450. Prepares the Senior nursing student of the professional role by developing a resume, test taking strategies for the NCLEX RN exam and a resume.

### 8200:405 Nursing Care of Healthy Individuals/Families - RN Only (3 Credits)

Prerequisite or Corequisite: 8200:336. Health care concepts across the lifespan with emphasis on health promotion and illness prevention for individuals, families, and groups are discussed.

### 8200:406 Palliative Nursing Care - RN Only (3 Credits)

Prerequisite or Corequisite: 8200:336. Dimensions of end of life nursing care, including family dynamics, grief and loss, ethical considerations, physiologic changes and community resources are examined.

### 8200:409 International Health (2-3 Credits)

Prerequisite: Junior standing. Study in an international location. Focuses on comparisons of education, ethics, government, demography and geography on health care and nursing roles and responsibilities.

### 8200:410 Nursing of Families with Children (5 Credits)

Prerequisites: 8200:341, 8200:350, 8200:360, 8200:370, and 8200:380 with grades of C+ or better. Theoretical and clinical nursing course focused on the child within a family context. Health problems of both acute and chronic nature are explored.

### 8200:412 Global Perspectives of Health and Health Care (2-3 Credits)

Prerequisite: senior status. Cultural, political, educational, and economical perspectives of different regions of the world and the impact of these factors on health will be compared and examined.

### 8200:415 Complex Care of Aging Families/RN only (3 Credits)

Prerequisite or Corequisite: 8200:336. Complex nursing issues related to care of aging individuals and families are explored. The nurse's role in physiological, emotional and psychosocial care is discussed.

### 8200:430 Nursing in Complex & Critical Situations (5 Credits)

Prerequisites: 8200:341, 8200:350, 8200:360, 8200:370, 8200:380. Introduces advanced beginners to the complexity of nursing care in acute complex and critical situations of patients with multi-system failures.

### 8200:435 Nursing Research (2 Credits)

Prerequisite: Completion of 8200:341, 8200:350, 8200:360, 8200:370, 8200:380. Exploration of the effects of nursing research on the profession, become a knowledgeable consumer of research.



**8200:436 Nursing Research/RN Only (3 Credits)**

Prerequisite or Corequisite: 8200:336. Exploration of the effects of nursing research on the profession and becoming a knowledgeable consumer of research.

**8200:440 Nursing of Communities (5 Credits)**

Prerequisite: Completion of 8200:341, 8200:350, 8200:360, 8200:370, 8200:380. A synthesis of nursing skills applied among various community populations. Health and illness care strategies within diverse population groups.

**Gen Ed:** Tier 3 - Complex Systems

**8200:444 Community Engagement/RN (2 Credits)**

Corequisite: 8200:445. Prerequisite or Corequisite: 8200:336. This community engagement course provides experiences related to community health nursing in a variety of traditional and nontraditional community environments.

**8200:445 Nursing of Communities - RN Only (3 Credits)**

Corequisite: 8200:444. Prerequisite or Corequisite: 8200:336. This course provides a theoretical foundation for community, including public health nursing, to individuals and families in a variety of settings to diverse populations.

**Gen Ed:** Tier 3 - Complex Systems

**8200:446 Professional Nursing Leadership - RN Only (3 Credits)**

Corequisite: 8200:447. Prerequisite or Corequisite: 8200:336. Issues related to nursing leadership, management, policy, and economic issues within the healthcare system that influence nursing practice are discussed.

**8200:447 Leadership Engagement/RN (2 Credits)**

Corequisite: 8200:446. Prerequisite or Corequisite: 8200:336. This leadership experience course offers the opportunity to implement leadership and management skills in a health care setting.

**8200:448 Professional Nursing Capstone - RN Only (3 Credits)**

Prerequisite: 8200:336. Prerequisites or Corequisites: 8200:337, 8200:405, 8200:406, 8200:415, 8200:436, 8200:444, 8200:445, 8200:446, and 8200:447. Opportunities to synthesize information and reflect on ethical, legal, cultural, and political dimensions of employment and patient care within the health care system are provided.

**8200:450 Senior Practicum and Nursing Leadership (5 Credits)**

Prerequisites: 8200:341, 8200:350, 8200:360, 8200:370, and 8200:380. This course focuses on the application of leadership and management principles to the practice of nursing. Political, social, cultural, legal and ethical issues are explored.

**8200:453 School Nurse Practicum I (5 Credits)**

Prerequisites: 5570:421/521 and 5570:423/523. Prerequisite or corequisite: 8200:225/650. Emphasis on clinical primary health care nursing to enhance positive health behavior outcomes of well children and adolescents with minor conditions on family, community, school contexts.

**8200:454 School Nurse Practicum II (5 Credits)**

Prerequisite: 5570:421/521, 5570:423/523, 225 or 650, 453/553 or waiver. Emphasis on primary health care nursing to enhance positive health behavior outcomes of children/adolescents with minor common health or behavioral problems and chronic illnesses.

**8200:480 Senior Honors Project (1-4 Credits)**

Prerequisites: Honors Program Student, 8200:435 (Honor's Designated Section) Completion and presentation of an original investigation of a significant topic or creative work which must meet high standards of scholarship.

**8200:489 Special Topics: Nursing (1-4 Credits)**

(May be repeated as new topics are presented) Group studies of special topics in nursing. May not be used to meet requirements for the major in nursing. May be used for elective credit.

**8200:493 Workshop (1-4 Credits)**

(May be repeated as new topics are presented) Selected topics in nursing. May be used to meet undergraduate or graduate major requirements at the discretion of the college.

**8200:497 Independent Study: Nursing (1-3 Credits)**

Prerequisite: Permission of Director of Nursing Education, and good academic standing. Provides opportunity to develop greater depth in an area of nursing through methodology specific to discipline of nursing.

## Nursing, BSN

### Bachelor of Science in Nursing (820000BSN)

More on the Nursing major (<https://www.uakron.edu/nursing/academic-programs/undergraduate-programs/bsn.dot>)

## Contact Information

School of Nursing  
Mary Gladwin Hall  
Student Success Center, Room 313  
(330) 972-6061

## Program Description

The traditional undergraduate nursing program provides the education needed earn a Registered Nurse license and begin work in an entry level nursing position or apply for graduate school.

**Admission Criteria:** BSN degree-seeking students must meet the minimum criteria listed below:

- 2.75 Prerequisite GPA. All prerequisites must be completed by the end of the spring semester before.
- 2.75 Prerequisite Science GPA

Students must earn at least a C in all prerequisite course courses. Grades of a C- or less must be repeated. (See School of Nursing Repeat Policy below)

Students are separated into two admission consideration categories and in each category they are ranked based on the prerequisite science GPA.

### Admission Consideration Categories

- **Priority Pool:** Pre-nursing students who were admitted or transferred to the school before the first day of spring semester, are prioritized by Pre-science GPA. Five seats are reserved for Army ROTC scholarship recipients.
- **Secondary Pool:** Any pre-nursing student or ICT students who has repeated a pre-admission science class will be placed in this category and are prioritized by science GPA. The top 5 students in this category whose science GPA is above the Priority Pool admission cut off will be offered a seat in the major.
- **Provisional Admission Criteria:** Direct admits to the CHP, pre-nursing or ICT students, intended nursing majors finishing prerequisites Summer session 1 and/or 2 can still be considered for admission pending successful completion of the summer courses, if they meet

the admission criteria listed above, and availability in the in the courses for the fall semester.

All students admitted to the Sophomore class, by August 1st will begin nursing coursework in the fall and take a six or eight semester course of study. Upon successful completion of the program, the student are granted the Bachelor of Science degree in Nursing. They may then apply to take the National Council Licensure Examination (NCLEX) for Registered Nurses.

**By the end of your first 48 credit hours attempted, you should have completed your General Education English, Math, and Oral Communication (Speech) requirements;**

**By the end of your first 48 credit hours attempted, you should have declared a major and transferred to (been accepted by) a degree granting college at The University of Akron.**

**School of Nursing Repeat Policy:** If School of Nursing Pre-Nursing students or students located in the Center for Academic Advising & Student Success or College of Applied Science & Technology do not achieve a C or higher in science prerequisite courses the first time they take them, they are allowed to repeat the course for a change of grade **one time only**. (UA policy allows for two repeats for change of grade.) If a student must take a science course for a third time in order to earn a grade of C or higher, the student will *no longer* be eligible for consideration for the nursing major until the previous science courses are 5 years old. This policy includes the repetition of a course originally taken at another institution or vice versa. All students must be aware that the repeat of a prerequisite science will automatically place them into the Secondary pool. Any student who has repeated a prerequisite science course, including those students who elect to repeat a science course which they have passed successfully (“illegal repeat” of a C or higher) in order to raise their entry GPA, will be placed in the Secondary pool, even if they had previously been in the Priority consideration pool.

**Transfer Students:** A student must be accepted by the University and have all course work applicable to the Nursing requirements evaluated by the respective UA departments with a copy of the departmental approval on the file by August 1st of the year of entry into School of Nursing. *All transfer prerequisites will be combined and averaged with those earned at the University of Akron. Transfer students who have been dismissed from a Nursing program at another institution are not eligible to apply to The University of Akron's Nursing program.*

**Notification of Admission:** Pending the outcome of spring semester, applicants completing pre-admission requirements will be notified of admission by June 30th. **Meeting minimum admission requirements does not guarantee admission.** Qualified students who do not receive admission will be placed on a waiting list which will be in effect through the first week of fall classes.

**Reapplication Process:** Applications for the College of Health Professions are only effective for the current academic year. A student meeting the minimum entry criteria but not admitted from the waiting list or denied admission will have their file remain in the School of Nursing as a pre-nursing student. These students will need to reapply during the next year's application period.

The School of Nursing reserves the right to approve admission to those individuals whose abilities, attitudes and character promise satisfactory achievement of the program of studies.

**\*\*\*Background Checks/Fingerprinting/Urine screen:** All Nursing students are subject to yearly thorough criminal background checks and urine screen at the students' expense. Both background checks may reveal a student's unsealed and sealed criminal record. Students are required to have a yearly TB test and flu vaccine as well as maintain current BLS Certification for the Healthcare Provider through the American Heart Association.

The following information has official approval of the **School of Nursing** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33) *	9
	Preadmission Courses	33
	Nursing Core	81
	Total Hours	123

\* Several courses required for the major also satisfy General Education requirements. The University minimum of 34 credits are required for General Education and credit for these courses will apply to both.

## General Education Courses

Code	Title	Hours
	Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.	
	<b>Tier I: Academic Foundations</b>	<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
	<b>Tier II: Disciplinary Areas</b>	<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	
	<i>Social Sciences: 6 credit hours</i>	
	<b>Tier III: Tagged Courses</b>	
	<i>Select one class from each of the following subcategories:</i>	
	Complex Systems	
	Critical Thinking	
	Domestic Diversity	
	Global Diversity	

Review the General Education Requirements page for detailed course listings.

Total Hours 34

## Preadmission Courses

Code	Title	Hours
3100:200	Human Anatomy & Physiology I	3
3100:201	Human Anatomy & Physiology Laboratory I	1
3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3150:110	Introduction to General, Organic & Biochemistry I (Lecture)	3
3150:111	Introduction to General, Organic & Biochemistry I (Laboratory)	1
3150:112	Introduction to General, Organic & Biochemistry II (Lecture)	3
3150:113	Introduction to General, Organic & Biochemistry II (Laboratory)	1
3300:111	English Composition I	3
3300:112	English Composition II	3
3470:250 or 3470:260	Statistics for Everyday Life Basic Statistics	4
3750:100	Introduction to Psychology	3
7600:105 or 7600:106	Introduction to Public Speaking Effective Oral Communication	3
8200:100	Introduction to Nursing	1
Total Hours		33

## Nursing Core

Code	Title	Hours
3100:130	Principles of Microbiology	3
3600:120	Introduction to Ethics	3
3750:230	Developmental Psychology	4
3850:100	Introduction to Sociology	3
7760:316	Science of Nutrition	4
8200:211	Foundations of Nursing Practice I	5
8200:212	Foundations of Nursng Practice II	5
8200:217	Pathophysiology for Nurses	3
8200:225	Health Assessment	3
8200:230	Nursing Pharmacology	3
8200:341	Professional Role Development	3
8200:350	Nursing of the Childbearing Family	5
8200:360	Nursing Care of Adults	5
8200:370	Nursing Care of Older Adults	5
8200:380	Mental Health Nursing	5
8200:401	RN Transition	1
8200:410	Nursing of Families with Children	5
8200:430	Nursing in Complex & Critical Situations	5
8200:435	Nursing Research	2
8200:440	Nursing of Communities	4
8200:450	Senior Practicum and Nursing Leadership	5
Total Hours		81

## Recommended Sequence

### 1st Year

Fall Semester		Hours
3100:200	Human Anatomy & Physiology I <sup>1</sup>	3
3100:201	Human Anatomy & Physiology Laboratory I <sup>1</sup>	1
3150:110	Introduction to General, Organic & Biochemistry I (Lecture) <sup>1,2</sup>	3
3150:111	Introduction to General, Organic & Biochemistry I (Laboratory) <sup>1</sup>	1
3300:111	English Composition I <sup>1</sup>	3
3470:250 or 3470:260	Statistics for Everyday Life <sup>1,3</sup> or Basic Statistics	3-4
8200:100	Introduction to Nursing <sup>1</sup>	1
Hours		15-16

### Spring Semester

3100:202	Human Anatomy & Physiology II <sup>1</sup>	3
3100:203	Human Anatomy & Physiology Laboratory II <sup>1</sup>	1
3150:112	Introduction to General, Organic & Biochemistry II (Lecture) <sup>1</sup>	3
3150:113	Introduction to General, Organic & Biochemistry II (Laboratory) <sup>1</sup>	1
3300:112	English Composition II <sup>1</sup>	3
3750:100	Introduction to Psychology <sup>1</sup>	3
7600:105 or 7600:106	Introduction to Public Speaking <sup>1</sup> or Effective Oral Communication	3
Hours		17

### 2nd Year

Fall Semester		Hours
7760:316 or 3750:230	Science of Nutrition <sup>4</sup> or Developmental Psychology	4
8200:211	Foundations of Nursing Practice I	5
8200:217	Pathophysiology for Nurses	3
8200:225	Health Assessment	3
Hours		15

### Spring Semester

8200:212	Foundations of Nursng Practice II	5
7760:316 or 3750:230	Science of Nutrition <sup>4</sup> or Developmental Psychology	4
3100:130	Principles of Microbiology <sup>4</sup>	3
8200:230	Nursing Pharmacology	3
Hours		15

### 3rd Year

Fall Semester		Hours
3600:120	Introduction to Ethics <sup>4</sup>	3
8200:350	Nursing of the Childbearing Family <sup>5</sup>	5
8200:360	Nursing Care of Adults <sup>5</sup>	5
Arts Requirement		3
Hours		16

**Spring Semester**

3850:100	Introduction to Sociology (meets Social Science & Domestic Diversity requirement) <sup>4</sup>	3
8200:341	Professional Role Development	3
8200:370	Nursing Care of Older Adults <sup>5</sup>	5
8200:380	Mental Health Nursing <sup>5</sup>	5
	Arts or Humanities Requirement	3
	Hours	19

**4th Year****Fall Semester**

8200:410	Nursing of Families with Children <sup>6</sup>	5
8200:435	Nursing Research	2
8200:440	Nursing of Communities <sup>6</sup>	5
	Hours	12

**Spring Semester**

8200:401	RN Transition	1
8200:430	Nursing in Complex & Critical Situations <sup>6</sup>	5
8200:450	Senior Practicum and Nursing Leadership <sup>6</sup>	5
	Global Diversity Requirement	3
	Hours	14
	<b>Total Hours</b>	<b>123-124</b>

<sup>1</sup> Preadmission courses: A grade of C or higher is required.

<sup>2</sup> It is strongly recommended that a student have recent high school algebra and chemistry. If algebra skills need updating, a student should see advisor for assistance. If a student has no high school chemistry, 2820:105 Basic Chemistry or 3150:101 Chemistry for Everyone should be taken prior to enrollment in 3150:110 Introduction to General, Organic & Biochemistry I (Lecture) and 3150:111 Introduction to General, Organic & Biochemistry I (Laboratory).

<sup>3</sup> The math requirement is 3470:260 Basic Statistics or 3470:250 Statistics for Everyday Life. A student may substitute 3470:261 Introductory Statistics I, 3470:262 Introductory Statistics II. Either option will fulfill the Quantitative Reasoning requirement.

<sup>4</sup> Corequisite courses: A grade of C or higher is required.

<sup>5</sup> Junior level clinical courses may be taken in any order:

- 8200:350 Nursing of the Childbearing Family
- 8200:360 Nursing Care of Adults
- 8200:370 Nursing Care of Older Adults
- 8200:380 Mental Health Nursing

<sup>6</sup> Senior level clinical courses may be taken in any order:

- 8200:410 Nursing of Families with Children
- 8200:430 Nursing in Complex & Critical Situations
- 8200:440 Nursing of Communities
- 8200:450 Senior Practicum and Nursing Leadership

## Nursing, BSN Accelerated

### Bachelor of Science in Nursing, Accelerated (820200BS)

More on the Accelerated Nursing major (<https://www.uakron.edu/nursing/academic-programs/undergraduate-programs/second-degree-bsn.dot>)

## Contact Information

School of Nursing  
Mary Gladwin Hall  
Student Success Center, Room 313  
(330) 972-6061

## Program Description

The Accelerated BSN program is a four semester nursing program that provides the education needed to earn a Registered Nurse license and begin work in an entry level nursing position or apply to graduate school.

**Total credit hours for Accelerated BSN degree (including prerequisites):** 96-99 credits. The program begins in the summer semester and students complete the program in four semesters.

Progression in the program: Due to the sequencing of the courses, continued progress is dependent upon maintaining a minimum 2.3 nursing GPA and successful completion of C+ or higher in each nursing course.

## Application deadline:

The deadline to apply for the next May class is December 1st of the preceding year. If you are interested in applying after December 1st please contact the Student Enrollment Counselor for the accelerated option, Ms. Regena Ellis at [ellisr@uakron.edu](mailto:ellisr@uakron.edu) or 330-972-7554.

## Admission Requirements

- Complete a Second Degree Form (Application to the Program itself, available on the website)
- Baccalaureate degree from a regionally accredited four year college or university with a cumulative GPA of 3.0 on a 4.0 scale.
- Admission to the University of Akron - students previously enrolled at The University of Akron must complete an Inter-College Transfer (ICT) to the School of Nursing.
- Able to maintain full time status
- Pre-requisite science courses completed within 5 years of application to the program. Science courses must have a lab component.
- Pre-requisite science courses must have a cumulative 3.0 GPA on a 4.0 scale
- Completion of the prerequisite courses prior to beginning the first nursing course
- Two letters of recommendation
- Resume
- A 500-word Personal Statement addressing how you can contribute to the field of nursing

Important note: Completion of all admission criteria does not guarantee admission to the accelerated program.

## Admission Procedures

Submit the Second Degree form along with copies of your transcripts to the School of Nursing, attention Accelerated Option. You will receive a written evaluation (Planning Sheet) of the prerequisites you have completed along with those that need to be completed. From this point forward, you must maintain close contact with the Student Enrollment Counselor for the accelerated option, Ms. Regena Ellis, in order to ensure proper progression towards entry into the program and to confirm continued interest for consideration for admission.

International students should contact the Office of International Programs for admission. If you have attended The University of Akron in the past, you may need to reactivate your file by contacting the Office of Admissions.

**Prerequisite Courses:** The following list of prerequisite courses are offered at The University of Akron and Wayne College Campus, as well as Medina County University Center (MCUC). Prerequisites may be completed at any regionally accredited university or community college. However, to ensure transfer of credits, you are strongly advised to submit a course description prior to registering for approval from the Advisor/Assistant Director. *All prerequisite courses must be completed by the start of the program in May.*

Code	Title	Hours
3100:130	Principles of Microbiology	3
3100:200	Human Anatomy & Physiology I	3
3100:201	Human Anatomy & Physiology Laboratory I	1
3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3150:110	Introduction to General, Organic & Biochemistry I (Lecture)	3
3150:111	Introduction to General, Organic & Biochemistry I (Laboratory)	1
3150:112	Introduction to General, Organic & Biochemistry II (Lecture)	3
3150:113	Introduction to General, Organic & Biochemistry II (Laboratory)	1
3750:230	Developmental Psychology	4
7760:316	Science of Nutrition	4
3470:250 or 3470:260	Statistics for Everyday Life Basic Statistics	4
3600:120	Introduction to Ethics	3
Total Hours		34

If you have any questions about the prerequisites or the program, please contact Ms. Regena Ellis (ellisr@uakron.edu), Student Enrollment Counselor for the Accelerated Option. 330-972-7554

**\*\*\*Background Checks/Fingerprinting/Urine screen:** All Nursing students are subject to yearly thorough criminal background checks and urine screen at the students expense. Both background checks may reveal a student's unsealed and sealed criminal record. Students are required to have a yearly TB test and flu vaccine as well as maintain current BLS Certification for the Healthcare Provider through the American Heart Association.

## Change of Requirements

Without limiting the generality of its powers to alter, amend, or revoke rules and regulations, The University of Akron reserves the right to make changes in degree requirements of the student enrolled prior to the change by:

- Altering the number of credits and/or courses required in a major field of study
- Deleting courses
- Amending courses by increasing or decreasing the credits of specific courses
- Offering substitute courses in the same or cognate fields
- Changing the sequence of courses.

The following information has official approval of the **School of Nursing** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
Prerequisite Courses		33-34
Summer I		19
Fall		15
Spring		14
Summer II		16
Total Hours		97-98

## Prerequisite Courses

Code	Title	Hours
3100:130	Principles of Microbiology	3
3100:200	Human Anatomy & Physiology I	3
3100:201	Human Anatomy & Physiology Laboratory I	1
3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3150:110	Introduction to General, Organic & Biochemistry I (Lecture)	3
3150:111	Introduction to General, Organic & Biochemistry I (Laboratory)	1
3150:112	Introduction to General, Organic & Biochemistry II (Lecture)	3
3150:113	Introduction to General, Organic & Biochemistry II (Laboratory)	1
3470:250 or 3470:260	Statistics for Everyday Life Basic Statistics	3-4
3600:120	Introduction to Ethics	3
3750:230	Developmental Psychology	4

7760:316	Science of Nutrition	4
Total Hours		33-34

## Summer I

Code	Title	Hours
8200:211	Foundations of Nursing Practice I	5
8200:212	Foundations of Nursng Practice II	5
8200:217	Pathophysiology for Nurses	3
8200:225	Health Assessment	3
8200:230	Nursing Pharmacology	3
Total Hours		19

## Fall

Code	Title	Hours
8200:341	Professional Role Development	3
8200:350	Nursing of the Childbearing Family	5
8200:370	Nursing Care of Older Adults	5
8200:435	Nursing Research	2
Total Hours		15

## Spring

Code	Title	Hours
8200:360	Nursing Care of Adults	5
8200:380	Mental Health Nursing	5
8200:440	Nursing of Communities	4
Total Hours		14

## Summer II

Code	Title	Hours
8200:401	RN Transition	1
8200:410	Nursing of Families with Children	5
8200:430	Nursing in Complex & Critical Situations	5
8200:450	Senior Practicum and Nursing Leadership	5
Total Hours		16

## Recommended Sequence

### 1st Year

Summer Semester		Hours
8200:211	Foundations of Nursing Practice I	5
8200:212	Foundations of Nursng Practice II	5
8200:217	Pathophysiology for Nurses	3
8200:225	Health Assessment	3
8200:230	Nursing Pharmacology	3
Hours		19

### 2nd Year

Fall Semester		Hours
8200:341	Professional Role Development	3
8200:350	Nursing of the Childbearing Family	5
8200:370	Nursing Care of Older Adults	5
8200:435	Nursing Research	2
Hours		15

### Spring Semester

8200:360	Nursing Care of Adults	5
8200:380	Mental Health Nursing	5
8200:440	Nursing of Communities	4
Hours		14

### Summer Semester

8200:401	RN Transition	1
8200:410	Nursing of Families with Children	5
8200:430	Nursing in Complex & Critical Situations	5
8200:450	Senior Practicum and Nursing Leadership	5
Hours		16
Total Hours		64

**Total credit hours for Accelerated BSN degree (including prerequisites): 96-99**

Progression in the program: Due to the sequencing of the courses, continued progress is dependent upon maintaining a minimum 2.3 nursing GPA and successful completion of C or higher in each nursing course.

## Nursing, LPN/BSN

### Bachelor of Science in Nursing, Licensed Practical Nurse (820003BS)

More on the Nursing-LPN major (<https://www.uakron.edu/nursing/academic-programs/undergraduate-programs/bsn-for-lpn.dot>)

## Contact Information

School of Nursing  
Mary Gladwin Hall  
Student Success Center, Room 313  
(330) 972-6061

## Program Description

The LPN to BSN nursing program provides students the education they need to earn a Registered Nurse license, begin work in an entry level nursing position and apply for graduate school.

**Admission Criteria** All applicants must:

- Have graduated from an accredited LPN Program
- Hold a valid, unencumbered LPN or RN License in the State of Ohio
- Complete all pre-requisites courses with a grade of C or better. Grades of a C- or lower must be repeated. (See School of Nursing Repeat Policy below)
- Complete a Progression to Major form with their academic Advisor
- Achieve a minimum 2.75 GPA in the science prerequisite courses.
- Achieve a minimum of 2.75 GPA in all the prerequisite courses (physical education and electives are not included in the calculations).

All students admitted to the Sophomore class by August 1st will begin nursing coursework in the fall and take a six or eight semester course of study. Upon successful completion of the program, the student is granted the Bachelor of Science degree in Nursing. They may then apply to take

the National Council Licensure Examination (NCLEX) for Registered Nurses.

**School of Nursing Repeat Policy:** If School of Nursing Pre-Nursing students or students located in the Center for Academic Advising & Student Success or College of Applied Science & Technology do not achieve a C or higher in science prerequisite courses the first time they take them, they are allowed to repeat the course for a change of grade **one time only**. (UA policy allows for two repeats for change of grade.) If a student must take a science course for a third time in order to earn a grade of "C" or higher, the student will *no longer* be eligible for consideration for the nursing major until the previous science courses are 5 years old. This policy includes the repetition of a course originally taken at another institution or vice versa.

**Transfer Students:** A student must be accepted by the University and have all course work applicable to the Nursing requirements evaluated by the respective UA departments with a copy of the departmental approval on the file by August 1st of the year of entry into School of Nursing. All transfer prerequisites will be combined and averaged with those earned at the University of Akron. *Transfer students who have been dismissed from a Nursing program at another institution are not eligible to apply to The University of Akron's Nursing program.* Transfer students are eligible to Intercollege Transfer to the School of Nursing after completing 12 credits at the University of Akron, completion of one or more core science courses and earning a 3.0 GPA at The University of Akron.

**Notification of Admission:** Pending the outcome of spring semester, all applicants will be notified of admission by June 30th. **Meeting minimum admission requirements does not guarantee admission.** Qualified students who do not receive admission will be placed on a waiting list which will be in effect through the first week of fall classes.

**Reapplication Process:** Applications for the College of Health Professions are only effective for the current academic year. A student meeting the minimum entry criteria but not admitted from the waiting list or denied admission will have their file remain in the School of Nursing as a pre-nursing student. These students will need to reapply during the next year's application period.

**\*\*\*Background Checks & Fingerprinting:** All Nursing students are subject to yearly thorough criminal background checks and urine screen at the students' expense. Background checks *may* reveal a student's unsealed and sealed criminal record.

The School of Nursing reserves the right to approve admission to those individuals whose abilities, attitudes and character promise satisfactory achievement of the program of studies.

The following information has official approval of the **School of Nursing** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33) *	8
	Preadmission Courses	45
	Nursing Core	71
Total Hours		124

\* Several courses required for the major also satisfy General Education requirements. The University minimum of 34 credits are required for General Education and credit for these courses will apply to both.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
	<i>Quantitative Reasoning: 3 credit hours</i>	
	<i>Speaking: 3 credit hours</i>	
	<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
	<i>Arts/Humanities: 9 credit hours</i>	
	<i>Natural Sciences: 7 credit hours</i>	
	<i>Social Sciences: 6 credit hours</i>	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
	Complex Systems	
	Critical Thinking	
	Domestic Diversity	
	Global Diversity	
	<i>Review the General Education Requirements page for detailed course listings.</i>	
Total Hours		34

## Preadmission Courses

Code	Title	Hours
3100:130	Principles of Microbiology	3
3100:200	Human Anatomy & Physiology I	3
3100:201	Human Anatomy & Physiology Laboratory I	1
3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3150:110	Introduction to General, Organic & Biochemistry I (Lecture)	3
3150:111	Introduction to General, Organic & Biochemistry I (Laboratory)	1
3150:112	Introduction to General, Organic & Biochemistry II (Lecture)	3

3150:113	Introduction to General, Organic & Biochemistry II (Laboratory)	1	3100:202	Human Anatomy & Physiology II <sup>1</sup>	3
3300:111	English Composition I	3	3100:203	Human Anatomy & Physiology Laboratory II <sup>1</sup>	1
3300:112	English Composition II	3	3150:112	Introduction to General, Organic & Biochemistry II (Lecture) <sup>1</sup>	3
3470:250 or 3470:260	Statistics for Everyday Life Basic Statistics	4	3150:113	Introduction to General, Organic & Biochemistry II (Laboratory) <sup>1</sup>	1
3600:120	Introduction to Ethics	3	3750:100	Introduction to Psychology <sup>1</sup>	3
3750:100	Introduction to Psychology	3	7600:105 or 7600:106	Introduction to Public Speaking <sup>1</sup> or Effective Oral Communication	3
3750:230	Developmental Psychology	4		Hours	17
3850:100	Introduction to Sociology	3			
7600:105 or 7600:106	Introduction to Public Speaking Effective Oral Communication	3			

Total Hours 45

## Nursing Core

Code	Title	Hours
7760:316	Science of Nutrition	4
8200:211	Foundations of Nursing Practice I	5
8200:212	Foundations of Nursing Practice II	5
8200:216	Transition to Baccalaureate Nursing	3
8200:217	Pathophysiology for Nurses	3
8200:225	Health Assessment	3
8200:230	Nursing Pharmacology	3
8200:341	Professional Role Development	3
8200:350	Nursing of the Childbearing Family	5
8200:360	Nursing Care of Adults	5
8200:370	Nursing Care of Older Adults	5
8200:380	Mental Health Nursing	5
8200:401	RN Transition	1
8200:410	Nursing of Families with Children	5
8200:430	Nursing in Complex & Critical Situations	5
8200:435	Nursing Research	2
8200:440	Nursing of Communities	4
8200:450	Senior Practicum and Nursing Leadership	5

Total Hours 71

## Recommended Sequence

1st Year		Hours
<b>Fall Semester</b>		
3300:111	English Composition I <sup>1</sup>	3
3100:200	Human Anatomy & Physiology I <sup>1</sup>	3
3100:201	Human Anatomy & Physiology Laboratory I <sup>1</sup>	1
3150:110	Introduction to General, Organic & Biochemistry I (Lecture) <sup>1</sup>	3
3150:111	Introduction to General, Organic & Biochemistry I (Laboratory) <sup>1</sup>	1
3470:250 or 3470:260	Statistics for Everyday Life <sup>1,2</sup> or Basic Statistics	3-4
	Hours	14-15
<b>Spring Semester</b>		
3300:112	English Composition II <sup>1</sup>	3

3100:202	Human Anatomy & Physiology II <sup>1</sup>	3
3100:203	Human Anatomy & Physiology Laboratory II <sup>1</sup>	1
3150:112	Introduction to General, Organic & Biochemistry II (Lecture) <sup>1</sup>	3
3150:113	Introduction to General, Organic & Biochemistry II (Laboratory) <sup>1</sup>	1
3750:100	Introduction to Psychology <sup>1</sup>	3
7600:105 or 7600:106	Introduction to Public Speaking <sup>1</sup> or Effective Oral Communication	3
	Hours	17

### 2nd Year

#### Fall Semester

3750:230 or 7760:316	Developmental Psychology <sup>4</sup> or Science of Nutrition	4
8200:211	Foundations of Nursing Practice I (Credit by Exam)	5
8200:216	Transition to Baccalaureate Nursing	3
8200:217	Pathophysiology for Nurses	3
8200:225	Health Assessment	3
	Hours	18

#### Spring Semester

3100:130	Principles of Microbiology <sup>4</sup>	3
7760:316 or 3750:230	Science of Nutrition <sup>4</sup> or Developmental Psychology	4
8200:212	Foundations of Nursing Practice II	5
8200:230	Nursing Pharmacology	3
	Hours	15

### 3rd Year

#### Fall Semester

8200:350	Nursing of the Childbearing Family <sup>5</sup>	5
8200:360	Nursing Care of Adults <sup>5</sup>	5
	Arts Requirement	3
3600:120	Introduction to Ethics <sup>4</sup>	3
	Hours	16

#### Spring Semester

3850:100	Introduction to Sociology <sup>4</sup>	3
8200:341	Professional Role Development	3
8200:370	Nursing Care of Older Adults <sup>5</sup>	5
8200:380	Mental Health Nursing <sup>5</sup>	5
	Arts or Humanities Requirement	3
	Hours	19

### 4th Year

#### Fall Semester

8200:410	Nursing of Families with Children <sup>6</sup>	5
8200:435	Nursing Research	2
8200:430	Nursing in Complex & Critical Situations <sup>6</sup>	5
	Hours	12

#### Spring Semester

8200:401	RN Transition	1
8200:440	Nursing of Communities (meets Complex Systems Affecting Individuals in Society) <sup>6</sup>	4
8200:450	Senior Practicum and Nursing Leadership <sup>6</sup>	5



Global Diversity Requirement	3
Hours	13
Total Hours	124-125

- <sup>1</sup> Preadmission courses: A grade of C or better is required.
- <sup>2</sup> The math requirement is 3470:260 Basic Statistics or 3470:250 Statistics for Everyday Life. A student may substitute 3470:261 Introductory Statistics I, 3470:262 Introductory Statistics II. Either option will fulfill the Quantitative Reasoning requirement.
- <sup>3</sup> It is strongly recommended that a student have recent high school algebra and chemistry. If algebra skills need updating, a student should see advisor for assistance. If a student has no high school chemistry, 2820:105 Basic Chemistry or 3150:101 Chemistry for Everyone should be taken prior to enrollment in 3150:110 Introduction to General, Organic & Biochemistry I (Lecture) and 3150:111 Introduction to General, Organic & Biochemistry I (Laboratory).
- <sup>4</sup> Corequisite courses: A grade of "C" or higher is required.
- <sup>5</sup> Junior level clinical courses may be taken in any order:
  - 8200:350 Nursing of the Childbearing Family
  - 8200:360 Nursing Care of Adults
  - 8200:370 Nursing Care of Older Adults
  - 8200:380 Mental Health Nursing
- <sup>6</sup> Senior level clinical courses may be taken in any order:
  - 8200:410 Nursing of Families with Children
  - 8200:430 Nursing in Complex & Critical Situations
  - 8200:440 Nursing of Communities
  - 8200:450 Senior Practicum and Nursing Leadership

## Nursing, RN/BSN

### Nursing, RN/BSN (820002BS)

The RN to BSN program is designed for the registered nurse with a diploma or associate degree of nursing from an accredited program. It is especially designed for those who are interested in obtaining a baccalaureate degree in nursing. The program also offers a pathway for continuing on to a master's degree in nursing.

The RN program consists of 31 hours of upper-division baccalaureate coursework (one calendar year full time; part time options available). Students may opt to take up to 3 graduate courses for a total of 8 credits towards their MSN. Continuation in the graduate program is predicated on meeting graduate program requirements and acceptance into the graduate nursing program.

#### CONTACT INFORMATION

School of Nursing  
Mary Gladwin Hall  
Student Success Center, Room 313  
(330) 972-6061

#### ADMISSION REQUIREMENTS

1. Valid state license as a registered nurse. Must pass NCLEX prior to beginning Nursing of Communities course.
2. Admission to the University of Akron and School of Nursing.

3. Grade of a "C" or above in all prerequisite courses. Courses taken at other colleges may be used to receive credit towards prerequisite requirements.
4. A minimum Grade Point Average of 2.75. Grades of transfer work are combined with those earned at The University of Akron in the computation of the admission GPA.

#### ADMISSION PROCEDURES

All RN students are admitted directly to the School of Nursing as undergraduates. School of Nursing advisors will guide the student as to the pre and co-requisite courses needed and develop a plan of study that will best meet the student's needs.

#### LOCATIONS

Distance Learning Option: Attend classes in at one of four locations:

- Akron (Main Campus)
- Medina ([Medina County University Center \(https://www.uakron.edu/mcuc/\)](https://www.uakron.edu/mcuc/))
- Kirtland ([The Holden University Center at Lakeland Community College \(http://www.lakelandcc.edu/web/holden/home/\)](http://www.lakelandcc.edu/web/holden/home/))
- Orrville ([Wayne College \(http://wayne.uakron.edu/\)](http://wayne.uakron.edu/))

Separately, we also offer the same program 100% online.

- [UA's RN to BSN online option \(https://www.uakron.edu/nursing/academic-programs/undergraduate-programs/rn-to-bsn-online/\)](https://www.uakron.edu/nursing/academic-programs/undergraduate-programs/rn-to-bsn-online/)

Code	Title	Hours
<b>Prerequisite courses for entry into the RN-to-BSN sequence</b>		
3100:130	Principles of Microbiology	3
3100:200	Human Anatomy & Physiology I	3
3100:201	Human Anatomy & Physiology Laboratory I	1
3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
	Any Chemistry course with a lab	4
<b>Corequisite courses for the RN-to-BSN sequence</b>		
3300:111	English Composition I	3
3300:112	English Composition II	3
3470:250	Statistics for Everyday Life	4
or 3470:260	Basic Statistics	
3750:100	Introduction to Psychology	3
3750:230	Developmental Psychology	4
7600:105	Introduction to Public Speaking	3
or 7600:106	Effective Oral Communication	
3230:150	Human Cultures	3
or 3850:100	Introduction to Sociology	
3600:120	Introduction to Ethics	3
	Global Diversity Requirement	3
	Arts or Humanities Requirement	3
	*CLEP options available (Credit by Examination)	
<b>Nursing Courses for RN-to-BSN</b>		
8200:336	Concepts of Professional Nursing - RN Only	3
8200:337	Health Assessment/RN - RN Only	3
8200:405	Nursing Care of Healthy Individuals/Families - RN Only	3

8200:406	Palliative Nursing Care - RN Only	3
8200:415	Complex Care of Aging Families/RN only	3
8200:436	Nursing Research/RN Only	3
8200:444	Community Engagement/RN	2
8200:445	Nursing of Communities - RN Only	3
8200:446	Professional Nursing Leadership - RN Only	3
8200:447	Leadership Engagement/RN	2
8200:448	Professional Nursing Capstone - RN Only	3

## Nutrition and Dietetics

### Bachelor of Science in Dietetics: Coordinated Program

The Coordinated Program has suspended admissions to the program as of fall 2020 until further notice pending a School reorganization.

To become a registered dietitian (RD), a student must complete the academic requirements, complete a minimum of 1,200 hours of supervised experience in dietetic practice, obtain appropriate verification, and pass the dietetic registration examination. Only accredited programs like those at The University of Akron are recognized by the Academy of Nutrition and Dietetics.

This Coordinated Program (CP) allows students to complete 1,200 hours of supervised experience along with regular coursework during their junior and senior years. Students must have successfully completed their coursework and clinical experience before they are eligible to take the registration examination.

The University of Akron students apply through the College of Health Professions Dean's Office to be considered for admission into the Coordinated Program (dietetics major). Students must meet the minimum criteria listed below:

- 3.0 overall GPA
- Completion of prerequisite courses with a grade of "C" or better
- Faculty Interview

Students who desire to be admitted to the CP should know that seats are limited and entry is competitive.

### Bachelor of Science in Food and Environmental Nutrition

Students obtaining a Bachelor of Science degree in Food and Environmental Nutrition will qualify for the food industry in food marketing, entrepreneurship, quality control, quality assurance, and food product design. This major creates professionals to provide the expertise to meet the challenges of the food industry. Employment is generally with food manufacturers and related businesses with an emphasis on marketing and the consumer.

Students must meet the requirements to be admitted to the College of Health Professions, the School of Nutrition & Dietetics, and the Food and Environmental Nutrition program.

### Post-Bac Applicants

The School of Nutrition and Dietetics welcomes applicants who hold degrees in other disciplines desiring to become registered dietitians (RD). Students who have taken the prerequisite science courses may

possibly complete their Post-Bac work in two years. Applicants who do not have the requisite science courses will require a longer period of study. After completing their course work students will be given a verification statement.

For further information contact Ms. Joan Ogg

Phone: 1-330-972-5875

Email: [jjogg@uakron.edu](mailto:jjogg@uakron.edu)

Address: 313 Mary Gladwin Hall

Application Procedures: Application form is available online.

Verification Statements: A CP Verification Statement will be issued after successful completion of all coursework and clinical rotations. This statement is a legal document necessary to take the National Registration Exam for Dietitians.

Please note: Recency of education requirements may need to be satisfied. Students seeking a second degree from The University of Akron must complete 30 credits in residence.

- Dietetics, Coordinated BST (p. 500)
- Food & Environmental Nutrition, BST (p. 503)
- Nutrition, Minor (p. 504)

## Nutrition and Dietetics (7760)

### 7760:120 Career Decisions in Nutrition (1 Credit)

Exploration of the nutrition/dietetics/food industry profession, including academic/internship routes, career opportunities, professional concepts and attributes. Self-assessment and goal setting with beginning portfolio development.

### 7760:132 Early Childhood Nutrition (3 Credits)

Emphasis on nutrition as component of Early Childhood programs. Nutrition principles discussed in relation to self and young children. Prenatal and infant nutrition studied. Food as learning experience, menu planning, purchasing, sanitation, food labeling, storage and parent involvement included. For Family and Child Development Option, and an educational technology student.

### 7760:133 Nutrition Fundamentals (3 Credits)

Study of basic nutrition concepts, contemporary issues, controversies; emphasis on macro/micro nutrient requirements for healthy individuals; analysis of a student's dietary intake. Online section available.

**Gen Ed:** Tier 2 - Natural Science

### 7760:141 Food for the Family (3 Credits)

Prerequisite: Permission of instructor. Application of nutrition to meal planning; problems in selecting, budgeting and preparing food; meal service.

### 7760:200 Sustainability, Foods and Environments (3 Credits)

This course provides an introduction to the basic concepts of environmental sustainability and conservation in food production. A brief history of this issue is followed by an examination of population needs and the management of water, agricultural practices, animal husbandry, fertilizer use, and land management. Global warming, genetically modified plant and animal organisms (GMOs), and carbon footprint/fossil fuel use, are also considered. The demographic and geo-political features of North American populations (urban, suburban, rural) contextualize comparisons of conventional food production practices and sustainable practices, around the world.

**7760:228 Introduction to Medical Nutrition Therapy (3 Credits)**

Prerequisites: 7760:133, 3150:110, 3150:111, 3150:112, and 3150:113. Introduction to Medical Nutrition Therapy will review basic metabolic and pathological conditions with emphasis on medical nutrition therapy strategies.

**7760:250 Food Science Lecture (3 Credits)**

Prerequisites: 7760:133, 7760:320, 3150:110, 3150:111, 3150:112, and 3150:113. Study of the chemical and physical structure of food. Scientific and aesthetic principles involved in the selection, storage and preparation of foods.

**7760:251 Food Science Lab (1 Credit)**

Prerequisites: 7760:133, 3150:110, 3150:111, 3150:112, and 3150:113. Corequisite 7760:250. Application of the scientific and sensory principles involved in the selection, storage and preparation of foods.

**7760:310 Food Systems Management I (4 Credits)**

Prerequisites: 7760:250 and [6200:201 or 2420:211]. Corequisite: 7760:315. Basic theoretical concepts in the management of dietetic food service systems and the practical application of principles and procedures in quantity food production and service.

**7760:314 Food Systems I Field Experience (2 Credits)**

Prerequisites: 6200:201 and 7760:250. Corequisite: 7760:310. Development of quantity food preparation in community and health care agencies; identification of functions and resources involved in the food service systems.

**7760:315 Food Systems Management I Clinical (2 Credits)**

Prerequisite: 7760:250. Corequisite: 7760:310. Development of quantity food preparation and supervisory skills in community agencies; identification of functions and resources involved in the management of food service systems.

**7760:316 Science of Nutrition (4 Credits)**

In-depth characterization of composition, metabolism, physiological functions and interrelationships of nutrients. Analysis and interpretation of current literature; assessment of nutrition counseling techniques.

**7760:321 Experimental Foods (3 Credits)**

Prerequisites: 7760:250, 3150:110, 3150:111, 3150:112, and 3150:113. Theory and methods in the experimental study of foods. Sensory evaluation and instrumental analysis of food quality. Individual research emphasized. Lecture/Laboratory.

**7760:328 Medical Nutrition Therapy I (3 Credits)**

Prerequisites: [7760:133 or 7760:316], 7760:426, and 7760:443. Analysis of health care concepts and the medical nutrition therapy relationship. Consideration of nutritional implications of pathological conditions and alterations to diet for specific health issues or disorders.

**7760:329 Medical Nutrition Therapy I Clinical (2 Credits)**

Prerequisites: [7760:133 or 7760:316], 7760:426, and 7760:443. Corequisite: 7760:328. Analysis of therapeutic health-care concepts. Consideration of nutritional implications of pathological conditions; construction of diets for specific disorders.

**7760:340 Meal Management (3 Credits)**

Prerequisites: 7760:250 or 7760:141. Emphasis is on meal design, etiquette, nutritional adequacy, and application of management principles. Resource management is applied to all course activities, including restricted financial and special diet situations.

**7760:400 Nutrition Communication & Education Skills (4 Credits)**

Prerequisites: 7760:228 and [7760:133 or 7760:316]. Theory and development of communication and education skills essential to dietetics practice; interpersonal communication; interviewing; nutrition counseling; education techniques, media, and current technology.

**7760:403 Advanced Food Preparation (3 Credits)**

Prerequisite: 7760:141 or 7760:250. Study of advanced techniques of food preparation. Introduction to and interpretation of classic and foreign cuisines. Emphasis on individualized experiences, skill development and evaluation of procedures and results.

**7760:412 Introduction to Regulatory Affairs (3 Credits)**

Organization and management in administration of food service systems; problems in administration of food service systems; problems in control of labor, time and cost. Field experience in food production. Study of regulations affecting the food industry, such as food labeling, nutrition labeling, food safety, and adulteration. Course includes discussion of regulatory agencies and their impact on the food industry.

**7760:413 Food Systems Management II (3 Credits)**

Prerequisite: 7760:310. Advanced concepts in management of dietetic service systems relating to achievement of nutritional care goals.

**7760:421 Special Problems in Nutrition and Dietetics (1-3 Credits)**

Additional study or apprentice experience in specialized field or preparation; group and individual experimentation.

**7760:424 Nutrition in Life Cycle (3 Credits)**

Prerequisite: 7760:316 or 7760:426. Study of the physiological basis for nutritional requirements; interrelating factors which affect growth, development, maturation and nutritional status from conception through the elderly years.

**7760:426 Human Nutrition (3 Credits)**

Prerequisites: 7760:133, 7760:228, 3100:202, 3100:203, 3150:112, and 3150:113. Application of principles nutrition, metabolism and assessment. Analyses and interpretation of current literature. Open to dietetics majors only.

**7760:428 Medical Nutrition Therapy II (3 Credits)**

Prerequisite: 7760:328. Continuation of 328. Medical Nutrition Therapy I with emphasis on more complex metabolic and pathological conditions with nutrition therapy strategies.

**7760:429 Medical Nutrition Therapy II Clinical (2 Credits)**

Prerequisites: 7760:329 and admission to the Coordinated program. Corequisite: 7760:428. Supervised practice experience in health care facilities with application of principles of medical nutrition therapy learned in 7760:328 and 7760:428.

**7760:430 Computer Assisted Food Service Management (3 Credits)**

Use of computer programs in application of management concepts for food service systems.

**7760:443 Nutrition Assessment (3 Credits)**

Prerequisites: 7760:133, 7760:228, 3100:202, 3100:203, 3150:112, and 3150:113. Application of principles of nutrition and assessment. Analysis and interpretation of current literature. Open to dietetics majors only.

**7760:444 Medical Nutrition Therapy in Long Term Care (2 Credits)**

Prerequisite: CP students only, 7760:328 and 7760:329. Clinical experiences in long term care facilities for application of principles of nutritional care learned in 7760:328.

**7760:447 Senior Seminar (1 Credit)**

Prerequisite: Senior standing. Consideration of the nutrition/dietetic professions and the impact on the health and wellness of individuals, families, and the environment. Analysis of challenges facing the profession.

**7760:470 Food Industry: Analysis & Field Study (3 Credits)**

Prerequisite: 7760:250. Role of technology in extending the food supply. Chemical, physical and biological effects of processing and storage, on-site tours of processing plants.

**7760:474 Cultural Dimensions of Food (3 Credits)**

Prerequisite: 7760:250. An examination of cultural, geographical and historical influences on development of food habits. Emphasis on evolution of diets; effects of religion, education, gender roles, media.

**7760:476 Developments in Food Science (3 Credits)**

Prerequisite: 7760:250. Advanced study of the chemistry and physics of food components affecting characteristics of food. Critical evaluation of current basic and applied research emphasized.

**7760:480 Community Nutrition I (3 Credits)**

Prerequisites: 7760:316 or 7760:426. Corequisite: 7760:481 for CP students only. Major food and nutrition related problems in the community. Emphasis on community assessment, program implementation and evaluation, and rationales for nutrition services.

**7760:481 Community Nutrition I-Clinical (2 Credits)**

Prerequisite: Admission to the Coordinated program. Corequisite: 7760:480. Field placement in area agencies offering nutrition services. Study of the agency's goals, organization, and philosophy of nutritional care.

**7760:482 Community Nutrition II (3 Credits)**

Prerequisite: 7760:480. Corequisite: 7760:483 for CP students only. Activities engaged in by community nutritionist. Emphasis on controversies, cultural differences, educational approaches, grantsmanship, marketing, and working with the media.

**7760:483 Community Nutrition II-Clinical (1 Credit)**

Prerequisite: CP students only; 7760:481. Corequisite: 7760:482. A second field placement in an area agency offering nutrition services. Study of the agency's goals, organization, and philosophy of nutritional care.

**7760:484 Health and Wellness Clinical (4 Credits)**

Prerequisite: (CP Students only) 7760:481. Corequisites: 7760:413 and 7760:482. A field placement in agencies or facilities offering health and wellness services as they related to nutrition. Credit/Noncredit.

**7760:485 Seminar in Health Professions (1-3 Credits)**

Prerequisite: Permission of instructor. Exploration and evaluation of current developments in selected areas.

**7760:486 Staff Relief: Dietetics (2 Credits)**

Prerequisites: 7760:414, CP senior only. Opportunity to function as an entry-level dietitian in area of administrative, therapeutic or community dietetics. The graduating senior CUP student spends three 40-hour weeks in a mutually agreeable agency primarily under direction of staff dietitians or coordinators.

**7760:487 Sports Nutrition (3 Credits)**

Prerequisites: 7760:133, 7760:426, 3100:202, 3100:203, 3150:112, and [3150:113 or 3150:203]. In-depth study of energy metabolism and utilization before, during, and after exercise. Factors affecting nutrient needs and peak performance of different athletic populations are emphasized.

**7760:488 Practicum in Dietetics (1-3 Credits)**

Prerequisite: Approval of advisor/instructor. Practical experience in application of the principles of nutrition.

**7760:489 Professional Preparation for Dietetics (1 Credit)**

Historical aspects of dietetics and where the profession is going. Specialty areas of dietetic practice are explored. Students prepare the application for dietetic internship.

**7760:493 Nutrition for Athletes (3 Credits)**

Study of metabolism before, during, and after exercise. Factors affecting nutrient needs and peak performance of different athletic populations are emphasized.

**7760:499 Senior Honors Project in Nutrition and Dietetics (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: Senior standing in Honors Program and approval of honors preceptor. Individual study supervised by adviser. Student and preceptor develop goals, objectives and methodology.

## Dietetics, Coordinated BST

### Bachelor of Science in Dietetics, Coordinated (H40500BST)

More on the Dietetics, Coordinated major

## Program Description

The CP includes over 1200 hours of pre-professional practice within the final two years of study, during which students gain knowledge as well as clinical experience in three main areas: food service administration, medical nutrition therapy, and community nutrition. CP graduates are eligible for active membership in the Academy and may take the national registration examination following graduation. State licensure requirements must also be satisfied prior to practice in Ohio. Information about limited permits and licensure are provided during the program.

**Coordinated Program:** The Coordinated Program has suspended admissions to the program as of fall 2020 until further notice pending a School reorganization.

**Information regarding official application to the Coordinated Program** No new students are being admitted to the CP program as of fall 2020 until further notice. Normally students applying to the Coordinated Program should have a minimum GPA of 3.0, a 3.0 science GPA, and be prepared for heavy time commitment. Students accepted to the Coordinated Program complete a new Academic Program Agreement and are then advised by the Coordinated Program Director. Deadline for application submission is February 1st.

**Verification Statement:** The Coordinated Program is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND). The student's Academic Program Requirements include courses which meet the verification statement requirements.

Upon graduation, verification statements are signed by the Coordinated Program Director, indicating satisfactory completion of the program requirements. To earn a Verification Statement in CP, students must have a 3.0 GPA and obtain a grade of "C" (2.0) or better in the following courses (unless waived):

Code	Title	Hours
3100:130	Principles of Microbiology	3
3100:200	Human Anatomy & Physiology I	3

3100:201	Human Anatomy & Physiology Laboratory I	1
3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3150:110	Introduction to General, Organic & Biochemistry I (Lecture)	3
3150:111	Introduction to General, Organic & Biochemistry I (Laboratory)	1
3150:112	Introduction to General, Organic & Biochemistry II (Lecture)	3
3150:113	Introduction to General, Organic & Biochemistry II (Laboratory)	1
3470:250 or 3470:260	Statistics for Everyday Life Basic Statistics	4
3750:100	Introduction to Psychology	3
3850:100	Introduction to Sociology	3
6200:201 or 2420:211 & 2420:212	Accounting Principles I Essentials of Financial Accounting and Basic Accounting II	3
6500:301	Management: Principles & Concepts	3
6500:480	Introduction to Health-Care Management	3
7600:105 or 7600:106	Introduction to Public Speaking Effective Oral Communication	3
7760:120	Career Decisions in Nutrition	1
7760:133	Nutrition Fundamentals	3
7760:228	Introduction to Medical Nutrition Therapy	3
7760:250	Food Science Lecture	3
7760:251	Food Science Lab	1
7760:310	Food Systems Management I	4
7760:314	Food Systems I Field Experience (DP only)	2
7760:315	Food Systems Management I Clinical (CP only)	2
7760:328	Medical Nutrition Therapy I	3
7760:400	Nutrition Communication & Education Skills	4
7760:403	Advanced Food Preparation	3
7760:413	Food Systems Management II	3
7760:424	Nutrition in Life Cycle	3
7760:426	Human Nutrition	3
7760:428	Medical Nutrition Therapy II	3
7760:443	Nutrition Assessment	3
7760:447	Senior Seminar	1
7760:480	Community Nutrition I	3
7760:482	Community Nutrition II	3
7760:485	Seminar in Health Professions <sup>1</sup>	1
7760:487	Sports Nutrition	3
7760:489	Professional Preparation for Dietetics (DP only)	1

<sup>1</sup> Topic must be Orientation to CP.

In addition, CP students must complete the following courses with a minimum of a B or with CR:

Code	Title	Hours
7760:315	Food Systems Management I Clinical	2
7760:329	Medical Nutrition Therapy I Clinical	2
7760:429	Medical Nutrition Therapy II Clinical	3

7760:444	Medical Nutrition Therapy in Long Term Care	2
7760:481	Community Nutrition I-Clinical	1
7760:484	Health and Wellness Clinical	4
7760:485	Seminar in Health Professions	1-3
7760:486	Staff Relief: Dietetics	2

Please note: Recency of education requirements may need to be satisfied.

#### Important:

- If courses are taken out of the recommended sequence, graduation may be delayed.
- If General Organic Biochemistry classes were completed more than 5 years ago. Please see contact the School of Nutrition and Dietetics for additional evaluation.
- To progress in the Nutrition majors, *students may not repeat any course required for the verification statement more than once*. If, after the first repeat, a student has not earned a "C" or better in a course, they will be dropped from the program.
- Once dropped, students will not be permitted to re-enter the dietetics program.

**Statement of Understanding:** Students are required to comply with the rules and regulations necessary to meet the foundation knowledge and skills for dietetics. Medical insurance, proof of immunization and a thorough criminal background check (BCI/FBI) for clinical experiences are required. The background check may reveal a student's unsealed and sealed criminal record.

**Student Academy of Nutrition & Dietetics (SAND):** The University of Akron Student Academy of Nutrition and Dietetics is open to all interested undergraduate and graduate students at the University. Its purpose is to stimulate interest in the dietetic profession, orient members to The Academy of Nutrition and Dietetics, and organize activities to involve members in programs for the public to help promote nutrition education. Contact the faculty advisor (330-972-8664), watch the Schrank bulletin board for meeting notices, and/or talk to one of the student officers for more information. New officers are elected yearly, and names are posted on the dietetics bulletin board.

**Scholarships:** Scholarships are available from various sources (including the School of Nutrition/Dietetics and The Academy of Nutrition and Dietetics) throughout the school year. Information regarding scholarships and the application is posted on the dietetics bulletin board in Schrank Hall South. Deadlines for applications will vary. It is the student's responsibility to request letters of recommendation from the faculty if required. Email the application before the posted deadline dates as instructed online.

**Employment Opportunities:** A student majoring in Dietetics gains some knowledge and experience in all three areas of specialization: management, medical nutrition therapy, and community dietetics. Thus, rewarding positions may be found in a variety of settings: hospitals, schools and colleges, commercial food services, community agencies, health care agencies, with manufacturers and distributors, with family practice units and private physicians requiring the professional services of a registered dietitian, or in the area of food and nutrition research. Average salary for dietitians is approximately \$57,910 annually.

The following information has official approval of **The School of Nutrition and Dietetics** and **The College of Health Professions**, but is intended only

as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Course	Title	Hours
<b>1st Year</b>		
<b>Fall Semester</b>		
3150:110	Introduction to General, Organic & Biochemistry I (Lecture) <sup>1,2</sup>	3
3150:111	Introduction to General, Organic & Biochemistry I (Laboratory) <sup>1,2</sup>	1
3300:111	English Composition I <sup>1</sup>	3
3470:260 or 3470:250	Basic Statistics <sup>1</sup> or Statistics for Everyday Life	3-4
3850:100	Introduction to Sociology <sup>1</sup>	3
7760:120	Career Decisions in Nutrition <sup>1,2</sup>	1
Hours		14-15
<b>Spring Semester</b>		
3100:130	Principles of Microbiology <sup>1,2</sup>	3
3150:112	Introduction to General, Organic & Biochemistry II (Lecture) <sup>1,2</sup>	3
3150:113	Introduction to General, Organic & Biochemistry II (Laboratory) <sup>1,2</sup>	1
3300:112 or 2020:222	English Composition II <sup>1</sup> or Technical Report Writing	3
7600:105 or 7600:106	Introduction to Public Speaking <sup>1</sup> or Effective Oral Communication	3
7760:133	Nutrition Fundamentals <sup>1,2</sup>	3
Hours		16
<b>2nd Year</b>		
<b>Fall Semester</b>		
3100:200	Human Anatomy & Physiology I <sup>2</sup>	3
3100:201	Human Anatomy & Physiology Laboratory I <sup>2</sup>	1
3750:100	Introduction to Psychology <sup>2</sup>	3
7760:228	Introduction to Medical Nutrition Therapy <sup>2</sup>	3
7760:250	Food Science Lecture <sup>2</sup>	3
7760:251	Food Science Lab <sup>2</sup>	1
Hours		14
<b>Spring Semester</b>		
3100:202	Human Anatomy & Physiology II <sup>2</sup>	3
3100:203	Human Anatomy & Physiology Laboratory II <sup>2</sup>	1
3600:120	Introduction to Ethics	3
6200:201	Accounting Principles I <sup>2,3</sup>	3
6300:201	Introduction to Entrepreneurship	3
Arts Requirement		3
Hours		16

**Summer Semester**

7760:485	Seminar in Health Professions <sup>4</sup>	1
Hours		1

**3rd Year****Fall Semester**

6500:480	Introduction to Health-Care Management <sup>2</sup>	3
7760:310	Food Systems Management I <sup>2,5</sup>	4
7760:314	Food Systems I Field Experience <sup>2</sup>	2
7760:403	Advanced Food Preparation <sup>2</sup>	3
7760:426	Human Nutrition <sup>2</sup>	3
7760:443	Nutrition Assessment <sup>2</sup>	3
Hours		18

**Spring Semester**

6500:301	Management: Principles & Concepts	3
7760:328	Medical Nutrition Therapy I <sup>2</sup>	3
7760:329	Medical Nutrition Therapy I Clinical <sup>2</sup>	2
7760:400	Nutrition Communication & Education Skills <sup>2</sup>	4
7760:424	Nutrition in Life Cycle	3
7760:487	Sports Nutrition <sup>2</sup>	3
Hours		18

**Summer Semester**

7760:444	Medical Nutrition Therapy in Long Term Care <sup>2</sup>	2
Arts or Humanities Requirement		3
Global Diversity Requirement		3
Hours		8

**4th Year****Fall Semester**

7760:428	Medical Nutrition Therapy II	3
7760:429	Medical Nutrition Therapy II Clinical	2
7760:480	Community Nutrition I <sup>5</sup>	3
7760:481	Community Nutrition I-Clinical	2
Complex Systems Requirement		3
Hours		13

**Spring Semester**

7760:413	Food Systems Management II	3
7760:447	Senior Seminar	1
7760:482	Community Nutrition II	3
7760:484	Health and Wellness Clinical	4
7760:486	Staff Relief: Dietetics	2
Hours		13
Total Hours		131-132

<sup>1</sup> Preadmission courses: A grade of "C" or higher is required. A minimum combined 3.0 GPA is required. All courses must be completed prior to the entry to the Didactic Program in Dietetics (DPD).

<sup>2</sup> Courses require a grade of "C" or better for the Verification Statement. Refer to the last page for an explanation of the differences between the Didactic and Coordinated Programs and the importance of the Verification Statement.

<sup>3</sup> 2420:211 Essentials of Financial Accounting and 2420:212 Basic Accounting II may be substituted for 6200:201 Accounting Principles I.

<sup>4</sup> Topic must be Orientation to CP.

<sup>5</sup> A \$35.00 fee for Liability Insurance is collected as part of course fees and provides you with required malpractice coverage.

## Food & Environmental Nutrition, BST Bachelor of Science in Food and Environmental Nutrition (H40112BST)

More on the Food and Environmental Nutrition major (<https://www.uakron.edu/nutritiondietetics/undergraduate-degrees/food-and-environmental-science.dot>)

### Program Description

Students obtaining a Bachelor of Science degree in Food and Environmental Nutrition will qualify for the food industry in food marketing, entrepreneurship, and food product design. This major creates professionals to provide the expertise to meet the challenges of the food industry. Employment is generally with food manufacturers and related businesses with an emphasis on marketing and the consumer. Students must meet the requirements to be admitted to the College of Health Professions, the School of Nutrition & Dietetics, and the Food and Environmental Nutrition program.

### Academic Advising

Once the student meets the first year requirements with a 3.0 GPA and a C or better, then the student will be assigned a faculty adviser.

## Food and Environmental Nutrition Association (FENA)

The University of Akron Food and Environmental Nutrition Association is open to all interested undergraduate and graduate students at the University. The purpose of this organization is to introduce students to career opportunities in the food industry through plant tours, professional panels, and lively discussion about new technologies in the food industry. Contact the faculty advisor (330-972-5594), watch the FENA bulletin board for meeting notices, and/or talk to one of the student officers for more information. New officers are elected yearly, and names are posted on the FENA bulletin board.

### Important:

- If courses are taken out of the recommended sequence, graduation may be delayed.
- If General Organic Biochemistry classes were completed more than 5 years ago, please see contact the School of Nutrition and Dietetics for additional evaluation.
- To progress in FEN, the student must have a minimum GPA of 3.0 and have a "C" (2.00) or better in all of the prerequisite courses, which includes all of the courses listed in the first year on the curriculum guide.
- Once dropped, students will not be permitted to re-enter the FEN program.

## Scholarships

Scholarships are available from various sources (including the School of Nutrition/Dietetics and The Institute of Food Technologists) throughout the school year. Information regarding scholarships is posted on the Nutrition Center bulletin board in Schrank Hall South. Deadlines for applications will vary; it is the student's responsibility to:

1. request application forms,
2. request letters of recommendation from the faculty if required, forms are generally available at the front desk, and
3. mail all materials to be received before the posted deadline dates.

## Employment Opportunities

The objective of the major is to provide for a degree to qualify students for the food industry including food marketing, entrepreneurship, food product design and development, food regulation, food promotion, brand development, community agriculture, and quality assurance/quality control.

## Career Center

Seniors should register with the Career Center ([www.uakron.edu/career](http://www.uakron.edu/career)) (<http://www.uakron.edu/career/>), keeping their addresses updated after graduation (no fee). Job opportunities and employer literature are also available in the Nutrition Center.

The following information has official approval of **The School of Nutrition and Dietetics** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

1st Year		Hours
Fall Semester		
3150:110	Introduction to General, Organic & Biochemistry I (Lecture) <sup>1</sup>	3
3150:111	Introduction to General, Organic & Biochemistry I (Laboratory) <sup>1</sup>	1
3300:111	English Composition I <sup>1</sup>	3
3470:260 or 3470:250	Basic Statistics <sup>1</sup> or Statistics for Everyday Life	3-4
3850:100	Introduction to Sociology <sup>1</sup>	3
7760:120	Career Decisions in Nutrition <sup>1</sup>	1
Hours		14-15
Spring Semester		
3100:130	Principles of Microbiology <sup>1</sup>	3
3150:112	Introduction to General, Organic & Biochemistry II (Lecture) <sup>1</sup>	3
3150:113	Introduction to General, Organic & Biochemistry II (Laboratory) <sup>1</sup>	1
3300:112	English Composition II <sup>1</sup>	3
7600:105 or 7600:106	Introduction to Public Speaking <sup>1</sup> or Effective Oral Communication	3

7760:133	Nutrition Fundamentals <sup>1</sup>	3
	Hours	16

**2nd Year****Fall Semester**

3100:200	Human Anatomy & Physiology I	3
3100:201	Human Anatomy & Physiology Laboratory I	1
3750:100	Introduction to Psychology	3
7760:228	Introduction to Medical Nutrition Therapy	3
7760:250	Food Science Lecture	3
7760:251	Food Science Lab	1
	Hours	14

**Spring Semester**

3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3600:120	Introduction to Ethics	3
6200:201	Accounting Principles I <sup>2</sup>	3
6300:201	Introduction to Entrepreneurship	3
	Arts Requirement	3
	Hours	16

**3rd Year****Fall Semester**

3250:200	Principles of Microeconomics	3
6500:301	Management: Principles & Concepts	3
7760:400	Nutrition Communication & Education Skills	4
7760:426	Human Nutrition	3
	Global Diversity Requirement	3
	Hours	16

**Spring Semester**

6600:205	Marketing Principles	3
7760:310	Food Systems Management I <sup>3</sup>	4
7760:314	Food Systems I Field Experience	2
7760:321	Experimental Foods	3
7760:470	Food Industry: Analysis & Field Study	3
	Hours	15

**Summer Semester**

7760:340	Meal Management	3
	Hours	3

**4th Year****Fall Semester**

6600:355	Consumer Behavior	3
7760:412	Introduction to Regulatory Affairs	3
7760:474	Cultural Dimensions of Food	3
7760:476	Developments in Food Science Elective <sup>4</sup>	3
	Hours	15

**Spring Semester**

7760:447	Senior Seminar	1
6600:440	Brand Management	3
	Critical Thinking Requirement	3
	Complex Systems Requirement	3

Art or Humanities Requirement	3
Hours	13
Total Hours	122-123

<sup>1</sup> Preadmission courses: A grade of "C" or higher is *required*. A minimum combined 3.0 GPA is required.

<sup>2</sup> 2420:211 Essentials of Financial Accounting *and* 2420:212 Basic Accounting II may be substituted for 6200:201 Accounting Principles I.

<sup>3</sup> A \$35.00 fee for Liability Insurance is collected as part of course fees and provides you with required malpractice coverage.

<sup>4</sup> A student in the FEN program will complete 3 credit hours of electives. Recommended Electives:

- 2020:222 Technical Report Writing
- 6200:250 Spreadsheet Modeling & Decision Analysis
- 6400:220 Legal & Social Environment of Business
- 3230:420 The Anthropology of Food
- 7600:325 Intercultural Communication
- 5550:211 First Aid & Cardiopulmonary Resuscitation

A Business Minor for Non-Business Majors can be completed with 3-4 additional courses. See website for curriculum information. A pre-MBA minor is another recommended option if a Master's in Business Administration is desired after obtaining a bachelor's degree.

**Alert: By the end of your first 48 credit hours attempted, you should have completed your General Education English, Math, and Oral Communication (Speech) requirements.**

## Nutrition, Minor

### Minor in Nutrition (H40113M)

The field of nutrition is interdisciplinary. A nutrition minor will be beneficial for future academic and employment opportunities, while improving personal nutrition, health, and lifestyle. Students will learn to differentiate evidence based nutrition science from misinformation, the principles of good nutrition and food preparation, sources and recommended amounts of essential nutrients, effects of nutritional deficiencies and excesses, and nutrition throughout the lifecycle. A minor in nutrition will be beneficial for those studying health related fields and those interested in food industry or medical sales.

**Program Contact**

*Nutrition Center*  
210 Schrank Hall South  
330-972-2836  
nutritioncenter@uakron.edu

The following information has official approval of the **School of Nutrition and Dietetics** and the **College of Health Professions**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Nutrition" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.



## Summary

Code	Title	Hours
Core Requirements		9
Electives		9
Total Hours		18

## Core Requirements

Code	Title	Hours
7760:133	Nutrition Fundamentals	3
7760:228	Introduction to Medical Nutrition Therapy	3
7760:424	Nutrition in Life Cycle	3
Total Hours		9

## Electives

Code	Title	Hours
<b>Complete 9 credits from the following courses:</b>		<b>9</b>
7760:132	Early Childhood Nutrition	
7760:141	Food for the Family	
7760:250	Food Science Lecture	
7760:310	Food Systems Management I	
7760:321	Experimental Foods	
7760:328	Medical Nutrition Therapy I	
7760:400	Nutrition Communication & Education Skills	
7760:412	Introduction to Regulatory Affairs	
7760:426	Human Nutrition	
7760:470	Food Industry: Analysis & Field Study	
7760:474	Cultural Dimensions of Food	
7760:476	Developments in Food Science	
7760:480	Community Nutrition I	
7760:487	Sports Nutrition	
Total Hours		9

## Social Work

### 7750: Social Work

Consistent with the mission of The University of Akron and the College of Health Professions, the mission of the undergraduate social work program is to prepare students for competent and effective generalist practice. The goals of the undergraduate social work program are to:

1. prepare students to integrate the knowledge, values and skills of the social work profession for competent and effective generalist practice with diverse client systems in various practice settings;
2. prepare students to identify the strengths and abilities of diverse client systems to foster empowerment toward social justice and systematic well-being; and
3. prepare students to utilize theoretically-based social work research, knowledge and critical thinking skills for effective and ethical social work practice.

The social work major is an accredited undergraduate professional program preparing students for entry-level practice positions in social service agencies employing Social Workers.

Elective courses are available in such areas as health, child welfare, mental health, grant writing, family service, corrections, etc. Certificate programs in Pan-American Studies, Addiction Services, Gerontology (Aging) and Victim Studies can be scheduled within the elective framework of the curriculum.

The Bachelor of Arts degree with a major in social work requires completion of 14 credits of a foreign language (Spanish is recommended; sign language as well as other foreign languages are accepted). The Bachelor of Arts in Social Work degree does not require a second language. Both degrees require 120 hours. Students who complete an associate degree program with a social services emphasis can complete either the B.A. or B.A./S.W. curriculum in social work by completing the required courses.

The Social Work Program at The University of Akron is fully accredited by the Council on Social Work Education.

Students wishing to major in social work must request an intercollege transfer to the College of Health Professions, School of Social Work from their current college. A 2.75 grade point average and 30 credit hours is required for admission to the School. Once admitted to the School, a separate admissions packet must be completed with the School in order to be admitted as a social work major in good standing.

- Addiction Services, Basic Certificate (p. 508)
- Addiction Services, Minor (p. 508)
- Social Work, BA (p. 508)
- Social Work, BAT (p. 511)
- The Resilient Child, Certificate (p. 514)

## Social Work (7750)

### 7750:230 Human Relations (3 Credits)

Examination of principles and methods which aid in understanding the individual's response to society and the relationship between society and individuals.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Critical Thinking

### 7750:240 Substance Use and Abuse (3 Credits)

Introduction to pharmacology of drugs of misuse; physiological factors of alcohol/drug-using behavior; effect of psychoactive drugs on the brain; intervention and treatment measures.

### 7750:244 Death & Dying (3 Credits)

Examination of a wide range of topics related to death and dying. Emphasis is placed on understanding and coping with death and dying.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

### 7750:260 Introduction to Addiction (3 Credits)

An overview of the continuum of use, abuse and dependency; theories of addiction; the impact of addiction on society; and the implications for professional practice.

### 7750:265 Women & Addiction (3 Credits)

Exploration of the social, psychological, physical and family aspects of addiction in women.

### 7750:268 Co-Occurring Disorders (3 Credits)

Key concepts and evidence-based practices in the provision of services to people suffering from substance abuse as well as mental illness and behavioral disorders.

**7750:269 Criminal Justice & Addiction (3 Credits)**

An introduction to the problems that exist with the treatment of the alcohol/drug offenders and issues relating to their transition back to the community.

**7750:270 Diversity and Social Work (3 Credits)**

Introductory course explores issues related to poverty and minority issues as they relate to at-risk populations.

**Gen Ed:** Tier 3 - Domestic Diversity

**7750:271 Behavioral Addictions (3 Credits)**

Introduction to understanding human behavior and physiological responses to compulsive behaviors other than dependencies on psychoactive chemicals. Several behavioral addictions will be explored.

**7750:275 Introduction to Social Work Practice (3 Credits)**

Introduces students to concepts, settings, and vulnerable populations related to the field of social work. Emphasis placed on purposes, values, ethics, knowledge, and skills that characterize the professional social worker. Provides an overview of theoretical and practical knowledge about the social work profession needed for entry levels of practice in social work.

**7750:276 Introduction to Social Welfare (3 Credits)**

Survey of field of social welfare; place of social work profession within human services institutions of United States. Introduction of basic concepts relating social welfare institutions and social work to society.

**7750:286 Addiction Services Internship (2 Credits)**

Prerequisite: Permission of instructor. Integrates counselor assistant experience with fundamental concepts and skills from academic studies. Students are required to complete 200 hours of supervised field experience.

**7750:300 The Resilient Child (3 Credits)**

Corequisite: 7750:301. Course content includes typical and atypical development in children affected with health related issues in a variety of clinical settings.

**7750:301 The Resilient Child Lab (1 Credit)**

Corequisite: 7750:300. Course content applies typical and atypical development in children affected with health related issues in a lab setting.

**7750:302 Assessment, Play and Therapeutic Interventions with Children (3 Credits)**

An overview of the theoretical framework of play and assessment of children's developmental and emotional needs. Therapeutic interventions and activities explored.

**7750:303 National Health and Safety Performance Standards in Child Care (1 Credit)**

Course content includes safety and performance standards for health care providers working with children in a clinical setting.

**7750:344 Death & Dying (3 Credits)**

Examination of a wide range of topics related to death and dying. Emphasis is placed on understanding and coping with death and dying.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

**7750:345 Death and Dying for Health Care Professionals (3 Credits)**

Examination of loss, death, and dying in health care professions. Theory-driven course emphasizing development of practical skills to address death-related issues and experiences.

**7750:349 Integrated Human Behavior and Health (3 Credits)**

Examination of the reciprocal nature of physical and mental health factors related to disease course/progression. Emphasis on application of theory-driven conceptualization and interventions.

**Gen Ed:** Tier 3 - Critical Thinking

**7750:401 Social Work Practice I (3 Credits)**

Prerequisite: Social Work major. Corequisite: 7750:405. Basic concepts and methods of Generalist social work practice, with an emphasis on understanding and working with individuals.

**7750:402 Social Work Practice II (3 Credits)**

Prerequisite: 7750:401, 7750:405; or permission of instructor. Concepts and methods of social work practice particularly relating to understanding and working with groups in various settings in our society.

**7750:403 Social Work Practice III (3 Credits)**

Prerequisite: 7750:401, 7750:405, or permission of instructor. Development of understanding and practice methods for utilization of community organization and social planning as social work process in assessing problems and developing program to meet needs.

**7750:404 Social Work Practice IV (3 Credits)**

Prerequisite: 7750:401 and 7750:405. Professional social work practice with families in social services; the dynamics of family systems, assessment of family function and dysfunction, professional helping processes.

**7750:405 Practice I Skills Lab (3 Credits)**

Prerequisites: 7750:270, 7750:276, 7750:427, 3100:103, 3700:100, 3750:100, 3850:100 and 3250:100 or 7750:200 or 2040:247; corequisite: 7750:401. Prepares students for beginning generalist social work practice and proves a context to apply and evaluate generic knowledge base, values, ethics, and skills common to practice with client systems.

**7750:411 Women's Issues in Social Work Practice (3 Credits)**

Prerequisite: 7750:401 or permission of instructor. Social work practice, knowledge and skill, social welfare institutions and social policy in relation to women's issues and concerns in the United States.

**7750:421 Field Experience Seminar I (2 Credits)**

Prerequisites: 7750:401 and permission of the instructor. Corequisite: 7750:493. The first of two consecutive courses that assists students in making the transition from classroom learning to experiential learning in the field practicum.

**7750:422 Field Experience Seminar II (2 Credits)**

Prerequisites: 7750:421 and 7750:493; Corequisite: 7750:494. The second of two consecutive courses, this course assists students in integrating, synthesizing, and applying classroom learning to field experiences and assignments.

**7750:425 Social Work Ethics (3 Credits)**

Prerequisite: Social Work major, permission of instructor. Social Worker's code of ethics as applied to practices, problems and issues in social work.

**7750:427 Human Behavior & Social Environment I (3 Credits)**

Social work perspective on human development across the life cycle. Human diversity approach consistent with the needs of social work students preparing for practice.

**7750:430 Human Behavior & Social Environment II (3 Credits)**

Prerequisites: Social Work major and 7750:427. Examination of larger social systems including families, groups, neighborhoods, and organizations. Focuses on the unique systemic characteristics of each system and its development.

**7750:442 Social Work Research (3 Credits)**

Prerequisite: Acceptance into the social work major. Overview of scientific inquiries in the research process as it applies to social work. Emphasis is placed on various social worker roles in relation to research. The focus will be on research concepts including contents on the evaluation of practice outcomes and data analyses.

**7750:445 Social Policy Analysis for Social Workers (3 Credits)**

Prerequisite: Social Work major, permission of instructor. Description, analysis and construction of social policy in social services; to understanding forces and processes which establish or change social policies, to predict consequences of social policies and to establish goals for social policy development; integrated into effective social work methodology.

**7750:450 Social Needs & Services: Aging (3 Credits)**

Prerequisite: 7750:401 or permission of instructor. Application of knowledge and principles of professional social work practice to understanding, development and provision of social services to meet needs of aging and later mature individuals, families and communities and institutions serving them and their relatives.

**7750:451 Social Work in Child Welfare (3 Credits)**

Prerequisite: 7750:401. In-depth exploration of structure and functioning of social services designed to help children, and of practice of social work in child-welfare settings. Consideration of supportive, supplementary and substitutive services.

**7750:452 Social Work in Mental Health (3 Credits)**

Prerequisite: 7750:401 or permission of instructor. Issues, organization, development and methodologies of current professional social work practice in mental-health settings.

**7750:454 Social Work in Juvenile Justice (3 Credits)**

Prerequisite: 7750:401. The theory and practice of social work in the juvenile justice systems of the United States. Traditional procedures and recent developments, prevention, diversion and community outreach, legal concerns, case management, institutional functioning.

**7750:455 Social Work Practice with African American Families (3 Credits)**

Prerequisite: 7750:401 or permission of instructor. Contemporary problems facing African American families; male-female relationships, single parent households, African American teens and elderly, public policy, theoretical models, explaining development of the African American family.

**7750:456 Social Work in Health Services (3 Credits)**

Prerequisite: 7750:401. Policies, programs and practice in health-care settings: short-term, intermediate and long-term hospitals, out-patient services, emergency services, clinics, visiting nurse services, nursing homes, pediatric services, self-help organizations.

**7750:459 Social Work with People with Developmental Disabilities (3 Credits)**

Prerequisite: Permission of instructor. Application of social work principles in the provision of social services to meet the needs of the mentally retarded and developmentally disabled and their families.

**7750:467 Addiction Screening, Assessment and Treatment Planning (3 Credits)**

Prerequisite: 7750:260. Overview of screening, diagnosis and assessment procedures in the addiction field, including review of the most commonly used testing instruments. Implication for treatment planning is explored.

**7750:468 Addiction Prevention, Treatment and Recovery (3 Credits)**

Evidence-based practices in addiction prevention, treatment, and recovery management. Treatment approaches include, but are not limited to, motivational interviewing, contingency management, cognitive behavioral therapy, and family approaches.

**7750:469 Group and Relationship Counseling in Addictions (3 Credits)**

Models and dynamics of groups and families struggling with substance use disorders. Emphasis on strategies and techniques to improve functioning and interpersonal relationships in the maintenance of recovery.

**7750:470 Law for Social Workers (3 Credits)**

Prerequisite: 7750:401. Basic terminology, theories, principles, organization and procedures of law will be explored along with the relationships between social work and law and comparisons of the theoretical bases of the two professions.

**7750:471 Crisis Intervention (3 Credits)**

This elective course focuses on knowledge/skills required by social workers dealing with people in crisis. Impact of crises on the human personality will be discussed.

**7750:472 Child Welfare II (3 Credits)**

This course is the second in a series of two child welfare courses. Child Welfare II, addresses the developmental and permanence needs of children in the welfare system.

**7750:473 Social Work with Adolescence (3 Credits)**

This course provides students with an in-depth knowledge of adolescent development and an understanding of how the biological, psychological, social, cultural, and spiritual aspects of an adolescent impact their overall functioning and quality of life issues.

**7750:475 Addiction & Social Work Practice (3 Credits)**

Prerequisite: 7750:401. Provides students with the essential knowledge and skill for successful social work practice with people involved in substance abuse.

**7750:480 Special Topics: Social Work & Social Welfare (1-3 Credits)**

Prerequisite: Permission of instructor. Analysis of current social work and social welfare theory and policy, settings, innovative interventions, and trends in delivery systems in relation to selected areas of concern. Topics and credits variable.

**7750:493 Field Experience: Social Agency I (3 Credits)**

Prerequisites: 7750:401, 7750:402, 7750:427, and permission of instructor. Corequisite: 7750:421. First of two consecutive courses of supervised internship in a social service setting. Facilitates acquisition of generalist practice skills. Student must receive permission to take the course with the Field Coordinator during early part of semester preceding enrollment. For senior social work majors.

**7750:494 Field Experience: Social Agency II (3 Credits)**

Prerequisites: 7750:493, 7750:421 and permission of instructor; corequisite: 7750:422. Second of two consecutive courses of supervised internship in a social service setting. Facilitates the continued acquisition of generalist practice skills. For senior social work majors only.

**7750:497 Individual Investigation in Social Work (1-3 Credits)**

Prerequisites: Permission and prearrangement with instructor. Individual readings, research or projects in area of interest in social welfare theory or institutional operations or in social work practice under guidance of social work faculty member. Preparation of report paper appropriate to nature of topic. For social work major.

**7750:499 Senior Honors Project in Social Work (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and approval of honors preceptor in department.

Open only to social work major enrolled in Honors Program. Independent study leading to completion of senior honors thesis or other original work resulting in writing of research paper in proper scholarly form, supervised by student's honors project adviser within the department.

## Addiction Services, Basic Certificate Certificate in Addiction Services - Basic (226106C)

The Addiction Services (Basic) Certificate is best suited for students looking to work in the helping professions. This certificate is intended for individuals who wish to enhance their knowledge of addiction and addiction treatment.

**Program Contact**

*John Ellis*

jellis@uakron.edu

330-972-5275

The following information has official approval of the **School of Social Work** and the **College of Health Professions**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Addiction Services - Basic" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record.

### Summary

Code	Title	Hours
Required Courses		13
Total Hours		13

### Required Courses

Code	Title	Hours
7750:260	Introduction to Addiction	3
7750:240	Substance Use and Abuse	3
7750:467	Addiction Screening, Assessment and Treatment Planning	3
7750:261	Addiction Treatment	4
Total Hours		13

## Addiction Services, Minor Minor in Addiction Services (226105M)

**Program Contact**

*John Ellis*

*Professor of Instruction, School of Social Work*

330-972-5275

jellis@uakron.edu

The following information has official approval of the **School of Social Work** and the **College of Health Professions**, but is intended only as

a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Addiction Services" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

### Summary

Code	Title	Hours
Required Courses		16
Electives		5
Total Hours		21

### Required Courses

Code	Title	Hours
7750:240	Substance Use and Abuse	3
7750:260	Introduction to Addiction	3
7750:467	Addiction Screening, Assessment and Treatment Planning	3
7750:261	Addiction Treatment	4
7750:263	Group Principles in Addiction	3
Total Hours		16

### Electives

Code	Title	Hours
<b>Complete 5 credits from the following courses:</b>		<b>5</b>
7750:265	Women & Addiction	
7750:268	Co-Occurring Disorders	
7750:269	Criminal Justice & Addiction	
7750:271	Behavioral Addictions	
Total Hours		5

## Social Work, BA

### Bachelor of Arts in Social Work (H75000BA)

More on the Social Work major (<https://www.uakron.edu/socialwork/>)

### Contact Information

School of Social Work, Polsky 411:

Michele Thornton

Pending Social Work Student Adviser

330-972-8195

mdt@uakron.edu

Dr. Timothy McCarragher

Director

330-972-5976

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Tina N. Johnson

Administrative Assistant  
330-972-5275  
tjohnson@uakron.edu (jcuddy@uakron.edu)

**\*\*\*Students pursuing a Social Work Degree desiring licensure as an LSW should be aware that felony convictions may negatively affect eligibility for licensure. To inquire whether individual situations affect licensure, write to:**

**Counselor, Social Worker & Marriage & Family Therapist Board**  
50 West Broad Street, Suite 1075  
Columbus, Ohio 43215-5919  
phone (614)466-0912 or email  
www.cswmft.ohio.gov/ (http://www.cswmft.ohio.gov/)\*\*

## Program Description

Consistent with the mission of The University of Akron and the College of Health Professions, the mission of the undergraduate social work program is to prepare students for competent and effective generalist practice. The goals of the undergraduate social work program are to: 1) prepare students to integrate the knowledge, values and skills of the social work profession for competent and effective generalist practice with diverse client systems in various practice settings; 2) prepare students to identify the strengths and abilities of diverse client systems to foster empowerment toward social justice and systematic well-being; and 3) prepare students to utilize theoretically-based social work research, knowledge and critical thinking skills for effective and ethical social work practice. The social work major is an accredited undergraduate professional program preparing students for entry-level practice positions in social service agencies employing Social Workers. Elective courses are available in such areas as health, child welfare, mental health, grant writing, family service, corrections, etc. Certificate programs in Pan-American Studies, Addiction Services, Gerontology (Aging), The Resilient Child, and Victim Studies can be scheduled within the elective framework of the curriculum.

The Bachelor of Arts degree with a major in social work requires completion of 14 credits of a foreign language (Spanish is recommended; sign language as well as other foreign languages are accepted). The Bachelor of Arts in Social Work degree does not require a second language. Both degrees require 120 hours. Students who complete an associate degree program with a social services emphasis can complete either the B.A. or B.A./S.W. curriculum in social work by completing the required courses.

Students wishing to major in social work must request an intercollege transfer to the College of Health Professions, School of Social Work from their current college. A 2.75 grade point average and 30 credit hours is required for admission to the School. Once admitted to the School, a separate admissions packet must be completed with the School in order to be admitted as a social work major in good standing.

## Job Description

Job titles include caseworker, family worker, group worker, community organization worker, outreach worker, rehabilitation worker, probation worker, community health worker, counselor, child welfare worker, employment community service worker, fair housing coordinator, human relations worker, consumer services worker, etc. Job titles are varied but all relate to human needs in the area of social-emotional adjustment, development or protection, in the context of the individual, family, group, or community. Opportunities exist in the public and non-public sectors.

A Bachelor's degree is preparation for an entry-level position and for graduate study in Social Work. A student is encouraged to consider graduate level study to further his/her career opportunities. The University of Akron now offers a Master's degree program at four campuses (Akron, Wayne, Lakewood, and Stark). **The Master of Social Work Program is fully accredited by the Council on Social Work Education.**

All Social Workers in the state of Ohio are licensed by the state.

## Salary Level

Depending on one's qualifications, experience, creativity and interests, there is a wide range of salaries possible at the entry-level, and upward mobility for the professional worker is fairly rapid. Entry-level salaries will range upward from \$20,000 to \$30,000 (BSW); \$40,000 to \$50,000 (MSW).

The following information has official approval of **The School of Social Work and The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Social Work Core	40
	Foreign Language Requirement	14
	Electives	6
	Additional Credits for Graduation *	26
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

Tier I: Academic Foundations		12
<i>Quantitative Reasoning: 3 credit hours</i>		
3470:250	Statistics for Everyday Life	
	or 3470:260 Basic Statistics	

*Speaking: 3 credit hours*

*Writing: 6 credit hours*

**Tier II: Disciplinary Areas** **22**

*Arts/Humanities: 9 credit hours*

*Natural Sciences: 7 credit hours*

3100:103 Natural Science: Biology

*Social Sciences: 6 credit hours*

3700:100 Government & Politics in the United States  
or 2040:242 American Urban Society

3750:100 Introduction to Psychology  
or 7750:230 Human Relations

3850:100 Introduction to Sociology

**Tier III: Tagged Courses**

*Select one class from each of the following subcategories:*

Complex Systems

Critical Thinking

7750:230 Human Relations

Domestic Diversity

7750:270 Diversity and Social Work

3850:100 Introduction to Sociology

Global Diversity

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## Social Work Core

Code	Title	Hours
7750:401	Social Work Practice I	3
7750:402	Social Work Practice II	3
7750:403	Social Work Practice III	3
7750:404	Social Work Practice IV	3
7750:405	Practice I Skills Lab	3
7750:421	Field Experience Seminar I	2
7750:422	Field Experience Seminar II	2
7750:425	Social Work Ethics	3
7750:430	Human Behavior & Social Environment II	3
7750:442	Social Work Research	3
7750:445	Social Policy Analysis for Social Workers	3
7750:452	Social Work in Mental Health	3
7750:493	Field Experience: Social Agency I	3
7750:494	Field Experience: Social Agency II	3
Total Hours		40

## Foreign Language Requirement

Code	Title	Hours
<b>The Bachelor of Arts degree with a major in Social Work requires completion of two years of a language requirement; Spanish is recommended.</b> <sup>1</sup>		<b>14</b>
Total Hours		14

<sup>1</sup> A student may also take the following sequence in Sign Language to meet the foreign language requirement:

- 7700:101 American Sign Language I;
- 7700:102 American Sign Language II;
- 7700:201 American Sign Language III;
- 7700:202 American Sign Language IV;
- 7700:222 Survey of Deaf Culture in America

## Electives

Code	Title	Hours
<b>Complete six credit hours:</b>		<b>6</b>
7750:xxx	Social Work Electives	
Total Hours		6

## Recommended Sequence

1st Year		Hours
<b>Fall Semester</b>		
3470:250	Statistics for Everyday Life <sup>1</sup>	3-4
or 3470:260	or Basic Statistics	
3700:100	Government & Politics in the United States <sup>1,3</sup>	3
or 2040:242	or American Urban Society	
3850:100	Introduction to Sociology <sup>1,3</sup>	3
7750:275	Introduction to Social Work Practice <sup>1</sup>	3
	English Composition I Requirement <sup>2</sup>	3
Hours		15-16

Spring Semester		Hours
3100:103	Natural Science: Biology <sup>1,4</sup>	4
3750:100	Introduction to Psychology <sup>1,3</sup>	3
or 7750:230	or Human Relations	
7750:270	Diversity and Social Work <sup>1</sup>	3
7750:276	Introduction to Social Welfare <sup>1</sup>	3
	English Composition II Requirement <sup>2</sup>	3
Hours		16

2nd Year		Hours
<b>Fall Semester</b>		
7750:427	Human Behavior & Social Environment I <sup>1</sup>	3
	Humanities Requirement	3
	Critical Thinking Requirement	3
	Speaking Requirement	3
Select one of the following:		3-4
	Beginning Language I <sup>5</sup>	
7700:101	American Sign Language I	
Hours		15-16

Spring Semester		Hours
	Natural Science Requirement <sup>4</sup>	3
	Arts Requirement	3
	Global Diversity Requirement	3
	Complex Systems Requirement	3
Select one of the following:		3-4
	Beginning Language II <sup>5</sup>	
7700:102	American Sign Language II	
Hours		15-16

**3rd Year**

**Fall Semester**

7750:401	Social Work Practice I	3
7750:405	Practice I Skills Lab	3
7750:442	Social Work Research	3
7750:xxx	Social Work Elective	3
Select one of the following:		3
	Intermediate Language I	
7700:201	American Sign Language III	
Hours		15

**Spring Semester**

7750:402	Social Work Practice II	3
7750:430	Human Behavior & Social Environment II	3
7750:445	Social Policy Analysis for Social Workers	3
7750:452	Social Work in Mental Health	3
Select one of the following:		3-5
	Intermediate Language II <sup>5</sup>	
7700:202 & 7700:222	American Sign Language IV and Survey of Deaf Culture in America	
Hours		15-17

**4th Year**

**Fall Semester**

7750:403	Social Work Practice III	3
7750:421	Field Experience Seminar I	2
7750:425	Social Work Ethics	3
7750:493	Field Experience: Social Agency I	3
7750:4xx	Social Work Elective	3
Hours		14

**Spring Semester**

7750:404	Social Work Practice IV	3
7750:422	Field Experience Seminar II	2
7750:494	Field Experience: Social Agency II	3
	Arts or Humanities Requirement	3
	General Electives <sup>6</sup>	4
Hours		15
Total Hours		120-125

<sup>1</sup> Preadmission Requirements – must be completed prior to admission into the Social Work major.

<sup>2</sup> While not required for transfer to the School of Social Work, the student must complete a General Education Quantitative Reasoning and English requirements *prior to full admission to the Social Work major*. Any General Education Quantitative Reasoning is accepted, but Statistics is recommended in preparation for Social Work Research I & II.

<sup>3</sup> 3850:100 Introduction to Sociology, 3700:100 Government & Politics in the United States or 2040:242 American Urban Society, and 3750:100 Introduction to Psychology or 7750:230 Human Relations, are requirements and will fulfill the Social Science requirement.

<sup>4</sup> Natural Science courses, including one human biology course, are required. This biology requirement can be met by completing 3100:103 Natural Science: Biology; the remainder of the requirement may be met by several courses. Consult your adviser and appropriate General Education guide.

<sup>5</sup> The Bachelor of Arts degree with a major in Social Work requires completion of two years of a language requirement; Spanish is recommended. A student may also take the following sequence in Sign Language to meet the foreign language requirement:

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- 7700:102 American Sign Language II;
- 7700:201 American Sign Language III;
- 7700:202 American Sign Language IV, (all sequential and 3 credits each); and
- 7700:222 Survey of Deaf Culture in America, 2 credits, no prerequisite.

<sup>6</sup> General Electives: These may be chosen from the following suggested disciplines: Anthropology (3230), Economics (3250), History (3400), Family & Consumer Sciences (7400), Political Science (3700), Psychology (3750), and Sociology (3850) or foreign language/ Sign Language coursework taken from the Bachelor of Arts with a major in Social Work degree.

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**Alert: By the end of your first 48 credit hours attempted, you should have completed your General Education English, Quantitative Reasoning, and Oral Communication (Speech) requirements**

## Social Work, BAT Bachelor of Arts in Social Work (H75000BAT)

More on the Social Work major (<https://www.uakron.edu/socialwork/>)

### Contact Information

School of Social Work, Polsky 411:

Michele Thornton  
Pending Social Work Student Adviser  
330-972-8195  
mdt@uakron.edu

Dr. Timothy McCarragher  
Director  
330-972-5976  
mccarra@uakron.edu

Tina N. Johnson  
Administrative Assistant  
330-972-5275  
tjohnson@uakron.edu (jcuddy@uakron.edu)

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Code	Title	Hours
	General Education Requirements (p. 33)	34
	Social Work Core	40
	Electives	6
	Additional Credits for Graduation *	40
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

## Recommended General Education Courses

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Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

<b>Tier I: Academic Foundations</b>	<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>	
3470:250	Statistics for Everyday Life
	or 3470:260 Basic Statistics
<i>Speaking: 3 credit hours</i>	
<i>Writing: 6 credit hours</i>	
<b>Tier II: Disciplinary Areas</b>	<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>	
<i>Natural Sciences: 7 credit hours</i>	
3100:103	Natural Science: Biology
<i>Social Sciences: 6 credit hours</i>	
3700:100	Government & Politics in the United States
	or 2040:242 American Urban Society



3750:100	Introduction to Psychology	
or 7750:230	Human Relations	
3850:100	Introduction to Sociology	
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
7750:230	Human Relations	
Domestic Diversity		
7750:270	Diversity and Social Work	
3850:100	Introduction to Sociology	
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## Social Work Core

Code	Title	Hours
7750:401	Social Work Practice I	3
7750:402	Social Work Practice II	3
7750:403	Social Work Practice III	3
7750:404	Social Work Practice IV	3
7750:405	Practice I Skills Lab	3
7750:421	Field Experience Seminar I	2
7750:422	Field Experience Seminar II	2
7750:425	Social Work Ethics	3
7750:430	Human Behavior & Social Environment II	3
7750:442	Social Work Research	3
7750:445	Social Policy Analysis for Social Workers	3
7750:452	Social Work in Mental Health	3
7750:493	Field Experience: Social Agency I	3
7750:494	Field Experience: Social Agency II	3
Total Hours		40

## Electives

Code	Title	Hours
<b>Complete six credit hours:</b>		<b>6</b>
7750:xxx	Social Work Electives	
Total Hours		6

## Recommended Sequence

1st Year		Hours
Fall Semester		
3470:250	Statistics for Everyday Life <sup>1</sup>	3-4
or 3470:260	or Basic Statistics	
3700:100	Government & Politics in the United States <sup>1,3</sup>	3
or 2040:242	or American Urban Society	
3850:100	Introduction to Sociology <sup>1,3</sup>	3
7750:275	Introduction to Social Work Practice <sup>1</sup>	3
	English Composition I Requirement <sup>2</sup>	3
Hours		15-16

Spring Semester		
3100:103	Natural Science: Biology <sup>1,4</sup>	4
3750:100	Introduction to Psychology <sup>1,3</sup>	3
or 7750:230	or Human Relations	
7750:270	Diversity and Social Work <sup>1</sup>	3
7750:276	Introduction to Social Welfare <sup>1</sup>	3
	English Composition II Requirement <sup>2</sup>	3
Hours		16

2nd Year		
Fall Semester		
7750:427	Human Behavior & Social Environment I <sup>1</sup>	3
	Humanities Requirement	3
	Critical Thinking Requirement	3
	Speaking Requirement	3
Hours		12

Spring Semester		
	Natural Science Requirement <sup>4</sup>	3
	Arts Requirement	3
	Global Diversity Requirement	3
	Complex Systems Requirement	3
Hours		12

3rd Year		
Fall Semester		
7750:401	Social Work Practice I	3
7750:405	Practice I Skills Lab	3
7750:442	Social Work Research	3
7750:xxx	Social Work Elective	3
	General Electives	5
Hours		17

Spring Semester		
7750:402	Social Work Practice II	3
7750:430	Human Behavior & Social Environment II	3
7750:445	Social Policy Analysis for Social Workers	3
7750:452	Social Work in Mental Health	3
	General Electives	5
Hours		17

4th Year		
Fall Semester		
7750:403	Social Work Practice III	3
7750:421	Field Experience Seminar I	2
7750:425	Social Work Ethics	3
7750:493	Field Experience: Social Agency I	3
7750:4xx	Social Work Elective	3
Hours		14

Spring Semester		
7750:404	Social Work Practice IV	3
7750:422	Field Experience Seminar II	2
7750:494	Field Experience: Social Agency II	3
	Arts or Humanities Requirement	3

General Electives <sup>6</sup>	6-5
Hours	17-16
Total Hours	120

- <sup>1</sup> Preadmission Requirements – must be completed prior to admission into the Social Work major.
- <sup>2</sup> While not required for transfer to the School of Social Work, the student must complete a General Education Quantitative Reasoning and English requirements *prior to full admission to the Social Work major*. Any General Education Quantitative Reasoning is accepted, but Statistics is recommended in preparation for Social Work Research I & II.
- <sup>3</sup> 3850:100 Introduction to Sociology, 3700:100 Government & Politics in the United States or 2040:242 American Urban Society, and 3750:100 Introduction to Psychology or 7750:230 Human Relations, are requirements and will fulfill the Social Science requirement.
- <sup>4</sup> Natural Science courses, including one human biology course, are required. This biology requirement can be met by completing 3100:103 Natural Science: Biology; the remainder of the requirement may be met by several courses. Consult your adviser and appropriate General Education guide.
- <sup>5</sup> General Electives: These may be chosen from the following suggested disciplines: Anthropology (3230), Economics (3250), History (3400), Family & Consumer Sciences (7400), Political Science (3700), Psychology (3750), and Sociology (3850) or foreign language/ Sign Language coursework taken from the Bachelor of Arts with a major in Social Work degree.

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**Alert: By the end of your first 48 credit hours attempted, you should have completed your General Education English, Quantitative Reasoning, and Oral Communication (Speech) requirements**

## The Resilient Child, Certificate

### Certificate in The Resilient Child (H70010C)

#### Program Contact

Sophia Kraus  
School of Social Work  
330-972-8211

The following information has official approval of the **School of Social Work** and the **College of Health Professions**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in The Resilient Child" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record.

## Summary

Code	Title	Hours
Core Requirements		8
Electives		6
Total Hours		14

## Core Requirements

Code	Title	Hours
7750:300	The Resilient Child	3
7750:301	The Resilient Child Lab	1
7750:302	Assessment, Play and Therapeutic Interventions with Children	3
7750:303	National Health and Safety Performance Standards in Child Care	1
Total Hours		8

## Electives

Code	Title	Hours
<b>Select 6 credits of the following:</b>		<b>6</b>
3750:100	Introduction to Psychology	
3750:430	Psychological Disorders of Children	
3760:270	Theory & Guidance of Play	
3760:360	Parent-Child Relations	
3850:100	Introduction to Sociology	
3850:340	The Family	
3850:342	Sociology of Health & Illness	
5610:225	Introduction to Exceptionalities	
5610:460	Family Dynamics & Communication in the Educational Process	
7700:110	Introduction to Disorders of Communications	
7700:230	Language Science & Acquisition	
7700:452	Child, Illness and Loss	
7700:454	Child in the Hospital	
7700:484	Hospital Settings, Children and Families	
7750:276	Introduction to Social Welfare	
7750:451	Social Work in Child Welfare	
7750:456	Social Work in Health Services	
7760:132	Early Childhood Nutrition	
7760:133	Nutrition Fundamentals	
8200:350	Nursing of the Childbearing Family	
8200:410	Nursing of Families with Children	
Total Hours		6

## Speech-Language Pathology and Audiology

### 7700: Speech-Language Pathology and Audiology

The program in Speech-Language Pathology of The University of Akron is accredited by the Council on Academic Accreditation of The American Speech-Language-Hearing Association. The Doctor of Audiology program at the University of Akron, in association with the Northeast Ohio

Audiology Consortium, is also accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association.

The School of Speech-Language Pathology and Audiology offers an undergraduate (preprofessional) program of academic training in speech-language pathology and audiology. Audiologists are hearing care specialists for evaluation and treatment of individuals with hearing and balance disorders. Scope of practice includes conducting hearing assessments, selecting and fitting hearing aids/assistive listening devices, programming cochlear implants, testing balance, and counseling regarding hearing loss. Speech-language pathologists work with children and adults with language, voice, fluency, articulatory and phonologic, cognitive and swallowing disorders. They provide assessment and treatment for these disorders as well as working in prevention of them.

Course work focuses on the evaluation and treatment of the many disordered communication processes. Students will also take: 7700:446 Observation and Clinical Techniques. This course includes accumulation of a minimum of 25 hours of supervised observation, as required for graduate study by the American Speech-Language-Hearing Association. The preprofessional undergraduate program prepares students to pursue a master's degree, which is required for employment and licensure as a speech-language pathologist. A doctoral degree (Au.D.) is required for licensure as an audiologist.

Typical work settings for speech-language pathologists and audiologists include: schools, hospitals, clinics, private practice, physicians' offices, industry and universities.

- Manual Communication, Certificate (p. 516)
- Speech Language Pathology & Audiology, BA (p. 517)
- Speech Language Pathology & Audiology, BAT (p. 520)

## Speech-Language Pathology and Audiology (7700)

### 7700:101 American Sign Language I (3 Credits)

Introduction to American Sign Language: vocabulary building, beginning development of fingerspelling skills, receptive/expressive conversational skills.

### 7700:102 American Sign Language II (3 Credits)

Prerequisite: 7700:101 or equivalent. Continued development of skills in American Sign Language: vocabulary building, further development of fingerspelling skills, receptive/expressive conversational skills.

### 7700:110 Introduction to Disorders of Communications (3 Credits)

Overview of various types of speech disorders; their incidence, etiology and characteristics. Basic concepts and principles underlying speech pathology.

### 7700:201 American Sign Language III (3 Credits)

Prerequisite: 7700:102 or equivalent. Continued development of skills in American Sign Language: vocabulary building, fingerspelling skills, receptive/expressive conversational skills, and linguistic features of ASL.

### 7700:202 American Sign Language IV (3 Credits)

Prerequisite: 7700:201. Further fluency development of expressive/receptive communication, fingerspelling, and linguistic features of ASL.

### 7700:210 Introduction to Clinical Phonetics (4 Credits)

Introduction to International Phonetic Alphabet. Transcription of normal speech. Overview of articulatory and acoustic phonetics. Introduction to distinctive features.

### 7700:215 Introduction to Hearing and Speech Science (4 Credits)

Introductory course covering the human hearing system and acoustics of hearing as well as principles involved in the production, transmission, and reception of the speech signal.

### 7700:222 Survey of Deaf Culture in America (2 Credits)

The deaf experience in America including historical, educational, legal, social, and occupational developments.

### 7700:230 Language Science & Acquisition (4 Credits)

An introduction to language science and the study of the language acquisition process. The characteristics and explanations of language development will be presented.

### 7700:245 First Responders to the Deaf Community (4 Credits)

Prerequisites: Completion of 7700:201 with C or better. This course is required for the HSHS Manual Communication Certificate. It will emphasize ASL skills practical to first responders' needs.

### 7700:295 Direct Experiences in the Hospital (3 Credits)

Prerequisite: Permission of advisor. Individual learning experiences for students with patients, their families and the hospital personnel in various hospital settings under the direction of hospital and University staff.

### 7700:321 Articulatory & Phonologic Disorders (4 Credits)

Prerequisites: 7700:110, 7700:210. Study of disorders of articulation/phonology, including normal phonological developments, and assessment and remediation of phonological disorders.

### 7700:330 Language Disorders (4 Credits)

Prerequisite: 7700:230. Etiology, identification, evaluation, intervention, remediation of symbolic, cognitive, interpersonal language disorders of children. Disorders viewed as correlates or sequelae of central nervous system dysfunction or emotional disturbance.

### 7700:335 Principles of Audiology (4 Credits)

Prerequisite: 7700:215. Introduction to basic audiometric tests, principles of speech audiometry, masking, and impedance audiometry, "test battery" approach.

### 7700:345 Audiologic Treatment (4 Credits)

Prerequisite: 7700:215. Introduction to philosophy and methods of aural rehabilitation for children and adults. Includes methods of speech reading, auditory training, speech conservation, hearing aid use and combined visual and auditory approaches.

### 7700:365 Anatomy & Physiology of Speech & Hearing (3 Credits)

Prerequisites: 3100:200, 3100:201, 3100:202 and 3100:203. Study of the anatomy and physiology of organs directly and indirectly responsible for production of speech and perception of acoustical signals.

### 7700:366 Anatomy & Physiology Laboratory (1 Credit)

Corequisites: 7700:365. Laboratory to accompany lecture, includes hands-on experience with a variety of laboratory materials, primarily models and virtual dissection.

### 7700:401 Professional Practice and Communications in Child Life (1 Credit)

Provide knowledge in the area of child life professional practice. Exploration of the tenets of the child life profession and identify essential professional concepts and attributes.

### 7700:403 Professional Practice and Communications in Child Life (3 Credits)

Provide the knowledge of child life professional practice, standards of clinical practice, competencies and ethics. Skills related to therapeutic communication with patients, families and staff will be explored and practiced.

**7700:422 Organic Disorders of Communication (4 Credits)**

Prerequisites: 7700:230 and 7700:365. Surveys communication disorders that accompany acquired neurological impairments and neurodevelopmental syndromes. Introduces neurological models, classification systems, diagnostic and treatment procedures.

**7700:430 Aspects of Normal Language Development (3 Credits)**

(Not open to speech-language pathology and audiology majors) Introduction to acquisition and development of comprehension and production of language phonologically, semantically and syntactically. Relates language acquisition to perceptual development of child and looks at function of language in individual, family and school.

**7700:445 Multicultural Considerations for Audiologists & Speech-Language Pathologists (3 Credits)**

Prerequisites: 7700:110 or graduate standing. This course introduces the multicultural considerations faced by audiologists and speech-language pathologists providing services to families and individuals with communication disorders.

**7700:446 Observation and Clinical Techniques (4 Credits)**

Prerequisites: 7700:110, 700:210, 7700:215, and 7700:230. Introduction to concepts and processes of clinical practice in speech-language pathology and audiology. Includes clinical observation and case study.

**7700:452 Child, Illness and Loss (3 Credits)**

Prerequisite: senior level standing. This course examines the phenomena of illness, loss and bereavement in modern society with a special emphasis on children and families.

**7700:453 Facilitating Support Groups (3 Credits)**

Prerequisite: senior level standing. Theories, strategies and skills needed to facilitate support groups for children and for adults are studied using a variety of approaches including participation in a support group.

**7700:454 Child in the Hospital (6 Credits)**

Prerequisite: 3760:265, comparable course or permission of instructor. Seminar dealing with special needs and problems of hospitalized/ill child and family. Literature related to effects, separation, illness and stress. Examination of strategies for coping.

**7700:455 Practicum Experience in Child-Life Program (3 Credits)**

Prerequisite: 7700:454. Field experience in a child-life program and classroom activities including critical analysis of a currently functioning program and program administration.

**7700:480 Seminar in Speech-Language Pathology and/or Audiology (2 Credits)**

Prerequisite: senior standing. Provides a vehicle for detailed study and discussion of various communicative disorders.

**7700:481 Special Projects: Speech-Language Pathology & Audiology (1-3 Credits)**

(May be repeated for a total of four credits) Prerequisite: Permission of instructor. Individual or group projects related to any of the problems of communicative disorders.

**7700:484 Hospital Settings, Children and Families (5 Credits)**

Prerequisite: 3760:265, comparable course or permission of instructor. Focuses on hospital as a major social institution; introduces procedures and functions of the hospital; roles played by various hospital personnel plus cursory knowledge of medical terminology, common childhood diseases, illnesses and injuries.

**7700:485 Teaching & Learning Strategies in Speech-Language Pathology (2 Credits)**

Current practice related to clinical intervention designed for individuals with developmental disabilities. Explores the use of the natural environment and the computer as intervention tools.

**7700:494 Internship: Guided Experiences in Child Life Program (8 Credits)**

Prerequisite: 7700:455. Field experience in a child-life program at an approved pediatric facility under the supervision of Child Life Specialists.

**7700:496 Senior Honors Project: Speech-Language Pathology & Audiology (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: enrollment in the Honors Program, senior standing and major in speech-language pathology and audiology.

## Manual Communication, Certificate

### Certificate in Manual Communication (H70007C)

**Program Contact**

Lori Palmer  
School of Speech-language Pathology and Audiology  
330-972-8187

The following information has official approval of the **School of Speech-Language Pathology & Audiology** and the **College of Health Professions**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Manual Communication" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. This Certificate is open to undergraduate majors in any discipline as well as persons with a baccalaureate degree from the University or any other accredited institution. This certificate may also be earned independent of earning a degree.

## Summary

Code	Title	Hours
Required Courses		18
Total Hours		18

## Required Courses

Code	Title	Hours
7700:101	American Sign Language I	3
7700:102	American Sign Language II	3
7700:201	American Sign Language III	3
7700:202	American Sign Language IV	3
7700:222	Survey of Deaf Culture in America	2
7700:245	First Responders to the Deaf Community	4
Total Hours		18

# Speech Language Pathology & Audiology, BA

## Bachelor of Arts in Speech Language Pathology & Audiology (H70101BA)

More on the Speech Language Pathology & Audiology major (<https://www.uakron.edu/sslpa/undergradprog.dot>)

The traditional undergraduate speech-language pathology and audiology program provides the undergraduate degree needed to apply for graduate school in either speech-language pathology or audiology.

### Contact Information

School of Speech-Language Pathology and Audiology  
Polsky Building 181  
(330) 972-6803  
<http://www.uakron.edu/sslpa/>

#### Students are encouraged to contact:

Mrs. Jenna Day  
Undergraduate Coordinator  
School of Speech-Language Pathology and Audiology  
E-mail: [jday@uakron.edu](mailto:jday@uakron.edu)

Current University of Akron students may schedule an advising appointment with the College of Health Professions by visiting the online advising scheduling system here. (<https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbooknow.appointment-plus.com%2Fy6zr0zgx%2F&data=02%7C01%7Csjj%40uakron.edu%7C39b827e860054854f8cf08d84525fc10%7Ce8575dedd7f94ecea4aa0b32991aeedd%7C0%7C0%7C637335376742975487&sdata=Wuqc%2BJ5ho0kqTYvnX1GSX%2BkIZ%2ByUeb%2FFRXTxtfcEhIk%3D&reserved=0>)

### Speech Language Pathologist

- Speech-language pathologists specialize in communication and swallowing disabilities of all types and work with people from infants through the elderly.
- Speech-language pathologists diagnose and treat individuals with speech or language, swallowing, fluency, deafness and hearing loss, voice, and cognitive-communication disabilities due to brain injury or stroke.
- Speech-language pathologists also prescribe assistive technology for speaking, reading, and writing.
- The undergraduate curriculum provides a broad background in normal speech, hearing, and language development, and an introduction to the specific communication disorders and their management.
- With an undergraduate degree, some students enter sales or case management in various health-related businesses.

**Students must earn a Masters Degree to become a speech-language pathologist; the program takes two years to complete.**

Graduate students take classes and participate in clinical preparation which includes a supervised clinic on campus as well as community-based externships in settings such as hospitals, nursing homes, schools, rehabilitation facilities, clinics and private practice. The University of

Akron also offers a Masters Degree in Speech-Language Pathology. For more information, go to <https://www.uakron.edu/sslpa/gslpp/>.

### Job Outlook

Upon obtaining certification from the American Speech-Language and Hearing Association and a license from the State of Ohio Board of Speech-Language Pathology and Audiology, jobs are available in many settings. Employment settings include hospitals, rehabilitation facilities, nursing homes, home health agencies, early intervention programs, schools, clinics and private practices. Speech-language pathology is listed among the fastest growing occupations by the United States Department of Labor. The average starting salary for a speech-language pathologist is \$48,000 for an 11 to 12 month contract and \$42,000 for a nine month, school-based contract. For more information, go to [www.asha.org/public/speech](http://www.asha.org/public/speech) (<http://www.asha.org/public/speech/>).

### Audiologist

- Audiologists are hearing care specialists who evaluate and treat individuals with hearing and balance disorders.
- Audiologists are to hearing as Optometrists are to vision.
- Audiologists diagnose hearing and balance disorders in infants, children and adults, and provide treatment including fitting hearing aids, dispensing assistive listening devices, mapping cochlear implants, and providing audiologic rehabilitation for children and adults.
- Audiologists work in a variety of health care settings such as private practices, hospitals, rehabilitation centers, schools, and physician's offices.

#### To practice, Audiologists must earn a Doctor of Audiology degree.

The Doctor of Audiology degree is a 4 year post baccalaureate program that is offered through The University of Akron in conjunction with Kent State University and the Cleveland Clinic Foundation.

Graduate students take classes as well as participate in supervised clinical experiences, which take place in the campus clinic and in a wide variety of external sites.

### Job Outlook

Audiology is listed among the fastest growing occupations by the United States Department of Labor. Average starting salaries for audiologists is \$51,000. For more information go to [www.asha.org/public/hearing/gen\\_audiology.htm](http://www.asha.org/public/hearing/gen_audiology.htm) ([http://www.asha.org/public/hearing/gen\\_audiology.htm](http://www.asha.org/public/hearing/gen_audiology.htm)) or [www.audiology.org](http://www.audiology.org) (<http://www.audiology.org>).

The following information has official approval of **The School of Speech Language Pathology and Audiology** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Below is an example sequence of courses including The University of Akron General Education Requirements as of January 1, 2020, School of

Speech-Language Pathology and Audiology Degree requirements as of January 1, 2019, and ASHA-CCC Standards as of January 1, 2020.

## Requirements Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Core Courses		46
Foreign Language Requirement		14
ASHA Standards IV A & B <sup>1</sup>		17
Additional Credits for Graduation <sup>2</sup>		9
Total Hours		120

<sup>1</sup> This is a set of recommended courses. It is highly recommended that all students need to meet with the SSLPA academic advisor once admitted into the program.

<sup>2</sup> Bachelor's degrees require a minimum of 120 credit hours for graduation.

## Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
<b>Tier I: Academic Foundations</b>		<b>12</b>

*Quantitative Reasoning: 3 credit hours*

3470:250 Statistics for Everyday Life

*Speaking: 3 credit hours*

7600:106 Effective Oral Communication

*Writing: 6 credit hours*

3300:111 English Composition I

2020:222 Technical Report Writing

**Tier II: Disciplinary Areas** **22**

*Arts/Humanities: 9 credit hours*

3600:120 Introduction to Ethics

3600:150 Critical Thinking

7100:100 Survey of History of Art I

7500:201 Exploring Music: Bach to Rock

*Natural Sciences: 7 credit hours*

3100:200 Human Anatomy & Physiology I

3100:202 Human Anatomy & Physiology II

3150:101 Chemistry for Everyone

or 3650:133 Music, Sound & Physics

*Social Sciences: 6 credit hours*

2040:243 Contemporary Global Issues

7750:244 Death & Dying

3750:100 Introduction to Psychology

### Tier III: Tagged Courses

*Select one class from each of the following subcategories:*

Complex Systems

2040:241 Technology & Human Values

Critical Thinking

3600:120 Introduction to Ethics

3600:150 Critical Thinking

7100:100 Survey of History of Art I

Domestic Diversity

7750:244 Death & Dying

Global Diversity

2040:243 Contemporary Global Issues

*Review the General Education Requirements page for detailed course listings.*

Total Hours 34

## Core Courses

Code	Title	Hours
7700:110	Introduction to Disorders of Communications	3
7700:210	Introduction to Clinical Phonetics	4
7700:215	Introduction to Hearing and Speech Science	4
7700:230	Language Science & Acquisition	4
7700:321	Articulatory & Phonologic Disorders	4
7700:330	Language Disorders	4
7700:335	Principles of Audiology	4
7700:345	Audiologic Treatment	4
7700:365	Anatomy & Physiology of Speech & Hearing	3
7700:366	Anatomy & Physiology Laboratory	1
7700:422	Organic Disorders of Communication	4
7700:445	Multicultural Considerations for Audiologists & Speech-Language Pathologists	3
7700:446	Observation and Clinical Techniques	4
Total Hours		46

## Foreign Language Requirement

Code	Title	Hours
<i>(ASL, German, Italian, Spanish, or French)</i>		
7700:222	Survey of Deaf Culture in America	2
7700:101	American Sign Language I	3
7700:102	American Sign Language II	3
7700:201	American Sign Language III	3
7700:202	American Sign Language IV	3
Total Hours		14

## ASHA Standards IV A & B

Code	Title	Hours
<i>The following is a recommended course list. It is highly recommended that all students need to meet with the SSLPA academic advisor once admitted into the program.</i>		
3470:250	Statistics for Everyday Life	4
3100:201	Human Anatomy & Physiology Laboratory I	1

3100:203	Human Anatomy & Physiology Laboratory II	1
3150:101	Chemistry for Everyone	4
or 3650:133	Music, Sound & Physics	
3750:100	Introduction to Psychology	3
3750:230	Developmental Psychology	4
Total Hours		17

## Recommended Sequence

### 1st Year

Fall Semester		Hours
3100:200	Human Anatomy & Physiology I <sup>2</sup>	3
3100:201	Human Anatomy & Physiology Laboratory I <sup>2</sup>	1
3300:111	English Composition I	3
3750:100	Introduction to Psychology <sup>2</sup>	3
7600:105	Introduction to Public Speaking	3
or 7600:106	or Effective Oral Communication	
7700:110	Introduction to Disorders of Communications <sup>2</sup>	3
Hours		16

### Spring Semester

2040:344	Death & Dying	3
3100:202	Human Anatomy & Physiology II <sup>2</sup>	3
3100:203	Human Anatomy & Physiology Laboratory II <sup>2</sup>	1
3470:250	Statistics for Everyday Life <sup>2</sup>	3-4
or 3470:260	or Basic Statistics	
3750:230	Developmental Psychology	4
Hours		14-15

### 2nd Year

#### Fall Semester

2020:222	Technical Report Writing	3
7700:101	American Sign Language I <sup>1</sup>	3
7700:210	Introduction to Clinical Phonetics	4
7700:230	Language Science & Acquisition	4
	Elective	1
Hours		15

#### Spring Semester

7700:102	American Sign Language II <sup>1</sup>	3
7700:215	Introduction to Hearing and Speech Science	4
7700:321	Articulatory & Phonologic Disorders	4
7700:330	Language Disorders	4
Hours		15

### 3rd Year

#### Fall Semester

7700:201	American Sign Language III <sup>1</sup>	3
7700:335	Principles of Audiology	4
7700:365	Anatomy & Physiology of Speech & Hearing	3
7700:366	Anatomy & Physiology Laboratory	1
	Arts Requirement	3
Hours		14

### Spring Semester

3150:101	Chemistry for Everyone	4
or 3650:133	or Music, Sound & Physics	
7700:202	American Sign Language IV <sup>1</sup>	3
7700:222	Survey of Deaf Culture in America	2
7700:345	Audiologic Treatment	4
	Complex Systems Requirement	3
Hours		16

### 4th Year

#### Fall Semester

7700:245	First Responders to the Deaf Community	4
7700:446	Observation and Clinical Techniques	4
	Arts or Humanities Requirement	3
	Critical Thinking Requirement	3
Hours		14

#### Spring Semester

7700:422	Organic Disorders of Communication	4
7700:445	Multicultural Considerations for Audiologists & Speech-Language Pathologists	3
	Global Diversity Requirement	3
	Natural Science Requirement	3
	Electives	3-2
Hours		16-15
Total Hours		120

<sup>1</sup> **The Bachelor of Arts (BA)** requires 14 credits of a foreign language: Spanish, French, German, Italian, or American Sign Language. A student may take courses from the Department of Modern Languages or the following American Sign Language courses: ASL 7700:101 (<https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbulletin.uakron.edu%2Fsearch%2F%3FP%3D7700%253A101&data=02%7C01%7Csjj%40uakron.edu%7C2ce14868b52f43ab4f9d08d8071a786f%7Ce8575dedd7f94ecea4aa0b32991aeedd%7C0%7C0%7C637267157865380806&sdata=05%2FJkNqVl%2FbAVHzcQrOekkVKwa7MsSAe1F2xRmcjolg%3D&reserved=0>) American Sign Language I, 7700:102 (<https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbulletin.uakron.edu%2Fsearch%2F%3FP%3D7700%253A102&data=02%7C01%7Csjj%40uakron.edu%7C2ce14868b52f43ab4f9d08d8071a786f%7Ce8575dedd7f94ecea4aa0b32991aeedd%7C0%7C0%7C637267157865380806&sdata=OPauCdtyelR6xup32sDXk%2BXy8WmhibFPQs%2FphFrwGg0%3D&reserved=0>) American Sign Language II, 7700:201 (<https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbulletin.uakron.edu%2Fsearch%2F%3FP%3D7700%253A201&data=02%7C01%7Csjj%40uakron.edu%7C2ce14868b52f43ab4f9d08d8071a786f%7Ce8575dedd7f94ecea4aa0b32991aeedd%7C0%7C0%7C637267157865390802&sdata=eKK%2FTQ9UiG5r6sp3DI0PC%2B8Yr%2F0xPI%2B2bac3zbKK2nl%3D&reserved=0>) American Sign Language III, 7700:202 (<https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbulletin.uakron.edu%2Fsearch%2F%3FP%3D7700%253A202&data=02%7C01%7Csjj%40uakron.edu%7C2ce14868b52f43ab4f9d08d8071a786f%7Ce8575dedd7f94ecea4aa0b32991aeedd%7C0%7C0%7C637267157865390802&sdata=tX8z%2BKy76C%2B9UaWicSuHy7rzusMzfNn7mpch1CFZwJU%3D&reserved=0>) American Sign Language IV, 7700:222 (<https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbulletin.uakron.edu%2Fsearch%2F%3FP%3D7700%253A222&data=02%7C01%7Csjj%40uakron.edu%7C2ce14868b52f43ab4f9d08d8071a786f%7Ce8575dedd7f94ecea4aa0b32991aeedd%7C0%7C0%7C637267157865400794&sdata=dRO%2BUJ7qDbRsDyZGSeihTR1Dx9g9HTFzFuyFklpJ1Js%3D&reserved=0>) Survey of Deaf Culture in America. The major also offers an option with no foreign language. **The Bachelor of Arts in Speech-Language Pathology & Audiology (BAT)** does **not** require a foreign language. Instead the student completes 14 credits of coursework from schools within the College of Health Professions. Recommended areas include: ChildLife, Nutrition/Dietetics, Nursing, SocialWork, Applied Science and Technology, Psychology, or Sociology.

<sup>2</sup> Pre-admission courses and 30 credits with a 3.00 GPA is required to be admitted into the program.

#### Alert:

1. By the end of your first 48 credit hours attempted, you should have completed your General Education English, Math, and Oral Communication (Speech) requirements;

2. By the end of your first 48 credit hours attempted, you should have declared a major and transferred to (been accepted by) a degree granting college at The University of Akron.

## Speech Language Pathology & Audiology, BAT

### Bachelor of Arts in Speech Language Pathology & Audiology (H70101BAT)

More on the Speech Language Pathology & Audiology major (<https://www.uakron.edu/sslpa/undergradprog.dot>)

The traditional undergraduate speech-language pathology and audiology program provides the undergraduate degree needed to apply for graduate school in either speech-language pathology or audiology.

### Contact Information

School of Speech-Language Pathology and Audiology  
Polsky Building 181  
(330) 972-6803  
<http://www.uakron.edu/sslpa/>

#### Students are encouraged to contact:

Mrs. Jenna Day  
Undergraduate Coordinator  
School of Speech-Language Pathology and Audiology  
E-mail: [jday@uakron.edu](mailto:jday@uakron.edu)

Current University of Akron students may schedule an advising appointment with the College of Health Professions by visiting the online advising scheduling system here. (<https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbooknow.appointment-plus.com%2Fy6zr0zgx%2F&data=02%7C01%7Csjj%40uakron.edu%7C39b827e860054854f8cf08d84525fc10%7Ce8575dedd7f94ecea4aa0b32991aeedd%7C0%7C0%7C637335376742975487&sdata=Wuqc%2BJ5ho0kqTYvnX1GSX%2BklZ%2ByUeb%2FFRXTxtfcEhIk%3D&reserved=0>)

### Speech Language Pathologist

- Speech-language pathologists specialize in communication and swallowing disabilities of all types and work with people from infants through the elderly.
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- The undergraduate curriculum provides a broad background in normal speech, hearing, and language development, and an introduction to the specific communication disorders and their management.
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**Students must earn a Masters Degree to become a speech-language pathologist; the program takes two years to complete.**



Graduate students take classes and participate in clinical preparation which includes a supervised clinic on campus as well as community-based externships in settings such as hospitals, nursing homes, schools, rehabilitation facilities, clinics and private practice. The University of Akron also offers a Masters Degree in Speech-Language Pathology. For more information, go to <https://www.uakron.edu/sslpa/gslpp/>.

## Job Outlook

Upon obtaining certification from the American Speech-Language and Hearing Association and a license from the State of Ohio Board of Speech-Language Pathology and Audiology, jobs are available in many settings. Employment settings include hospitals, rehabilitation facilities, nursing homes, home health agencies, early intervention programs, schools, clinics and private practices. Speech-language pathology is listed among the fastest growing occupations by the United States Department of Labor. The average starting salary for a speech-language pathologist is \$48,000 for an 11 to 12 month contract and \$42,000 for a nine month, school-based contract. For more information, go to [www.asha.org/public/speech](http://www.asha.org/public/speech) (<http://www.asha.org/public/speech/>).

## Audiologist

- Audiologists are hearing care specialists who evaluate and treat individuals with hearing and balance disorders.
- Audiologists are to hearing as Optometrists are to vision.
- Audiologists diagnose hearing and balance disorders in infants, children and adults, and provide treatment including fitting hearing aids, dispensing assistive listening devices, mapping cochlear implants, and providing audiologic rehabilitation for children and adults.
- Audiologists work in a variety of health care settings such as private practices, hospitals, rehabilitation centers, schools, and physician's offices.

### To practice, Audiologists must earn a Doctor of Audiology degree.

The Doctor of Audiology degree is a 4 year post baccalaureate program that is offered through The University of Akron in conjunction with Kent State University and the Cleveland Clinic Foundation.

Graduate students take classes as well as participate in supervised clinical experiences, which take place in the campus clinic and in a wide variety of external sites.

## Job Outlook

Audiology is listed among the fastest growing occupations by the United States Department of Labor. Average starting salaries for audiologists is \$51,000. For more information go to [www.asha.org/public/hearing/gen\\_audiology.htm](http://www.asha.org/public/hearing/gen_audiology.htm) ([http://www.asha.org/public/hearing/gen\\_audiology.htm](http://www.asha.org/public/hearing/gen_audiology.htm)) or [www.audiology.org](http://www.audiology.org) (<http://www.audiology.org>).

The following information has official approval of **The School of Speech Language Pathology and Audiology** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer

process is completed through an appointment with your academic advisor.

Below is an example sequence of courses including The University of Akron General Education Requirements as of January 1, 2020, School of Speech-Language Pathology and Audiology Degree requirements as of January 1, 2019, and ASHA-CCC Standards as of January 1, 2020.

## Summary

Code	Title	Hours
	General Education Requirements (p. 33)	34
	Core Courses	46
	Tagged Degree Requirements	13
	ASHA Standards IV A & B <sup>1</sup>	17
	Additional Credits for Graduation <sup>2</sup>	10
	<b>Total Hours</b>	<b>120</b>

<sup>1</sup> This is a set of recommended courses. It is highly recommended that all students need to meet with the SSLPA academic advisor once admitted into the program.

<sup>2</sup> Bachelor's degrees require a minimum of 120 credit hours for graduation.

## Recommended General Education Courses

Code	Title	Hours
------	-------	-------

Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.

Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.

<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
3470:250	Statistics for Everyday Life	
<i>Speaking: 3 credit hours</i>		
7600:106	Effective Oral Communication	
<i>Writing: 6 credit hours</i>		
3300:111	English Composition I	
2020:222	Technical Report Writing	
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
3600:120	Introduction to Ethics	
3600:150	Critical Thinking	
7100:100	Survey of History of Art I	
7500:201	Exploring Music: Bach to Rock	
<i>Natural Sciences: 7 credit hours</i>		
3100:200	Human Anatomy & Physiology I	
3100:202	Human Anatomy & Physiology II	
3150:101	Chemistry for Everyone	
	or 3650:133 Music, Sound & Physics	

*Social Sciences: 6 credit hours*

2040:243	Contemporary Global Issues
7750:244	Death & Dying
3750:100	Introduction to Psychology

**Tier III: Tagged Courses***Select one class from each of the following subcategories:*

Complex Systems	
2040:241	Technology & Human Values
Critical Thinking	
3600:120	Introduction to Ethics
3600:150	Critical Thinking
7100:100	Survey of History of Art I
Domestic Diversity	
7750:244	Death & Dying
Global Diversity	
2040:243	Contemporary Global Issues

*Review the General Education Requirements page for detailed course listings.*

Total Hours	34
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**Core Courses**

Code	Title	Hours
7700:110	Introduction to Disorders of Communications	3
7700:210	Introduction to Clinical Phonetics	4
7700:215	Introduction to Hearing and Speech Science	4
7700:230	Language Science & Acquisition	4
7700:321	Articulatory & Phonologic Disorders	4
7700:330	Language Disorders	4
7700:335	Principles of Audiology	4
7700:345	Audiologic Treatment	4
7700:365	Anatomy & Physiology of Speech & Hearing	3
7700:366	Anatomy & Physiology Laboratory	1
7700:422	Organic Disorders of Communication	4
7700:445	Multicultural Considerations for Audiologists & Speech-Language Pathologists	3
7700:446	Observation and Clinical Techniques	4
Total Hours		46

**Tagged Degree Requirements**

Code	Title	Hours
2020:222	Technical Report Writing	3
3600:150	Critical Thinking	3
3750:230	Developmental Psychology	4
7700:101	American Sign Language I	3
Total Hours		13

**ASHA Standards IV A & B**

Code	Title	Hours
3470:250	Statistics for Everyday Life	4

*The following is a recommended course list. It is highly recommended that all students need to meet with the SSLPA academic advisor once admitted into the program.*

3100:201	Human Anatomy & Physiology Laboratory I	1
3100:203	Human Anatomy & Physiology Laboratory II	1
3150:101	Chemistry for Everyone	4
or 3650:133	Music, Sound & Physics	
3750:100	Introduction to Psychology	3
3750:230	Developmental Psychology	4
Total Hours		17

**Recommended Sequence****1st Year**

Fall Semester		Hours
3100:200	Human Anatomy & Physiology I <sup>2</sup>	3
3100:201	Human Anatomy & Physiology Laboratory I <sup>2</sup>	1
3300:111	English Composition I	3
3750:100	Introduction to Psychology <sup>2</sup>	3
7600:105	Introduction to Public Speaking	3
or 7600:106	or Effective Oral Communication	
7700:110	Introduction to Disorders of Communications <sup>2</sup>	3
Hours		16

**Spring Semester**

2040:344	Death & Dying	3
3100:202	Human Anatomy & Physiology II <sup>2</sup>	3
3100:203	Human Anatomy & Physiology Laboratory II <sup>2</sup>	1
3470:250	Statistics for Everyday Life <sup>2</sup>	3-4
or 3470:260	or Basic Statistics	
3750:230	Developmental Psychology <sup>1</sup>	4
Hours		14-15

**2nd Year****Fall Semester**

2020:222	Technical Report Writing <sup>1</sup>	3
7700:101	American Sign Language I <sup>1</sup>	3
7700:210	Introduction to Clinical Phonetics	4
7700:230	Language Science & Acquisition	4
	Elective	1
Hours		15

**Spring Semester**

3600:150	Critical Thinking <sup>1</sup>	3
7700:215	Introduction to Hearing and Speech Science	4
7700:321	Articulatory & Phonologic Disorders	4
7700:330	Language Disorders	4
Hours		15

**3rd Year****Fall Semester**

7700:335	Principles of Audiology	4
7700:365	Anatomy & Physiology of Speech & Hearing	3
7700:366	Anatomy & Physiology Laboratory	1
	Arts Requirement	3
	Elective	3
Hours		14

**Spring Semester**

3150:101 or 3650:133	Chemistry for Everyone <sup>1</sup> or Music, Sound & Physics	4
7700:345	Audiologic Treatment	4
	Natural Science Requirement	3
	Complex Systems Requirement	3
	Elective	2-1
Hours		16-15

**4th Year**

**Fall Semester**

7700:446	Observation and Clinical Techniques	4
	Arts or Humanities Requirement	3
	Elective	7-8
Hours		14-15

**Spring Semester**

7700:422	Organic Disorders of Communication	4
7700:445	Multicultural Considerations for Audiologists & Speech-Language Pathologists	3
	Global Diversity Requirement	3
	Elective	6-5
Hours		16-15
Total Hours		120

<sup>1</sup> **The Bachelor of Arts (BA)** requires 14 credits of a foreign language: Spanish, French, German, Italian, or American Sign Language. A student may take courses from the Department of Modern Languages or the following American Sign Language courses: ASL 7700:101 (<https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbulletin.uakron.edu%2Fsearch%2F%3FP%3D7700%253A101&data=02%7C01%7Csjj%40uakron.edu%7C2ce14868b52f43ab4f9d08d8071a786f%7Ce8575dedd7f94ecea4aa0b32991aeedd%7C0%7C0%7C637267157865380806&sdata=05%2FJkNqvl%2FbAVHzcQrOekkVKwa7MsSAe1F2xRmcjolg%3D&reserved=0>) American Sign Language I, 7700:102 ([https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbulletin.uakron.edu%2Fsearch%2F%3FP%3D7700%253A102&data=02%7C01%7Csjj%40uakron.edu%7C2ce14868b52f43ab4f9d08d8071a786f%7Ce8575dedd7f94ecea4aa0b32991aeedd%7C0%7C0%7C637267157865390802&sdata=eKK%2FTQ9UiG5r6sp3DI0PC%2B8Yr%2FOxPI%2B2bac3zbKK2nl%3D&reserved=0](https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbulletin.uakron.edu%2Fsearch%2F%3FP%3D7700%253A102&data=02%7C01%7Csjj%40uakron.edu%7C2ce14868b52f43ab4f9d08d8071a786f%7Ce8575dedd7f94ecea4aa0b32991aeedd%7C0%7C0%7C637267157865380806&sdata=OPauCdyelR6xup32sDXk%2BXy8WmhibFPQs%2FphFrwGg0%3D&reserved=0)) American Sign Language II, 7700:201 ([https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbulletin.uakron.edu%2Fsearch%2F%3FP%3D7700%253A202&data=02%7C01%7Csjj%40uakron.edu%7C2ce14868b52f43ab4f9d08d8071a786f%7Ce8575dedd7f94ecea4aa0b32991aeedd%7C0%7C0%7C637267157865400794&sdata=dRO%2BUJ7qDbRsDyZGSeihTR1Dx9g9HTFZfUyFklpJ1Js%3D&reserved=0](https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbulletin.uakron.edu%2Fsearch%2F%3FP%3D7700%253A201&data=02%7C01%7Csjj%40uakron.edu%7C2ce14868b52f43ab4f9d08d8071a786f%7Ce8575dedd7f94ecea4aa0b32991aeedd%7C0%7C0%7C637267157865390802&sdata=tX8z%2BKy76C%2B9UaWicSuHy7rzusMzfNn7mpch1CFZwJU%3D&reserved=0)) Survey of Deaf Culture in America. The major also offers an option with no foreign language. **The Bachelor of Arts in Speech-Language Pathology & Audiology (BAT)** does not require a foreign language. Instead the student completes 14 credits of coursework from schools within the College of Health Professions. Recommended areas include: ChildLife, Nutrition/Dietetics, Nursing, SocialWork, Applied Science and Technology, Psychology, or Sociology.

<sup>2</sup> Pre-admission courses and 30 credits with a 3.00 GPA is required to be admitted into the program.

**Alert:**

1. By the end of your first 48 credit hours attempted, you should have completed your General Education English, Math, and Oral Communication (Speech) requirements;

2. By the end of your first 48 credit hours attempted, you should have declared a major and transferred to (been accepted by) a degree granting college at The University of Akron.

## Sport Science and Wellness Education

### 5550: Physical Education

The School of Sport Science and Wellness Education offers the following undergraduate programs:

- Exercise Science
- Sport Studies
- Licensure in Dance (Pre-K-12) (Admission Suspended)

### 5570: Health Education

- Health Education with Licensure (Admission Suspended)

### 5570: Community Health and Wellness Education

- Community Health (Admission Suspended)
- Exercise Science, Coaching and Conditioning, BS (p. 529)
- Exercise Science, Fitness Management, BS (p. 530)
- Exercise Science, Physiological Sciences, BS (p. 531)
- Exercise Science, Pre-Physical Therapy, BS (p. 532)
- Sport and Exercise Science Sport Coaching & Strength Training, Certificate (p. 534)
- Sport and Exercise Science Sport Management, Certificate (p. 534)
- Sport Studies Coach Education, Minor (p. 534)
- Sport Studies, Coaching Education, BS (p. 535)
- Sport Studies, Sport Management, BS (p. 537)
- Sport Studies, Sport Management, Minor (p. 539)

### Physical Education (5550)

#### 5550:100 Introduction to Sport Studies (3 Credits)

Introduction to sport studies explores the history, philosophy, and principles of today's sport industry within a practical, career-oriented framework.

#### 5550:102 Physical Education Activities I: Fitness, Leisure, & Healthy Life Style (3 Credits)

Introduction to fitness and leisure activities, as well as healthy life style. Knowledge of developing programs that lead to fitness, leisure and healthy life style for individuals as well as groups.

#### 5550:110 Introduction to Athletic Training (1 Credit)

Provides an overview of the Sports Medicine team and the components of a comprehensive athletic healthcare program. Introduces the student to the profession of athletic training.

#### 5550:125 Introduction to Exercise Science (1 Credit)

Overview for becoming a fitness professional. Information concerning choosing a career, national certification and professional organizations will be provided.

#### 5550:130 Physical Education Activities for Children (2 Credits)

For a physical education majors only. Participation in methods, activities and issues relating to pre-K through elementary physical education programs. One lecture and two laboratory periods per week.

#### 5550:150 Concepts in Health & Fitness (3 Credits)

Introduction to basic health and fitness concepts and related topics. Attention will be given to individual fitness programs emphasizing such topics as aerobic and anaerobic exercises, nutrition, diet, stress, and assessment methods and procedures.

#### 5550:160 Introduction to Coaching (3 Credits)

An introduction to the coaching profession. Discussion of the important technical and tactical elements of coaching athletes.

#### 5550:193 Orientation to Physical and Health Education (3 Credits)

Introduction to physical and health education to students who pursue state license in teaching physical and health education. It's also the required course before the admission to the college of education.

#### 5550:194 Sports Officiating (2 Credits)

Knowledge of rules for interscholastic sports and officiating techniques.

#### 5550:195 Foundations of Physical Education (3 Credits)

Concepts analysis of games and play and application of these concepts to the teaching/learning process in physical education at all ages.

#### 5550:200 Aquatic Facility Management (3 Credits)

This course is designed to explore, acquire, and discuss knowledge and techniques of aquatic facility operation and management.

#### 5550:201 Kinesiology (3 Credits)

Prerequisites: 3100:200, [3100:201 or 3100:202], 3100:203. Application of basic principles of anatomy and mechanics to human movement. Three hours lecture with practical application and demonstrations.

#### 5550:202 Diagnosis of Motor Skills (3 Credits)

This course introduces athletic trainers and physical education majors to the sciences of diagnosing motor skills.

#### 5550:203 Measurement & Evaluation in Physical Education (3 Credits)

Statistical procedures needed for analysis and interpretation of tests. Evaluation procedures, testing instruments, and techniques for administering tests are discussed and practiced. Three hours lecture.

#### 5550:204 Individual and Team Sports (2 Credits)

Intro to individual and team sports that are commonly taught in schools. Course presents knowledge, fundamental skill development, psychomotor skills analysis for the content areas.

#### 5550:205 Team Sports (2 Credits)

The purpose of this course is to teach students how to teach team sports.

#### 5550:206 Coaching Basketball (3 Credits)

An introduction to coaching basketball. Discussion of the important technical and tactical elements of coaching basketball.

#### 5550:207 Coaching Track and Field (3 Credits)

An introduction to coaching track and field. Discussion of the important technical, tactical and psychological elements of coaching track and field.

#### 5550:208 Coaching Football (3 Credits)

An introduction to coaching football. Discussion of the important technical and tactical elements of coaching football.

#### 5550:209 Coaching Baseball (3 Credits)

An introduction to coaching baseball. Discussion of the important offensive, defensive, and technical and tactical elements of coaching baseball.

**5550:211 First Aid & Cardiopulmonary Resuscitation (2 Credits)**

Based on American Red Cross standards for first aid and cardiopulmonary resuscitation. Instruction and skills practice for sudden illness/emergencies is provided. Two hours lecture.

**5550:212 First Aid and CPR for Professional Rescuer (2 Credits)**

Prerequisite: Permission of instructor. First aid and cardiopulmonary resuscitation for health care professionals based upon American Red Cross standards. Instruction and skills practice for sudden illness/emergencies is provided.

**5550:220 Health Promotion and Behavior Change (3 Credits)**

Prerequisite: 5550:150. Course will translate theories of behavioral science for health professionals who are involved in planning, developing, implementing or evaluating physical activity programs.

**5550:235 Concepts of Motor Learning & Development (3 Credits)**

This course will introduce key motor learning concepts and analysis of developing fundamental motor skills. Three hours lecture.

**5550:240 Care & Prevention of Athletic Injuries (3 Credits)**

Prerequisites: 3100:200,201; Corequisite: 3100:202, 203. This course is an introduction to basic athletic training principles and techniques. Includes a laboratory course for practical application of techniques.

**5550:241 Care and Prevention of Athletic Injuries Lab (1 Credit)**

Prerequisites: 3100:200 and 3100:201. Corequisites: 3100:202 and 3100:203, 5550:240. This course is designed to allow students to learn, practice, and become competent and proficient in the psychomotor skills associated basic injury prevention, evaluation, management, and treatment of physically active individuals in the practice of athletic training as defined by the NATA.

**5550:242 Therapeutic Modalities (3 Credits)**

Prerequisites: Accepted into the ATEP Clinical Education Program. Corequisite: 243. This course will promote student medical and technical aspects of therapeutic modalities and pharmacological agents in the treatment and rehabilitation of injured physically active individuals.

**5550:243 Athletic Training Lab I (1 Credit)**

Prerequisites: Accepted into the ATEP Clinical Education Program. Corequisites: 242. This course will meet CAATE standards and allow the students to learn and practice psychomotor skills and clinical proficiencies. Includes clinical rotation.

**5550:245 Adapted Physical Education (3 Credits)**

Identification of atypical movement among various exceptional individuals, with adapted physical education programming experience in a laboratory setting.

**5550:250 Principles of Athletic Training (3 Credits)**

Prerequisites: Students must be accepted into the Clinical Athletic Training Education Program (ATEP). This course will address principles and techniques used in initial evaluation of musculoskeletal injury as defined by CAATE standards and guidelines.

**5550:255 Emergency Care for Athletic Training (3 Credits)**

Prerequisite: Accepted into ATEP Clinical Education program. This course will teach knowledge and skills in handling emergency situations or life-threatening sudden illness or injuries which an athletic training may encounter.

**5550:275 Advanced Athletic Injury Management: Lower Extremity (3 Credits)**

Prerequisites: 5550:242 and 5550:243. Corequisite: 5550:276. This course is designed to meet CAATE standards and guidelines to display knowledge and psychomotor skills in injury evaluation and recognition lower extremity.

**5550:276 Athletic Training Lab II (1 Credit)**

Prerequisites: 5550:242 and 5550:243. Corequisite: 5550:275. This course will meet CAATE standards and allow the students to learn and practice psychomotor skills and clinical proficiencies. Includes clinical rotation.

**5550:300 Physiology of Exercise for the Older Adult (3 Credits)**

Prerequisite: 5550:302. Analysis of physiological effects of exercise on the elderly. Exercise programs adaptable for use by persons working with elderly. Three hours lecture.

**5550:302 Physiology of Exercise (3 Credits)**

Prerequisites: 3100:200 and 3100:202. A course designed to study the physiological effects of exercise relative to physical education activities, athletics and athletic training. Two hours lecture, two hours laboratory. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:305 Clinical Experience I (2 Credits)**

Prerequisite: Permission. Improves the student's psychomotor skills in the following domains of athletic training: injury prevention, injury recognition/evaluation and management, therapeutic exercise and rehabilitation.

**5550:306 PE Act IV: Badminton/Golf (2 Credits)**

Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of badminton and golf. One hour lecture, two hours lab. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:307 Physical Education Activities V (2 Credits)**

Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of tennis and volleyball. One hour lecture, two hours lab. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:308 PE Act IV: Dance & Tumbling (2 Credits)**

Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of dance and tumbling. One hour lecture, two hours lab. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:327 Exercise Leadership (3 Credits)**

Prerequisite: 5550:302. Students learn principles of teaching safe and effective exercises designed to enhance physical fitness. Course will assist students in preparing for a group exercise certification.

**5550:330 Exercise and Weight Control (3 Credits)**

Prerequisite: 5550:302. Course will focus on role of exercise in regard to its positive influences on weight control. The hazards and implications of being overweight are studied.

**5550:332 Therapeutic Exercise & Rehabilitation I Principles (3 Credits)**

Prerequisites: 5550:342 and 5550:343. Corequisite: 5550:333. This course will address CAATE standards and guidelines for competencies and proficiencies using principles in exercise and rehabilitation techniques.

**5550:333 Athletic Training Lab IV (1 Credit)**

Prerequisites: 5550:342 and 5550:343. Corequisite: 5550:332. This course will allow students to learn psychomotor skills associated with therapeutic exercise & rehabilitation techniques. Includes a 250 hour clinical sport rotation.

**5550:335 Movement Experiences for Children (3 Credits)**

Prerequisites: 5550:130, 5550:193, and 5550:235. Course focuses on use of fundamental motor skill analysis to structure movement lessons for children from early childhood through elementary years. One hour lecture, two hours lab. (20 clinical hours, 10 field hours.) Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:336 Motor Learning & Development for Early Childhood (2 Credits)**

Physical fitness, fundamental motor skills, motor development and learning for early childhood, birth to age eight. Creating an environment of motor experiences for young children (10 field hours). Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:342 Advanced Athletic Injury Management: Upper Extremity (3 Credits)**

Prerequisites: 5550:275 and 5550:276. Corequisite: 5550:343. This course designed to meet CAATE standards and guidelines to display knowledge and psychomotor skills in injury evaluation and recognition of the upper extremity.

**5550:343 Athletic Training Lab III (1 Credit)**

Prerequisites: 5550:275 and 276. Corequisite: 5550:342. This course will meet CAATE standards and allow the students to learn and practice psychomotor skills and clinical proficiencies. Includes clinical rotation.

**5550:352 Strength & Conditioning Fundamentals (3 Credits)**

Prerequisite: 3100:200, 3100:201, 3100:202, and 3100:203. This course will address CAAHEP competencies and proficiencies in the area of strength and conditioning of physically active individuals.

**5550:355 Exercise in Special Populations (3 Credits)**

Prerequisites: 5550:302 and 5550:403. Advanced course in clinical exercise testing and prescription relative to disease of the cardiovascular, pulmonary, metabolic, musculoskeletal, neuromuscular, and immunologic systems.

**5550:360 Practicum I (1 Credit)**

Prerequisites: 3100:200, 3100:201, 3100:202, and 3100:203. This is a senior level athletic training course focusing on the refinement of practical skills and preparation for the NATABOC certification examination.

**5550:362 Sport History (3 Credits)**

This course is designed to introduce students to sport in American History. The people, organizations and institutions that shaped the development of sport are examined.

**5550:364 Sport Ethics (3 Credits)**

The focus of this course is the ethical behavior of sport participants and sport administrators studied within the context of the sport environment.

**5550:366 Sport Communication (3 Credits)**

The focus of this course is on the important knowledge that administrators should have related to the field of sport communication.

**5550:368 Sport Facility Management (3 Credits)**

This course has been designed to identify the systems approach for the effective management of the maintenance and operation of sport and recreation facilities.

**5550:370 Financial Aspects of Sport (3 Credits)**

The focus of this course is related to the important knowledge that administrators should have related to the field of the financial aspects of sport.

**5550:375 Sport Performance Principles (3 Credits)**

An introduction to important elements related to the physical aspects of sport performance. Discussion of the important physical elements of coaching athletes.

**5550:395 Field Experience (1-6 Credits)**

Practical experience in an area related to physical education under supervision of faculty member. Student works with current physical education programs or exercise science settings. May be repeated for a maximum of 12 credits. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:400 Musculoskeletal Anatomy I: Upper Extremity (3 Credits)**

Prerequisites: 3100:200 and 3100:202. This course includes lecture/laboratory activities to provide the student a comprehensive learning experience in lower extremity musculoskeletal anatomy.

**5550:401 Musculoskeletal Anatomy II: Lower Extremity (3 Credits)**

Prerequisites: 3100:200, 3100:201, 3100:202, 3100:203 and 5550:201. This course includes lecture laboratory activities to provide the student a comprehensive learning experience in lower extremity musculoskeletal anatomy.

**5550:403 Exercise Testing (3 Credits)**

Prerequisite: 5550:302. This course will cover basic knowledge of exercise testing and interpretation of results. Cardiovascular and muscular fitness aspects will be measured. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:404 Exercise Prescription (3 Credits)**

Prerequisite: 5550:403. This course focuses on how to appropriately prescribe exercise for various populations (young, middle-aged, elderly, pregnant, diseased-states). Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:405 Clinical Experience I (2 Credits)**

Prerequisite: Accepted into ATEP Clinical education program. Enroll by advisor permission only. This course will allow for athletic training students to master CAATE proficiencies and clinical proficiencies associated with the course.

**5550:406 Advanced Strength and Conditioning (3 Credits)**

Prerequisite: 5550:352. Strength and conditioning programs for heterogeneous populations. The course covers high-level sport specific exercise prescriptions that aids injury prevention and performance enhancement.

**5550:409 Sport Behavior (3 Credits)**

The focus of this course is the behavior of athletes and sport participants studied within the context of play, games, and sport.

**5550:410 Introduction to Sport Sociology (3 Credits)**

Provides information to students about the sociological aspects of sport.

**5550:412 General Medical Aspects (3 Credits)**

Prerequisites: 3100:200 and 3100:201. Covers various topics related to sports medicine and general medical conditions. Students will gain perspectives and exposure to a variety of allied health care professionals.

**5550:415 Seminar in Athletic Training (2 Credits)**

Prerequisites: 3100:200, 3100:201, 3100:202, and 3100:203. To meet CAAHEP standards and guidelines and incorporate an even distribution of competencies and proficiencies throughout all athletic training for sports medicine courses.

**5550:418 Cardiorespiratory Function (3 Credits)**

Prerequisite: 5550:302. This course is designed to study the normal structure and function of the respiratory system and how it is affected by different types of disease.

**5550:420 Fundamentals of Management Strategies in Sport (3 Credits)**

This course seeks to explore, acquire, and discuss knowledge within the theoretical and applied management practices of sport, fitness, and instructional programs. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:422 Sport Planning/Promotion (3 Credits)**

Analysis of marketing/promotions from a sport manager's perspective. Emphasis on marketing strategy, tactics and development in sport delivery systems.

**5550:424 Sports Leadership (3 Credits)**

Introduces students to current issues related to leadership, management, and supervision. Examines current sport leadership research and governance structure of amateur and professional sport organizations.

**5550:426 Nutrition for Sports (3 Credits)**

This course will provide an explanation of the consumption, absorption, and recommendation for diet of athletes and the physically active individual.

**5550:428 Nutrition for Teachers and Coaches (3 Credits)**

Covers nutritional basics and topics related to teaching physical education/health and coaching athletes, including basic nutrition, eating disorders, meal preparation, and trends in nutrition.

**5550:430 Senior Honors Project:Physical Education (1-6 Credits)**

(May be repeated for a total of six credits) Prerequisites: Senior standing in Honors Program. Carefully defined individual study demonstrating originality and sustained inquiry. \*Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:436 Foundations & Elements of Adapted Physical Education (3 Credits)**

Principles, components, and strategies necessary in providing motor activities for handicapped students via application of a neuro-developmental model and alternate methods. Three hours lecture. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:438 Cardiac Rehab Principles (3 Credits)**

Prerequisite: 5550:302. This course will teach students the core competencies for cardiac rehab professionals, based upon the American Association of Cardiovascular and Pulmonary Rehabilitation Specialists (AAVCPR).

**5550:440 Injury Management for Teachers & Coaches (2 Credits)**

Prerequisites: 5550:211. This course challenges the student to understand ways to provide and care for the safety of individual they teach or coach.

**5550:444 Athletic Training Lab V (1 Credit)**

Prerequisites: 5550:332 and 5550:333. Corequisite: 5550:445. This course will meet CAATE standards and allow the students to learn and practice psychomotor skills and clinical proficiencies. Includes clinical rotation.

**5550:445 Therapeutic Exercise & Rehabilitation II Applications (3 Credits)**

Prerequisites: 5550:332 and 5550:333. Corequisite: 5550:444. This course will address CAATE standards and guidelines for competencies and proficiencies using principles in exercise and rehabilitation techniques.

**5550:446 Instructional Techniques in Secondary Physical Education & Health (3 Credits)**

Prerequisites: 5550:102, 5550:193, 5550:204, and 5550:205. Instructional strategies for teaching secondary students in physical and health education. A variety of instructional models will be introduced appropriate to the learners' age and development. It is a required course for the physical education licensure. Two hours lecture, two hours lab (30 clinical hours). Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:447 Instructional Techniques for Children in Physical Education & Health Education (3 Credits)**

Prerequisites: 5550:130 and 5550:193. Instructional strategies for teaching children in physical and health education. A variety of instructional models will be introduced appropriate to the learners' age and development. Required for the physical education licensure. (30 clinical hours). Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:449 Organization & Administration for Health Care Professionals (3 Credits)**

Prerequisites: senior level status and permission only. This class is a requirement for Athletic Trainers and Exercise Science majors. This class presents the skills necessary for supervising a health care facility.

**5550:450 Organization & Administration of Physical Education, Intramural and Athletics (3 Credits)**

Prerequisite: Admission to the Sport Science and Wellness Program or instructor's permission. Investigation of procedures for conducting physical education, intramural, and athletic programs. Includes tournament designs, supplies and equipment, liability, curriculum, and general administration. Three hours lecture. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:451 Assessment & Evaluation in Adapted Physical Education (3 Credits)**

Investigation, analysis, and selection of appropriate assessment instruments, as well as methodology for determining instructional objectives and activities for handicapped students. Three hours lecture. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:452 Foundations of Sport Science, Physical and Health Education (3 Credits)**

Prerequisite: Admission to the Sport Science and Wellness Program. Overview of the emergence of sport science, physical and health education as a profession and the supporting role of underlying scholarly and scientific disciplines. Three hours lecture. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:453 Principles of Coaching (3 Credits)**

Prerequisite: Admission to the Sport Science and Wellness Program. Basics for becoming a successful coach. Discussion of principles applying to most sports, players and coaches. Ten clinical hours required. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:456 Evidence Based Practice and Research Applications (3 Credits)**

Prerequisite: Permission of advisor. This course is designed to provide students an opportunity to review current research, create, implement, and present original research in an allied health related field.

**5550:459 Practicum Seminar (1 Credit)**

Prerequisite: Permission of instructor. This course will focus on the professional development process, including practicum preparation, resume development, interview skills and job search strategies.

**5550:460 Practicum in Physical Education (1-6 Credits)**

Prerequisites: Senior standing in the Sport Science and Wellness Program. Practical work experience with certified personnel in a discipline or profession related to physical education or sport and exercise science. May be repeated for a maximum of 12 credits. \*Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:462 Legal Aspects of Physical Activity (2 Credits)**

Overview legal and ethical elements of greatest concern to specialists in sport and physical activity. Cases used to illustrate specific points. Topics vary.

**5550:465 Psychology of Injury Rehabilitation (2 Credits)**

Prerequisites: 3100:200, 3100:201, 3100:202, and 3100:203. This course will address the cognitive and affective aspects of injury and rehabilitation of injury. Specifically the stages of rehabilitation and techniques to aid in the rehabilitation process.

**5550:467 Practicum II (1 Credit)**

Prerequisites: 3100:200, 3100:201, 3100:202, and 3100:203. This course will allow the students to practice psychomotor skills in the high school setting while being supervised by a certified athletic trainer.

**5550:470 Injury Pathology & Therapeutic Interventions (3 Credits)**

Prerequisites: 3100:200, 3100:201, 3100:202, and 3100:203. This course will discuss common musculoskeletal pathology and surgical procedure associated with a physically active population.

**5550:480 Special Topics: Physical Education (1-4 Credits)**

(May be repeated with a change in topic) Prerequisite: Permission of instructor. Group study of special topics in physical education. May be repeated with change in topic. \*Students must be in the College of Education to take 300/400 level courses.

**5550:485 Exercise Science Capstone (2 Credits)**

Prerequisites: 5550:302 and 5550:403. Designed to familiarize students with current issues in exercise physiology. Students will be expected to obtain a professional certification during this course.

**5550:490 Workshop in Physical Education (1-3 Credits)**

Practical, intensive and concentrated involvement with current curricular practices in areas related to physical education. Students must be in the College of Education to take 300/400 level courses.

**5550:494 Student Teaching Colloquium for Physical & Health Education (2 Credits)**

Corequisite: 5550:495. Students meet during student teaching to discuss concerns about student teaching and analyze previous learning as it relates to their future as a professional educator. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:495 Student Teaching for Physical & Health Education (11 Credits)**

Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing OAE subject test, and approved portfolio. Corequisite 5550:494. Planned teaching experience in schools selected and supervised by the Office of Student Teaching.

**5550:497 Independent Study: Physical Education (1-6 Credits)**

Prerequisite: Permission of adviser. Analysis of specific topic related to a current problem in physical education or sport and exercise science. May be repeated for a maximum of 12 credits. \*Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

## Outdoor Education (5560)

**5560:430 Senior Honors Project: Outdoor Education (1-6 Credits)**

(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.

**5560:450 Application of Outdoor Education to the School Curriculum (4 Credits)**

Provides knowledge, skills and techniques useful in application of outdoor education to school curriculum.

**5560:452 Resources & Resource Management for Teaching Outdoor Education (4 Credits)**

Methodologies unique to outdoor education which incorporate a multisensory approach to learning. Instructional materials and resources which permit expansion of curriculum beyond the school building.

**5560:454 Resident Outdoor Education (2 Credits)**

Skills, program considerations, and organizational techniques unique to an extended, overnight, resident outdoor education program. Off-campus location for four days and three nights.

**5560:456 Outdoor Pursuits (4 Credits)**

Investigation and participation in practical experiences in outdoor pursuits.

**5560:460 Outdoor Education Practicum (2 Credits)**

Prerequisites: 5560:452 and 5560:454. Closely supervised practical experience in conjunction with regularly scheduled classroom meetings. Laboratory experience consists of active participation with an established outdoor education program.

**5560:464 Wilderness Education Association Outdoor Leadership (3 Credits)**

This is the Wilderness Education Association Standard Program for Outdoor Leadership Certification.

**5560:497 Independent Study (1-3 Credits)**

Prerequisites: Permission of adviser and supervisor of independent study. Provides varied opportunities for a student to gain first-hand knowledge and experience with existing outdoor education programs.

## Health Education (5570)

**5570:101 Personal Health (2 Credits)**

This course applies the current principles and facts pertaining to healthful, effective living, personal health problems, and needs of the student. Two hours lecture.

**5570:201 Foundations in Health Education (3 Credits)**

Prerequisite: 5570:101. History and philosophy of health education as a discipline; professionalism and administration in health education are considered.

**5570:202 Stress Management (3 Credits)**

Prerequisite: Sophomore standing. Course provides knowledge about the relationship between stress, physiological, psychological illness and disease, also how to manage stress in life activities.

**5570:322 Current Topics in Health Education (3 Credits)**

Prerequisites: 5570:101, 5570:201, and 5570:420. Skills needed to do research, teach, and present current health education topics in a factual and comfortable manner in schools and community. Three hours lecture. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.



**5570:375 Program Planning and Evaluation (2 Credits)**

Prerequisites: 5570:101 and 5570:201. This course addresses the process of planning and evaluating health education programs within the school and community.

**5570:395 Field Experience: Health Education (1-3 Credits)**

Prerequisite: Permission of the advisor. On-site field experience will be conducted in an area related to pre-K-12 health education under the supervision of a faculty member. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5570:400 Environmental Aspects of Health Education (3 Credits)**

Prerequisite: Major or minor in health education and admission to the Sport Science and Wellness Program. A study of the interrelationships of ecosystems and a healthful environment. This course investigates many aspects of the environment and their influences upon the quality of human life. Students must be in the College of Education to take 300/400 level courses.

**5570:420 Community and Personal Health (3 Credits)**

Introduction of current public and personal health issues. Organizations and their roles in public and personal health programs. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5570:421 Comprehensive School Health (3 Credits)**

Prerequisites: 5570:101, 5570:201, and 5570:320. This course explains and presents comprehensive school health curricula for pre-k to 12. The three components of a comprehensive school health program are presented.

**5570:423 Methods & Materials Teaching Health Education (3 Credits)**

Prerequisites: 5570:101, 5570:201, 5570:420, 5100:210, 5100:211, 5500:310, 5500:311. Planning, organization, use of instructional resources and delivery of health education content and teaching process (pre K-12). Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5570:430 Senior Honors Project: Health Education (1-6 Credits)**

(May be repeated for a total of six credits) Prerequisites: Senior standing in Honors Program. Carefully defined individual study demonstrating originality and sustained inquiry. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5570:460 Practicum in Health Education (2-6 Credits)**

Prerequisite: Permission of the advisor. The practicum in Health Education is an on-site participation in a community health organization, agency or resource. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5570:497 Independent Study: Health Education (1-2 Credits)**

Prerequisite: Permission of the advisor. Analysis of a specific topic related to a current problem in health education. May include investigative procedure, research or concentrated practical experience.

## Exercise Science, Coaching and Conditioning, BS

### Bachelor of Science in Exercise Science, Coaching and Conditioning (555231BS)

More on the Coaching and Conditioning major (<https://www.uakron.edu/sswe/programs/exercise-science/>)

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## Program Description

The Exercise Science major is designed to prepare students for employment in commercial, corporate, clinical, community and government agencies with interest in the areas of physical activity and health promotion. The program prepares students to sit for certification examinations such as American College of Sports Medicine Exercise Physiologist Certified and the National Strength and Conditioning Association Certified Strength and Conditioning Specialist.

All major coursework used for graduation requires a grade of C or better.

The following information has official approval of the **School of Sport Science and Wellness Education** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

### 1st Year

Fall Semester		Hours
3100:200	Human Anatomy & Physiology I <sup>1</sup>	3
3100:201	Human Anatomy & Physiology Laboratory I <sup>1</sup>	1
3300:111	English Composition I <sup>1,2</sup>	3
3750:100	Introduction to Psychology (Social Science) <sup>1</sup>	3
5550:125	Introduction to Exercise Science	1
	Math Requirement <sup>1</sup>	4
Hours		15

### Spring Semester

3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3300:112	English Composition II <sup>1,2</sup>	3
3850:100	Introduction to Sociology <sup>1</sup>	3
5550:150	Concepts in Health & Fitness	3
7600:105 or 7600:106	Introduction to Public Speaking <sup>1</sup> or Effective Oral Communication	3
Hours		16

**2nd Year****Fall Semester**

2750:120	Medical Terminology	3
5550:235	Concepts of Motor Learning & Development	3
5550:240	Care & Prevention of Athletic Injuries	3
5570:202	Stress Management	3
	Arts Requirement	3
	Hours	15

**Spring Semester**

5550:160	Introduction to Coaching	3
5550:201	Kinesiology	3
5550:220	Health Promotion and Behavior Change	3
5550:302	Physiology of Exercise	3
	Critical Thinking/Humanities Requirement <sup>3</sup>	3
	Hours	15

**3rd Year****Fall Semester**

5550:375	Sport Performance Principles	3
5550:400	Musculoskeletal Anatomy I: Upper Extremity	3
5550:426	Nutrition for Sports	3
	Arts or Humanities Requirement	3
	Complex Systems Requirement	4
	Hours	16

**Spring Semester**

5550:327	Exercise Leadership	3
5550:352	Strength & Conditioning Fundamentals	3
5550:401	Musculoskeletal Anatomy II: Lower Extremity	3
5550:409	Sport Behavior	3
	Global Diversity Requirement	3
	Hours	15

**4th Year****Fall Semester**

5550:330	Exercise and Weight Control	3
5550:403	Exercise Testing	3
5550:406	Advanced Strength and Conditioning	3
5550:449	Organization & Administration for Health Care Professionals	3
5550:462	Legal Aspects of Physical Activity	2
	Hours	14

**Spring Semester**

5550:355	Exercise in Special Populations	3
5550:404	Exercise Prescription	3
5550:460	Practicum in Physical Education	6
5550:485	Exercise Science Capstone	2
	Hours	14
	Total Hours	120

<sup>1</sup> Preadmission courses must average 2.5 GPA with an overall GPA of 2.75 or higher for admission to the program.

<sup>2</sup> 3300:111 English Composition I and 3300:112 English Composition II must be completed with a grade of C or better.

<sup>3</sup> *Critical Thinking* can double as a *Humanities* – see GE course listing (<http://www.uakron.edu/general-education> (<http://www.uakron.edu/general-education/>)) or advisor.

**Alert: By the end of your first 48 credit hours attempted, you must have completed your General Education Writing, Quantitative Reasoning, and Speaking requirements.**

## Exercise Science, Fitness Management, BS

### Bachelor of Science in Exercise Science, Fitness Management (555233BS)

More on the Fitness Management major (<https://www.uakron.edu/sswe/programs/exercise-science/>)

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### Program Description

The Exercise Science major is designed to prepare students for employment in commercial, corporate, clinical, community and government agencies with interest in the areas of physical activity and health promotion. The program prepares students to sit for certification examinations such as American College of Sports Medicine Exercise Physiologist Certified and the National Strength and Conditioning Association Certified Strength and Conditioning Specialist.

All major coursework used for graduation requires a grade of C or better.

The following information has official approval of the **School of Sport Science and Wellness Education** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

**1st Year****Fall Semester**

3100:200	Human Anatomy & Physiology I <sup>1</sup>	3
3100:201	Human Anatomy & Physiology Laboratory I <sup>1</sup>	1

3300:111	English Composition I <sup>1,2</sup>	3
3750:100	Introduction to Psychology <sup>1</sup>	3
5550:125	Introduction to Exercise Science	1
	Math Requirement <sup>1</sup>	4
	Hours	15

**Spring Semester**

3100:202	Human Anatomy & Physiology II (Natural Science Requirement)	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3300:112	English Composition II <sup>1,2</sup>	3
3850:100	Introduction to Sociology (meets Social Science & Domestic Diversity) <sup>1</sup>	3
5550:150	Concepts in Health & Fitness	3
7600:105 or 7600:106	Introduction to Public Speaking <sup>1</sup> or Effective Oral Communication	3
	Hours	16

**2nd Year****Fall Semester**

2750:120	Medical Terminology	3
5550:235	Concepts of Motor Learning & Development	3
5550:240	Care & Prevention of Athletic Injuries	3
5570:202	Stress Management	3
	Arts Requirement	3
	Hours	15

**Spring Semester**

5550:201	Kinesiology	3
5550:220	Health Promotion and Behavior Change	3
5550:370	Financial Aspects of Sport	3
5550:426	Nutrition for Sports	3
	Critical Thinking/Humanities Requirement <sup>3</sup>	3
	Hours	15

**3rd Year****Fall Semester**

5550:302	Physiology of Exercise	3
5550:366	Sport Communication	3
5550:400	Musculoskeletal Anatomy I: Upper Extremity	3
5550:462	Legal Aspects of Physical Activity	2
	Arts or Humanities Requirement	3
	Hours	14

**Spring Semester**

5550:327	Exercise Leadership	3
5550:352	Strength & Conditioning Fundamentals	3
5550:401	Musculoskeletal Anatomy II: Lower Extremity	3
	Complex Systems Requirement	4
	Global Diversity Requirement	3
	Hours	16

**4th Year****Fall Semester**

5550:330	Exercise and Weight Control	3
5550:403	Exercise Testing	3

5550:420	Fundamentals of Management Strategies in Sport	3
5550:422	Sport Planning/Promotion	3
5550:449	Organization & Administration for Health Care Professionals	3
	Hours	15

**Spring Semester**

5550:355	Exercise in Special Populations	3
5550:404	Exercise Prescription	3
5550:460	Practicum in Physical Education	6
5550:485	Exercise Science Capstone	2
	Hours	14
	Total Hours	120

<sup>1</sup> Preadmission courses must average 2.5 GPA with an overall GPA of 2.75 or higher for admission to the program.

<sup>2</sup> 3300:111 English Composition I and 3300:112 English Composition II must be completed with a grade of C or better.

<sup>3</sup> *Critical Thinking* can double as a *Humanities* – see GE course listing (<http://www.uakron.edu/general-education> (<http://www.uakron.edu/general-education/>)) or advisor.

**Alert: By the end of your first 48 credit hours attempted, you must have completed your General Education Writing, Quantitative Reasoning, and Speaking requirements.**

## Exercise Science, Physiological Sciences, BS

### Bachelor of Science in Exercise Science, Physiological Sciences (555230BS)

More on the Physiological Sciences major (<https://www.uakron.edu/sswe/programs/exercise-science/>)

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## Program Description

The Exercise Science major is designed to prepare students for employment in commercial, corporate, clinical, community and government agencies with interest in the areas of physical activity and health promotion. The program prepares students to sit for certification examinations such as American College of Sports Medicine Exercise Physiologist Certified and the National Strength and Conditioning Association Certified Strength and Conditioning Specialist.

All major coursework used for graduation requires a grade of C or better.

The following information has official approval of the **School of Sport Science and Wellness Education** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

### 1st Year

Fall Semester		Hours
3100:200	Human Anatomy & Physiology I <sup>1</sup>	3
3100:201	Human Anatomy & Physiology Laboratory I <sup>1</sup>	1
3300:111	English Composition I <sup>1,2</sup>	3
3750:100	Introduction to Psychology <sup>1</sup>	3
5550:125	Introduction to Exercise Science	1
	Math Requirement <sup>1</sup>	4
Hours		15

### Spring Semester

3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3300:112	English Composition II <sup>1,2</sup>	3
3850:100	Introduction to Sociology <sup>1</sup>	3
5550:150	Concepts in Health & Fitness	3
7600:105 or 7600:106	Introduction to Public Speaking or Effective Oral Communication	3
Hours		16

### 2nd Year

Fall Semester		Hours
2750:120	Medical Terminology	3
5550:235	Concepts of Motor Learning & Development	3
5550:240	Care & Prevention of Athletic Injuries	3
5570:202	Stress Management	3
	Arts Requirement	3
Hours		15

### Spring Semester

2750:230	Basic Pharmacology	3
5550:201	Kinesiology	3
5550:220	Health Promotion and Behavior Change	3
5550:426	Nutrition for Sports	3
	Critical Thinking/Humanities Requirement	3
Hours		15

### 3rd Year

Fall Semester		Hours
5550:302	Physiology of Exercise	3
5550:352	Strength & Conditioning Fundamentals	3
5550:400	Musculoskeletal Anatomy I: Upper Extremity	3

	Arts or Humanities Requirement	3
	Complex Systems Requirement	4
Hours		16

### Spring Semester

3006:450	Interdisciplinary Seminar in Life-Span Development & Gerontology	2
5550:327	Exercise Leadership	3
5550:401	Musculoskeletal Anatomy II: Lower Extremity	3
5550:403	Exercise Testing	3
	Global Diversity Requirement	3
Hours		14

### 4th Year

#### Fall Semester

5550:330	Exercise and Weight Control	3
5550:355	Exercise in Special Populations	3
5550:404	Exercise Prescription	3
5550:418	Cardiorespiratory Function	3
5550:449	Organization & Administration for Health Care Professionals	3
Hours		15

#### Spring Semester

5550:412	General Medical Aspects	3
5550:438	Cardiac Rehab Principles	3
5550:460	Practicum in Physical Education	6
5550:485	Exercise Science Capstone	2
Hours		14
Total Hours		120

<sup>1</sup> Preadmission courses must average 2.5 GPA with an overall GPA of 2.75 or higher for admission to the program.

<sup>2</sup> 3300:111 English Composition I and 3300:112 English Composition II must be completed with a grade C or better.

<sup>3</sup> *Critical Thinking* can double as a *Humanities* – see GE course listing (<http://www.uakron.edu/general-education> (<http://www.uakron.edu/general-education/>)) or advisor.

**Alert: By the end of your first 48 credit hours attempted, you must have completed your General Education Writing, Quantitative Reasoning, and Speaking requirements.**

## Exercise Science, Pre-Physical Therapy, BS

### Bachelor of Science in Exercise Science, Pre-Physical Therapy (555232BS)

More on the Pre-Physical Therapy major (<https://www.uakron.edu/sswe/programs/exercise-science/>)

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## Program Description

The Exercise Science major is designed to prepare students for employment in commercial, corporate, clinical, community and government agencies with interest in the areas of physical activity and health promotion. The program prepares students to sit for certification examinations such as American College of Sports Medicine Exercise Physiologist Certified and the National Strength and Conditioning Association Certified Strength and Conditioning Specialist. Students choosing this track can obtain the necessary pre-requisite courses for graduate programs including Physical Therapy, Occupational Therapy, Physician Assistant, Doctor of Chiropractic, medical school and many other allied health terminal degrees.

All major coursework used for graduation requires a grade of C or better.

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1st Year		
Fall Semester		Hours
3100:200	Human Anatomy & Physiology I <sup>1</sup>	3
3100:201	Human Anatomy & Physiology Laboratory I <sup>1</sup>	1
3300:111	English Composition I <sup>1,2</sup>	3
3450:145	Algebra for Calculus <sup>1,3</sup>	4
3750:100	Introduction to Psychology <sup>1</sup>	3
5550:125	Introduction to Exercise Science	1
Hours		15
Spring Semester		
3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1
3300:112	English Composition II <sup>1,2</sup>	3
3850:100	Introduction to Sociology (meets Social Science & Domestic Diversity requirements) <sup>1</sup>	3
5550:150	Concepts in Health & Fitness	3
7600:105 or 7600:106	Introduction to Public Speaking <sup>1</sup> or Effective Oral Communication	3
Hours		16

2nd Year		
Fall Semester		
2750:120	Medical Terminology	3
3100:111	Principles of Biology I <sup>4</sup>	4
3150:151	Principles of Chemistry I <sup>4</sup>	3
3150:152	Principles of Chemistry I Laboratory <sup>4</sup>	1
5550:240	Care & Prevention of Athletic Injuries	3
Hours		14

Spring Semester		
5550:201	Kinesiology	3
5550:220	Health Promotion and Behavior Change	3
5570:202	Stress Management	3
Art Requirement		3
Critical Thinking/Humanities Requirement <sup>5</sup>		3
Hours		15

3rd Year		
Fall Semester		
3650:261	Physics for Life Sciences I	4
5550:235	Concepts of Motor Learning & Development	3
5550:302	Physiology of Exercise	3
5550:400	Musculoskeletal Anatomy I: Upper Extremity	3
Arts or Humanities Requirement		3
Hours		16

Spring Semester		
3650:262	Physics for Life Sciences II	4
5550:352	Strength & Conditioning Fundamentals	3
5550:401	Musculoskeletal Anatomy II: Lower Extremity	3
5550:460	Practicum in Physical Education	4
Hours		14

4th Year		
Fall Semester		
5550:330	Exercise and Weight Control	3
5550:403	Exercise Testing	3
5550:426	Nutrition for Sports	3
5550:449	Organization & Administration for Health Care Professionals	3
Complex Systems Tag Requirement		4
Hours		16

Spring Semester		
5550:327	Exercise Leadership	3
5550:355	Exercise in Special Populations	3
5550:404	Exercise Prescription	3
5550:485	Exercise Science Capstone	2
Global Diversity Tag Requirement		3
Hours		14
Total Hours		120

<sup>1</sup> Preadmission courses must average 2.5 GPA with an overall GPA of 2.75 or higher for admission to the program.

<sup>2</sup> 3300:111 English Composition I and 3300:112 English Composition II must be completed with a grade of C or better.

<sup>3</sup> If a student is eligible for Precalculus, as needed for later science courses, the department recommends taking Basic Statistics instead of College Algebra. Many physical therapy schools require a statistics class for admission. If a student places below Precalculus s/he may take both College Algebra and Basic Statistics.

<sup>4</sup> While Principles of Biology I and Principles of Chemistry I are required by the major, the Department recommends also taking Principles of Biology II and Principles of Chemistry II. Many physical therapy schools require two semesters of both Biology and Chemistry for admission.

<sup>5</sup> *Critical Thinking* can double as a *Humanities* – see GE course listing (<http://www.uakron.edu/general-education> (<http://www.uakron.edu/general-education/>)) or advisor.

## Sport and Exercise Science Sport Coaching & Strength Training, Certificate

### Certificate in Sports & Exercise Science – Sport Coaching / Strength Conditioning (555204C)

#### Program Contact

*Dr. Rachele Kappler*

*Program Director, Exercise Science, School of Sport Science and Wellness Education*

330-972-6524

kappler@uakron.edu

The following information has official approval of the **School of Sports Science and Wellness Education** and the **College of Health Professions**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a “Certificate in Sports & Exercise Science – Sport Coaching / Strength Conditioning” and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student’s record.

#### Summary

Code	Title	Hours
Required Courses		20
Total Hours		20

#### Required Courses

Code	Title	Hours
5550:352	Strength & Conditioning Fundamentals	3
5550:409	Sport Behavior	3
5550:453	Principles of Coaching	3
5550:460	Practicum in Physical Education <sup>1</sup>	9
5550:462	Legal Aspects of Physical Activity	2
Total Hours		20

<sup>1</sup> 5550:460 Practicum in Physical Education must be repeated for a total of 9 credits.

## Sport and Exercise Science Sport Management, Certificate

### Certificate in Sports & Exercise Science – Sport Management (555207C)

#### Program Contact

*Dr. Matthew Juravich*

*Program Director Sport Studies, School of Sport Science and Wellness Education*

330-972-2308

mjuravich@uakron.edu

The following information has official approval of the **School of Sports Science and Wellness Education** and the **College of Health Professions**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a “Certificate in Sports & Exercise Science – Sport Management” and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student’s record.

#### Summary

Code	Title	Hours
Required Courses		20
Total Hours		20

#### Required Courses

Code	Title	Hours
5550:100	Introduction to Sport Studies	3
5550:420	Fundamentals of Management Strategies in Sport	3
5550:422	Sport Planning/Promotion	3
5550:450	Organization & Administration of Physical Education, Intramural and Athletics	3
5550:452	Foundations of Sport Science, Physical and Health Education	3
5550:460	Practicum in Physical Education <sup>1</sup>	5
Total Hours		20

<sup>1</sup> 5550:460 Practicum in Physical Education must be taken for a total of 5 credits.

## Sport Studies Coach Education, Minor

### Minor in Sports Studies - Coach Education (555235M)

#### Program Contact

*Dr. Matthew Juravich*

Program Director, Sport Studies,  
School of Sport Science and Wellness Education  
330-972-2308  
mjuravich@uakron.edu

The following information has official approval of the **School of Sports Science and Wellness Education** and the **College of Health Professions**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Sports Studies-Coach Education" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

## Summary

Code	Title	Hours
Required Courses		15
Electives		3
Total Hours		18

## Required Courses

Code	Title	Hours
5550:160	Introduction to Coaching	3
5550:375	Sport Performance Principles	3
5550:409	Sport Behavior	3
5550:410	Introduction to Sport Sociology	3
5550:453	Principles of Coaching	3
Total Hours		15

## Electives

Code	Title	Hours
<b>Select 3 credits of the following:</b>		<b>3</b>
5550:395	Field Experience	
5500:440	Literacy in the Content Areas	
5550:480	Special Topics: Physical Education <sup>1</sup>	
Total Hours		3

<sup>1</sup> 5550:480 Special Topics: Physical Education should be an approved coaching class.

## Sport Studies, Coaching Education, BS

### Bachelor of Science in Education, Sport Studies Coaching Education (555235BS)

More on the Sport Management major (<https://www.uakron.edu/sswe/programs/sport-studies/>)

## Contact

Dr. Judith A. Juvancic-Heltzel  
Interim School Director

Sport Science & Wellness Education  
InfoCision 317  
(330)972- 6679  
jaj52@uakron.edu

Dr. Matthew Juravich  
Associate Professor  
Program Director - Sport Studies  
(330)972-2308  
mjuravich@uakron.edu

## Program Description

A Bachelor's degree in Sport Studies with a concentration in Athletic Coaching Education paves the way to a variety of career opportunities in the sport and recreation industry related to coaching.

The following information has official approval of the **School of Sport Science and Wellness Education** and **The College of Health Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Sports Studies Requirement		39-42
Sports Studies Electives		18
Athletic Coaching Education Concentration		16-19
Additional Credits for Graduation *		13-7
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A grade of C or better in all 5550 courses is required for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
Quantitative Reasoning: 3 credit hours		
Speaking: 3 credit hours		
Writing: 6 credit hours		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
Arts/Humanities: 9 credit hours		

Natural Sciences: 7 credit hours

Social Sciences: 6 credit hours

### Tier III: Tagged Courses

Select one class from each of the following subcategories:

Complex Systems

Critical Thinking

Domestic Diversity

Global Diversity

Review the General Education Requirements page for detailed course listings.

Total Hours 34

## Sports Studies Requirement

Code	Title	Hours
5550:100	Introduction to Sport Studies	3
5550:203	Measurement & Evaluation in Physical Education	3
5550:235	Concepts of Motor Learning & Development	3
5550:245	Adapted Physical Education	3
5550:362	Sport History	3
5550:364	Sport Ethics	3
5550:409	Sport Behavior	3
5550:410	Introduction to Sport Sociology	3
5550:424	Sports Leadership	3
5550:450	Organization & Administration of Physical Education, Intramural and Athletics	3
5550:452	Foundations of Sport Science, Physical and Health Education	3
5550:453	Principles of Coaching	3
5550:462	Legal Aspects of Physical Activity	2
5550:480	Special Topics: Physical Education	1-4
or 5550:490	Workshop in Physical Education	
Total Hours		39-42

## Sports Studies Electives

Code	Title	Hours
<b>Select 18 credits:</b>		<b>18</b>
5550:xxx		
Total Hours		18

## Athletic Coaching Education Concentration

Code	Title	Hours
5550:160	Introduction to Coaching	3
5550:375	Sport Performance Principles	3
5550:420	Fundamentals of Management Strategies in Sport	3
5550:460	Practicum in Physical Education	4
Complete 3-6 credit hours:		3-6
5550:480	Special Topics: Physical Education	
Total Hours		16-19

## Recommended Sequence

### 1st Year

Fall Semester		Hours
3300:111	English Composition I <sup>1,2</sup>	3
3750:100	Introduction to Psychology <sup>1</sup>	3
	Natural Science Requirement with Lab <sup>1</sup>	4
	Math Requirement <sup>1</sup>	3
Hours		13

### Spring Semester

3300:112	English Composition II <sup>1,2</sup>	3
3850:100	Introduction to Sociology <sup>1</sup>	3
5550:100	Introduction to Sport Studies	3
	Speech/Oral Communication Requirement <sup>1</sup>	3
	Natural Science Requirement <sup>1</sup>	3
Hours		15

### 2nd Year

Fall Semester		Hours
5550:160	Introduction to Coaching	3
5550:203	Measurement & Evaluation in Physical Education	3
5550:362	Sport History	3
5550:364	Sport Ethics	3
5550:xxx	SSWE Electives	4
Hours		16

### Spring Semester

5550:235	Concepts of Motor Learning & Development	3
5550:245	Adapted Physical Education	3
5550:xxx	SSWE Electives	6
	Arts Requirement	3
Hours		15

### 3rd Year

Fall Semester		Hours
5550:375	Sport Performance Principles	3
5550:452	Foundations of Sport Science, Physical and Health Education	3
	Critical Thinking/Humanities Requirement <sup>3</sup>	3
	Complex Systems Tag Requirement	3
5550:xxx	SSWE Electives	4
Hours		16

### Spring Semester

5550:409	Sport Behavior	3
5550:410	Introduction to Sport Sociology	3
5550:453	Principles of Coaching	3
5550:462	Legal Aspects of Physical Activity	2
	Arts or Humanities Requirement	3
Hours		14

### 4th Year

Fall Semester		Hours
5550:420	Fundamentals of Management Strategies in Sport	3



5550:424	Sports Leadership	3
5550:480	Special Topics: Physical Education	3
5550:480	Special Topics: Physical Education	3
5550:xxx	SSWE Electives	3
Hours		15
<b>Spring Semester</b>		
5550:450	Organization & Administration of Physical Education, Intramural and Athletics	3
5550:460	Practicum in Physical Education	4
5550:480	Special Topics: Physical Education	3
5550:xxx	SSWE Electives	3
Global Diversity Requirement		3
Hours		16
Total Hours		120

- <sup>1</sup> Preadmission courses must average 2.5 GPA with an overall GPA of 2.5 or higher for admission to the program.
- <sup>2</sup> 3300:111 English Composition I and 3300:112 English Composition II must be completed with a "C" or better for admission to the major
- <sup>3</sup> *Critical Thinking* can double as a *Humanities*—see GE course listing (<http://www.uakron.edu/general-education>) or advisor

**Alert:** By the end of your first 48 credit hours attempted, you must have completed your General Education Writing, Quantitative Reasoning, and Speaking requirements.

## Sport Studies, Sport Management, BS

### Bachelor of Science in Education, Sport Studies Sport Management (555236BS)

More on the Sport Management major (<https://www.uakron.edu/sswe/programs/sport-studies/>)

## Contact Information

Dr. Judith Juvancic-Heltzel  
Interim School Director  
Sport Science & Wellness Education  
InfoCision 317  
(330)972-6679  
[jaj52@uakron.edu](mailto:jaj52@uakron.edu)

Dr. Matthew Juravich  
Associate Professor  
Program Director - Sport Studies  
(330)972-2308  
[mjuravich@uakron.edu](mailto:mjuravich@uakron.edu)

## Program Information

A Bachelor's degree in Sport Studies with a concentration in Sport Management paves the way to a variety of career opportunities in the sport and recreation industry that involve leadership, management, coaching, programming, marketing, sales, finance and legal aspects.

The following information has official approval of the **School of Sport Science and Wellness Education** and **The College of Health**

**Professions**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Summary

Code	Title	Hours
General Education Requirements (p. 33)		34
Sports Studies Requirement		41
Sports Studies Electives		18
Sport Studies Sport Management Concentration		19
Additional Credits for Graduation *		8
Total Hours		120

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A grade of C or better in all 5550 courses is required for graduation.

## General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.		
<b>Tier I: Academic Foundations</b>		<b>12</b>
<i>Quantitative Reasoning: 3 credit hours</i>		
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
<b>Tier II: Disciplinary Areas</b>		<b>22</b>
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
<b>Tier III: Tagged Courses</b>		
<i>Select one class from each of the following subcategories:</i>		
Complex Systems		
Critical Thinking		
Domestic Diversity		
Global Diversity		
<i>Review the General Education Requirements page for detailed course listings.</i>		
Total Hours		34

## Sports Studies Requirement

Code	Title	Hours
5550:100	Introduction to Sport Studies	3
5550:203	Measurement & Evaluation in Physical Education	3
5550:235	Concepts of Motor Learning & Development	3
5550:245	Adapted Physical Education	3
5550:362	Sport History	3
5550:364	Sport Ethics	3
5550:409	Sport Behavior	3
5550:410	Introduction to Sport Sociology	3
5550:424	Sports Leadership	3
5550:450	Organization & Administration of Physical Education, Intramural and Athletics	3
5550:452	Foundations of Sport Science, Physical and Health Education	3
5550:453	Principles of Coaching	3
5550:462	Legal Aspects of Physical Activity	2
5550:480	Special Topics: Physical Education	3
or 5550:490	Workshop in Physical Education	
Total Hours		41

## Sports Studies Electives

Code	Title	Hours
<b>Select 18 credits:</b>		<b>18</b>
5550:xxx		
Total Hours		18

## Sport Studies Sport Management Concentration

Code	Title	Hours
5550:366	Sport Communication	3
5550:368	Sport Facility Management	3
5550:370	Financial Aspects of Sport	3
5550:420	Fundamentals of Management Strategies in Sport	3
5550:422	Sport Planning/Promotion	3
5550:460	Practicum in Physical Education	4
Total Hours		19

## Recommended Sequence

1st Year		
Fall Semester		Hours
3300:111	English Composition I <sup>1,2</sup>	3
3750:100	Introduction to Psychology <sup>1</sup>	3
	Natural Science Requirement with Lab <sup>1</sup>	4
	Math Requirement <sup>1</sup>	3
Hours		13
Spring Semester		
3300:112	English Composition II <sup>1,2</sup>	3
3850:100	Introduction to Sociology <sup>1</sup>	3
5550:100	Introduction to Sport Studies	3

Speech/Oral Communication Requirement <sup>1</sup>	3
Natural Science Requirement <sup>1</sup>	3
Hours	15

### 2nd Year

#### Fall Semester

5550:203	Measurement & Evaluation in Physical Education	3
5550:362	Sport History	3
5550:364	Sport Ethics	3
5550:xxx	SSWE Electives	7
Hours		16

#### Spring Semester

5550:235	Concepts of Motor Learning & Development	3
5550:245	Adapted Physical Education	3
5550:xxx	SSWE Electives	3
Arts Requirement		3
Arts or Humanities Requirement		3
Hours		15

### 3rd Year

#### Fall Semester

5550:368	Sport Facility Management	3
5550:462	Legal Aspects of Physical Activity	2
Critical Thinking/Humanities Requirement <sup>3</sup>		3
5550:xxx	SSWE Electives	7
Hours		15

#### Spring Semester

5550:409	Sport Behavior	3
5550:410	Introduction to Sport Sociology	3
5550:452	Foundations of Sport Science, Physical and Health Education	3
5550:453	Principles of Coaching	3
Complex Systems Requirement		3
Hours		15

### 4th Year

#### Fall Semester

5550:420	Fundamentals of Management Strategies in Sport	3
5550:422	Sport Planning/Promotion	3
5550:424	Sports Leadership	3
5550:480	Special Topics: Physical Education	3
5550:xxx	SSWE Elective	3
Hours		15

#### Spring Semester

5550:366	Sport Communication	3
5550:370	Financial Aspects of Sport	3
5550:450	Organization & Administration of Physical Education, Intramural and Athletics	3
5550:460	Practicum in Physical Education	4
Global Diversity Requirement		3
Hours		16
Total Hours		120

- <sup>1</sup> Preadmission courses must average 2.5 GPA with an overall GPA of 2.5 or higher for admission to the program.
- <sup>2</sup> 3300:111 English Composition I and 3300:112 English Composition II must be completed with a "C" or better for admission to the major
- <sup>3</sup> *Critical Thinking* can double as a *Humanities*—see GE course listing ([http://www.uakron.edu/general-education/](http://www.uakron.edu/general-education)) or advisor

**Alert:** By the end of your first 48 credit hours attempted, you must have completed your General Education Writing, Quantitative Reasoning, and Speaking requirements.

## Sport Studies, Sport Management, Minor

### Minor in Sports Studies - Sport Management (555236M)

#### Program Contact

Dr. Matthew Juravich

Program Director, Sport Studies, School of Sport Science and Wellness Education

330-972-2308

mjuravich@uakron.edu

The following information has official approval of the **School of Sports Science and Wellness Education** and the **College of Health Professions**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Sports Studies-Sport Management" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (<https://bulletin.uakron.edu/undergraduate/important-policies/graduation-requirements/#minor-req>) for specific graduation information regarding minors.

### Summary

Code	Title	Hours
Required Courses		15
Electives		3
Total Hours		18

### Required Courses

Code	Title	Hours
5550:100	Introduction to Sport Studies	3
5550:370	Financial Aspects of Sport	3
5550:410	Introduction to Sport Sociology	3
5550:420	Fundamentals of Management Strategies in Sport	3
5550:424	Sports Leadership	3
Total Hours		15

## Electives

Code	Title	Hours
<b>Select 3 credits of the following:</b>		
5550:364	Sport Ethics	3
5550:366	Sport Communication	
5550:368	Sport Facility Management	
5550:409	Sport Behavior	
5550:422	Sport Planning/Promotion	
5550:460	Practicum in Physical Education	
Total Hours		3

## Williams Honors College

### Selective Admission

Students who have been accepted to The University of Akron, who are pursuing a bachelor's program as a full-time student, and who meet the Williams Honors College criteria may apply separately for admission to the Williams Honors College. A student may be admitted to the Williams Honors College upon graduation from high school, upon transfer from another college or university, or as a continuing student at The University of Akron.

Selective admission criteria for the Williams Honors College:

- Separate application for the Williams Honors College
- Pursuing a bachelor's program
- High school grade-point average of 3.5 or above and either an ACT score of 27 or above or SAT of 1280 or above

Other applicants, whether transfer students or continuing undergraduates, must satisfy the following:

- Grade-point average of 3.6 or above
- Completed fewer than 64 credits of college coursework

## Honors Curriculum

### Academic Majors

A Williams Honors College student completes the requirements for a major in one of the colleges awarding bachelor's degrees and enrolls in select honors classes. The Honors Research Project counts as advanced coursework.

### Honors Distribution

In place of The University of Akron General Education requirements, a Williams Honors College student completes an individually selected set of courses to meet the Honors Distribution. The Honors Distribution consists of the following four group requirements totaling at least 25 credits:

#### Group I (The Humanities)

Six or more credits in courses offered by these departments:

- 2040: Black Experience
- 3001: Women's Studies
- 3002: Pan-African Studies
- 3200: Classical Studies
- 3240: Archaeology (depending on the course)
- 3400: World Civilizations

- 3400: Humanities in the Western Tradition
- 3400: History
- 3220: Latin
- 3600: Philosophy

### Group II (Languages and the Arts)

Six credits of English Composition (Honors) and/or other English; and three or more credits from the other departments listed below:

- 2020:222 Technical Report Writing (with certain restrictions)
- 3300: English
- 3500: Arabic
- 3500: Chinese
- 3500: Japanese
- 3520: French
- 3530: German
- 3550: Italian
- 3570: Russian
- 3580: Spanish
- 7100: Art
- 7500: Music
- 7520: Applied Music Lessons
- 7600: Communication
- 7700: Sign Language
- 7800: Theatre
- 7900: Dance

### Group III (The Social Sciences)

Six or more credits in courses offered by the departments below:

- 2040: Human Relations
- 2040: American Urban Society
- 2040: Diversity in American Society
- 3006: Institute for Life-Span/Gerontology
- 3230: Anthropology
- 3240: Archaeology
- 3250: Economics
- 3350: Geography and Planning
- 3700: Political Science
- 3750: Psychology
- 3850: Sociology

### Group IV (The Natural Sciences and Mathematics)

Three or more credits in mathematics, computer science, or statistics; and four or more credits of science courses, including a lab:

- 3100: Biology
- 3150: Chemistry
- 3230:151 Human Evolution
- 3370: Geology
- 3450: Mathematics (135 or higher)
- 3460: Computer Science
- 3470: Statistics
- 3650: Physics

Each student must complete at least 17 Honors credits of coursework prior to graduation. Students should select an honors section of a course

if an honors section is offered. Suggested courses and special cases are noted on the Williams Honors College web page.

## Honors Colloquia

All Williams Honors College students participate in the Honors Colloquium series: Humanities, Social Sciences, and Natural Sciences. These one-semester, three-credit courses are interdisciplinary seminars open only to Williams Honors College students.

Code	Title	Hours
1870:350	Honors Colloquium: Humanities	3
1870:340	Honors Colloquium: Social Science	3
1870:370	Honors Colloquium: Natural Science	3

## Honors Research Project

Williams Honors College students are required to complete an Honors Research Project. This capstone of the WHC student's academic and pre-professional studies begins with a choice of faculty adviser and submission of a proposal in the junior year. Students work intensively, with the guidance of a faculty sponsor, on a thesis, investigation, production, or problem of the student's choice. In designing, completing, and reporting on their Honors Research Projects. The students have unique opportunities to apply their learning and test their abilities. Students should register for Honors Research Project course credit, totaling at least 2 credits but not more than 6 credits, in their major department.

## Other Features

### Scholarships

Students admitted to the Williams Honors College are eligible for academic scholarships awarded by the Office of Admissions, ranging from \$500 to \$6000. The Lisle M. Buckingham/Orr Prestigious Scholarships, which provide tuition and general fees, room and board, for up to eight continual semesters, is awarded to students who are selected after an interview process.

### Advising

An Honors Faculty Adviser is available to advise Williams Honors College students in each academic department. With this Honors Faculty Adviser's guidance, the student plans the Honors Distribution and schedules what is needed to meet departmental, college, and Williams Honors College degree requirements. Professional Honors advisers are also available in the Williams Honors College office to assist with general academic advisement issues, personal and career counseling.

### Priority in Registration and Residence Assignment

Williams Honors College students are among the first students to register for classes each semester. In addition, new Williams Honors College students have exclusive access to the Honors complex, which also houses the Williams Honors College offices, computer facilities, seminar, individual and group study rooms, and meeting spaces for the use of commuting WHC students.

### Access to Graduate Courses

With the permission of the WHC Faculty Adviser and the graduate program instructor, a Williams Honors scholar may enroll in graduate courses for either undergraduate credit or up to 12 credits of graduate credit.

### The Honors Advisory Council

Consisting of faculty representing the colleges granting the bachelor's degree and the Dean of the Williams Honors College, the Honors Advisory

Council is responsible for decisions on the definition of policies and procedures appropriate to the mission of the WHC.

## Interdisciplinary Programs

- Military Studies, Military Science, Minor (p. 541)
- Museum and Archives Studies, Certificate (p. 541)

### Military Studies, Military Science, Minor

#### Minor in Military Science (160000M)

The following information has official approval of the **Office of the Provost**, but is intended only as a guide. Completion of this minor is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Minor in Military Studies" and must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record. Please refer to the University Requirements for Minor Areas of Study (p. 31) for specific graduation information regarding minors.

### Summary

Code	Title	Hours
Required Courses		18
Total Hours		18

### Required Courses

Code	Title	Hours
<b>Select six credits of the following:</b>		<b>6</b>
1100:205	Leadership Principles and Practices	
1600:100	Introduction to the Army and Critical Thinking	
1600:101	Introduction to the Profession of Arms	
1600:111	Introduction to Tactical Leadership Laboratory	
1600:200	Innovative Team Leadership	
1600:201	Foundations of Tactical Leadership	
1600:210	Innovative Team Leadership Laboratory	
1600:211	Foundations of Tactical Leadership Laboratory	
<b>Complete a minimum of 12 credits at the 300/400 level</b>		<b>12</b>
1600:300	Adaptive Team Leadership	
1600:301	Leadership Under Fire	
1600:310	Adaptive Team Leadership Laboratory	
1600:311	Leadership Under Fire Laboratory	
1600:400	Developing Adaptive Leaders	
1600:401	Leadership in a Complex World	
1600:490	Special Topics in Military Science	
Total Hours		18

Note:

- Corresponding lab courses must be taken in conjunction with the military science course.

- With the approval of the Professor of Military Science, substitution of other military related coursework/credit may be made for up to 6 credits (by exception).
- This minor may only be awarded at the time a student receives a baccalaureate degree.

## Museum and Archives Studies, Certificate

### Certificate in Museum and Archives Studies (140001C)

This certificate program provides undergraduate students the opportunity to obtain a working knowledge of the theory and practice of work in museums and archives. Upon completion of the certificate, students will be able to apply the basic skills of the preservation, conservation, presentation and interpretation of archival materials and museum objects.

#### Program Contact

*Dr. Jodi Kearns*

*Director of the Institute for Human Science & Culture*

*330-972-7952*

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The following information has official approval of the **Office of the Provost**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Museum and Archives Studies" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record.

### Summary

Code	Title	Hours
Core Courses		9
Electives		9
Total Hours		18

### Core Courses

Code	Title	Hours
1900:301	Foundations of Museums and Archives I	3
1900:302	Foundations of Museums and Archives II	3
<b>Choose one of the following courses for at least 3 credits:<sup>1</sup></b>		<b>3</b>
1900:425	Practical Experience in Museums and Archives	
3230:397	Anthropological Research	
3300:392	Internship in English	
3400:392	Internship in History	
3750:495	Field Experience in Psychology	
3750:497	Independent Reading/Research in Psychology	
5500:497	Independent Study	
7100:452	Service Learning in Art	
7100:496	Art Internship/Professional Experience	

## Electives

Code	Title	Hours
<b>Complete 9 credits from the following courses:</b>		<b>9</b>
1900:201	Curating Exhibits and Displays in Museums and Archives	
3230:358	Indians of North America	
3230:398	Introduction to Anthropological Data	
3240:300	Historical Archaeology	
3240:420	Archaeology of Ohio	
3240:440	Archaeological Laboratory Methods	
3300:300	Critical Reading & Writing	
3300:390	Professional Writing I	
3300:391	Professional Writing II	
3300:489	Seminar in English <sup>2</sup>	
3400:307	The Ancient Near East	
3400:310	Historical Methods	
3400:470	Ohio History	
3400:484	Museums and Archives	
3400:485	History, Communities, and Memory	
3400:487	Science and Technology in World History	
3750:345	Cognitive Processes	
3750:380	Industrial/Organizational Psychology	
3750:460	History of Psychology	
5100:200	Introduction to Education	
5200:215	The Child, the Family, and the School	
5610:225	Introduction to Exceptionalities	
7100:280	Digital Media	
7100:370	History of Photography	
7100:401	Special Topics: History of Art	
7100:402	Museology	
7600:325	Intercultural Communication	
7900:432	History of Ballet	

<sup>1</sup> Students should consult with an advisor to determine which course should be taken.

<sup>2</sup> Topic must be Digital Projects in the Archives.

# STUDENT SUPPORT AND SUCCESS

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Students attend the University to learn and grow in all aspects of their lives. The University delivers programs and services that are designed to assist our diverse student body to maximize opportunities for academic, social, cultural, personal and physical growth and development. Sensitive to the changing needs of today's college student, The University is committed to helping students meet their individual academic and personal goals. This responsibility will be accomplished by our commitment to these objectives:

- Creating a civil, supportive learning environment
- Providing academic support systems to increase student persistence and encourage satisfactory educational progress
- Moving beyond tolerance to embrace and celebrate the rich dimensions of difference within each individual and within each culture, subculture and identity group, diversity is a core value that embodies inclusiveness and excellence within the University community
- Collaborating with all constituencies within the University to increase enrollment and improve the quality of the student experience
- Encouraging students to assume responsibility for their educational decisions and experiences
- Identifying and addressing student needs in an evolving environment
- Addressing the student and community needs through programs, activities and services

## Student Life and Living

### Off Campus Living & Commuter Resources

[www.uakron.edu/offcampus](http://www.uakron.edu/offcampus) (<http://www.uakron.edu/offcampus/>)  
330-972-5869  
[uazipassist@uakron.edu](mailto:uazipassist@uakron.edu)

Our office is located within ZipAssist, on the first floor of Simmons Hall, in room 120A. Students may stop in for resources and assistance related to commuting, budgeting, and advice for renting. *Join us for FREE programs throughout the semester to meet other commuter students and stay connected to the UA community!*

**WHO we work with:** Students - transitioning from on-campus living to off-campus and commuters; permanent residents; local area landlords; on-campus departments; and parents of off-campus students ([https://www.uakron.edu/audiences/ua\\_parents/](https://www.uakron.edu/audiences/ua_parents/)).

**WHY:** Our purpose is to help you succeed both on and off campus. We are a resource that fosters student engagement and creates an environment on campus to enable student growth.

**WHAT we do:** Assist you with finding off-campus housing; help commuting students when on campus; partner with local businesses to promote the Akron community; and inform students of their rights and responsibilities as a commuter.

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## Student Recreation and Wellness Services

[www.uakron.edu/rec](http://www.uakron.edu/rec) (<http://www.uakron.edu/rec/>)  
Phone: 330-972-2348

Fax: 330-972-6715

With Student Recreation and Wellness Services, there is so much to explore! Their mission is to serve and engage all students to learn, develop and succeed through innovative recreation and wellness opportunities that encourage healthy and balanced lifestyles. The department includes the following:

1. Club Sports,
2. Aquatics
3. Intramurals
4. Outdoor Adventure Center
5. Fitness.

SRWS are comprised of the following facilities:

- Student Recreation & Wellness Center (SWRC): Amenities include a leisure pool with a current river and vortex, spa, jogging track, cardio and strength equipment, five multi-function gyms, group exercise studios, rock climbing wall and adventure equipment rental.
- Ocasek Natatorium (ONAT): Amenities include an Olympic-size swimming pool, racquetball courts and wallyball courts.
- Central Hower South Gym: This gym provides opportunities for informal (drop in) recreation, Intramural Sports, and Club Sports practice and competition.
- Buchtel Field: This grass field located on the corner of Brown St. and Wheeler St. provides outdoor recreation space for students, faculty, and staff.

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## Residence Life and Housing

<http://www.uakron.edu/reslife> (<http://www.uakron.edu/reslife/>)  
330-972-7800  
[reslife@uakron.edu](mailto:reslife@uakron.edu)

The Department of Residence Life and Housing is administratively responsible for managing the University's student housing program. The University provides reasonably priced, clean, convenient and secure residence hall facilities. In addition, the residence hall program is committed to providing a meaningful living/learning environment which directly supports the education, social and personal development of each student. The Department of Residence Life and Housing supervises and manages nine (9) on-campus residence hall facilities accommodating approximately 2,400 students. Students are encouraged to apply for residence hall accommodations as soon as possible.

### Freshman Residential Policy Requirement

The University of Akron is committed to providing a learning environment supportive of its academic mission and complementary to its academic programs. The University acknowledges that national studies find that first-year freshman uniquely benefit from a residence hall experience. Social integration and access to faculty, staff and institutional resources are enhanced through an on-campus residential experience. The University considered and accepted findings that living on-campus positively influences academic persistence and success, including degree completion. For all these reasons, all first-year freshman students at The University of Akron are required to reside in University residence halls for the duration of their freshman academic year at the University as long as space is available. Upon admission to the University, all first-year freshman students will be required to make application for residence in University housing and will be assigned and assessed appropriate room

and board fees, so long as space is available and/or unless the student is subject to one of the exemptions below.

Exemptions to the Freshman Residential Policy include:

- Permanent home residence with parents or legal guardians who reside in: Medina, Portage, Stark, Summit or Wayne counties
- Registered for fewer than 6 credit hours
- 21+ years of age
- Military experience 1+ years (proof of service required)
- Married (proof of marriage required)
- Student is parent with custodial care responsibilities (proof of custody care required)
- Permanent home residence of parents or legal guardians who reside outside Medina, Portage, Stark, Summit, or Wayne counties AND such residence is 25 miles or fewer from main campus (proof of residence is required).
- Other extenuating circumstances, including but not limited to special dietary needs or conditions, cultural or religious needs or accommodations, undue hardship, or an other circumstance(s) in support of an exemption which, if not granted, would undermine or contravene the purpose of the Freshman Residential Requirement Policy

Students seeking exemption from the Freshman Residential Policy should log into MyAkron (<http://my.uakron.edu>) and click on the Manage Housing portal. Here students will find a link to fill out the appropriate online form.

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## The Department of Student Life/The Jean Hower Taber Student Union

<https://www.uakron.edu/studentlife/>  
<https://www.uakron.edu/studentunion/>  
 330-972-7866

Within the Jean Hower Taber Student Union, there are many offices and services to enhance your collegiate experience. The staff is committed to building community through collaborative learning experiences that provide our students the opportunity to engage, serve and lead. The department includes the following:

1. Student Organization Resource Center (SOuRCe) (<https://www.uakron.edu/studentlife/involvement/source/>),
2. serveAkron (<https://www.uakron.edu/studentlife/involvement/serve/>),
3. Fraternity and Sorority Life (<https://www.uakron.edu/studentlife/involvement/fraternityandsororitylife/>),
4. Zips Programming Network (<https://www.uakron.edu/studentlife/involvement/zpn/>),
5. Campus Programs (<https://www.uakron.edu/studentlife/involvement/campusprograms/>),
6. Event Planning Services (<https://www.uakron.edu/studentunion/event-services/theatre.dot>),
7. Student Employment (<https://www.uakron.edu/studentlife/resources/student-employment/>).

The Jean Hower Taber Student Union is comprised of the following facilities:

Amenities include: PNC Bank (<https://www.uakron.edu/studentunion/amenities/bank.dot>); Campus Bookstore (<https://uakron.bncollege.com/shop/uakron/home/>); 7 retail food operations (<https://akron.campusdish.com/LocationsAndMenus/>) (Auntie Anne's, Chic-Fil-A, Freshens, Panda Express, Qdoba, Starbucks, & The Union Market); DocuZip (<https://www.uakron.edu/printing/docuzip.dot>) (shipping and printing services); The Roo Lounge (<https://www.uakron.edu/studentunion/amenities/roo-lounge/>) (game room); and ample study space, lounges (<https://uakron.edu/studentunion/event-services/su-lounges/>), meeting rooms (<https://uakron.edu/studentunion/event-services/meetingrooms.dot>), The Grand Ballroom (<https://uakron.edu/studentunion/event-services/ballrooms.dot>) and Gardner Theatre (<https://www.uakron.edu/studentunion/event-services/theatre.dot>). Other offices located in the Jean Hower Taber Student Union include: Dean of Students Office and Rape Crisis Center (<https://www.uakron.edu/deanofstudents/>), Career Services (<https://www.uakron.edu/career/>), Vice President for Student Affairs (<https://www.uakron.edu/student-success/>) and ESports (<https://www.uakron.edu/esports/>).

## Support Services for Students

### Academic Advising

[www.uakron.edu/advising](http://www.uakron.edu/advising) (<https://www.uakron.edu/advising/>)

New students are required to meet with academic advisors upon initial entry to the University and throughout the first year. Thereafter, academic advisors continue to serve as a resource for students to discuss degree requirements, career goals, major choice, course selection and other academic concerns.

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## Career Services

[www.uakron.edu/career](http://www.uakron.edu/career) (<https://www.uakron.edu/career/>)  
 330-972-7747  
[career@uakron.edu](mailto:career@uakron.edu)

Career Services assists students with career planning by offering programming, events, individual career advising and opportunities to network with employers for experiential learning and employment.

The Career Services staff is knowledgeable regarding current employment trends, in-demand jobs in Ohio, and internship and job search strategies. Career Advisors actively assist students at every stage of their career development. This includes exploring career paths, resume and cover letter writing skills, interview preparation, graduate school preparation, finding experiential learning opportunities such as internships or co-ops, on-campus student employment, and creating a job search strategy.\*

Handshake, UA's online job board, is where students and alumni can apply for positions, connect with employers, register for events, download resources guides, schedule an appointment and more! Log in at <http://uakron.joinhandshake.com> (<http://uakron.joinhandshake.com/>) with your UAnet ID and password.

\***Student Employment** is now coordinated through Career Services and offers on-campus student employment and Federal Work Study opportunities.

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## Counseling and Testing Center

[www.uakron.edu/counseling](https://www.uakron.edu/counseling/) (<https://www.uakron.edu/counseling/>)  
330-972-7082

The Counseling and Testing Center provides comprehensive, culturally competent psychological counseling, career planning, educational counseling, testing, outreach and consulting services to the University community. The Center is staffed by a culturally diverse group of psychologists and psychology trainees. Counseling services are free and confidential to enrolled students. There is a fee for testing services.

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## Office of Accessibility

[www.uakron.edu/access](https://www.uakron.edu/access/) (<https://www.uakron.edu/access/>)  
Phone: 330-972-7928  
TDD: 330-972-5764  
[access@uakron.edu](mailto:access@uakron.edu)

The goal of the Office of Accessibility is to provide reasonable accommodations and a supportive, well-resourced environment to students with disabilities in order to promote student success in the university environment. The mission of the Office of Accessibility is to provide students with full access to and the opportunity for full participation in the academic environment. We are advocates of social justice for students with disabilities and work to end oppression by examining social, cultural and institutional barriers to inclusion of all students. We embrace the diversity of our student body, and celebrate a culturally sensitive and accessible campus through outreach, partnership, and advocacy with all university departments.

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## Student Health Services

[www.uakron.edu/healthservices](https://www.uakron.edu/healthservices/) (<https://www.uakron.edu/healthservices/>)  
330-972-7808

Student Health Services, located in Suite 260 of the Student Recreation and Wellness Center, assists students in achieving their educational and personal goals by addressing their health care concerns while they are enrolled at The University of Akron. Our Advanced Practice Nurses are able to diagnose and treat illness, and perform screenings and physicals that will assist you in getting well and staying healthy.

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## Tutoring and Writing Centers

[www.uakron.edu/tutoring](https://www.uakron.edu/tutoring/) (<https://www.uakron.edu/tutoring/>)

The University has two tutoring centers on campus that provide free assistance to currently enrolled students. The centers are located in Bierce Library and the Polsky Building.

### Bierce Library

- Bierce Writing Commons: For students seeking assistance with a paper assignment for any of their courses, including help with citation styles, visit Bierce Writing Lab
- Bierce Math Lab: Bierce Math Lab offers support for students having difficulty in entry-level math classes. Drop-in hours are available every weekday

- Tutorial Services: Peer tutors are available to students in a wide variety of General Education courses, with emphasis on classes in math and the sciences
- Learning Assistants Program: Specific sections of many courses include a trained Learning Assistant, who holds regular study sessions for students. The Learning Assistant Program provides assistance in the classroom throughout the semester, with professors and learning assistants working as a team encourage student success.

### Polsky

- Tutorial Services are located on the third floor of the Polsky Building, near the College of Applied Sciences and Technology advising office.
- **Polsky Math Lab:** The Polsky Math Lab (<https://www.uakron.edu/tutoring/math-lab.dot>) provides one-on-one assistance to students having difficulty in basic math courses, College of Applied Sciences and Technology math courses and entry level math courses
- **Polsky Writing Lab:** The Polsky Writing Lab (<https://www.uakron.edu/tutoring/writing-lab.dot>) provides one-on-one assistance with all phases of the writing process, including subject development and organization, grammar and citation. Help is available for writing assignments from any course.
- **Polsky Study Skills Lab:** The Polsky Study Skills Lab (<https://www.uakron.edu/tutoring/study-skills-lab.dot>) helps students develop stronger study skills, including reading comprehension, test preparation, note taking, time management and vocabulary development
- Appointments for tutoring sessions are recommended and can be made by calling 330-972-7046. A limited number of walk-in sessions are available on a first-come, first-served basis.

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## ZipAssist

[www.uakron.edu/zipassist](https://www.uakron.edu/zipassist/) (<https://www.uakron.edu/admissions/>)  
330-972-7272  
[uazipassist@uakron.edu](mailto:uazipassist@uakron.edu) ([admissions@uakron.edu](mailto:admissions@uakron.edu))

ZipAssist serves as a **student advocacy and support office** and centralized information hub for the University's campus. Located on the first floor of Simmons Hall (office 120A), ZipAssist has been **intentionally** designed to share **available resources, and provide support** and assistance to help students **persist in their academic pursuits** at the University.

If you are aware of a UA student who is in distress, has intent to leave UA, or would benefit from additional guidance and support...please submit a Help-A-Zip referral at [www.uakron.edu/referral](https://www.uakron.edu/referral/) (<https://www.uakron.edu/referral/>)

The **Help-A-Zip Referral Program** is here to help you navigate campus and can support you directly with concerns related to:

- Financial: Tuition and Fees (FAFSA, account holds, budgeting, textbooks)
- Emergency Financial Assistance (food insecurity, financial crisis)
- Academic concerns (study skills, tutoring)
- Personal/Social (connecting to campus, finding resources)

### Additional Services and Programs:

- Help-A-Zip Referrals
- Retention Grants & Emergency Assistance
- Balancing on a Budget – Financial Education
- Off-Campus Living & Commuter Resources
- Parent & Family Association
- U.S. Passport Acceptance
- Simmons - Information Desk
- Celebratory & Educational Programming
- *...your go-to campus resource!*

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## Referring Students

**There are multiple offices and support services available on campus for students:**

### Help-A-Zip Referral Program

[www.uakron.edu/referral](https://www.uakron.edu/referral) (<https://www.uakron.edu/referral/>)

This early alert and intervention program can help students navigate campus and the ZipAssist Team can support students directly with concerns related to: Financial: Tuition and Fees, Emergency Financial Assistance, Academic concerns, or Personal/Social.

### Title IX

<https://www.uakron.edu/title-ix> (<https://www.uakron.edu/title-ix/>)

As a University, we are committed to ensuring compliance with Title IX, a federal law that prohibits discrimination based on the sex (gender) of employees and students. Assistance is available to those impacted by sexual harassment, sexual violence (sexual assault, intimate partner violence or stalking) or retaliation, regardless of whether any formal administrative or criminal process is initiated.

### CARE Team

<https://www.uakron.edu/care> (<https://www.uakron.edu/care/>)

Crisis – Assessment – Referral – Evaluation (CARE): Helping students in crisis.

UA's CARE Team provides guidance and assistance to students who are experiencing crises, displaying odd or unusual behaviors, or are engaging in other behaviors that may be perceived as being harmful (either to the student individually, or to others).

### Student Conduct & Community Standards

<https://www.uakron.edu/studentconduct/>

The Department of Student Conduct and Community Standards can receive referrals from **any member of the University and surrounding community** who has reason to believe a student or student organization has violated the definitions of misconduct (<https://uakron.edu/studentconduct/code-of-conduct.dot>) in the Code of Student Conduct. The following chart illustrates the most common sources of referrals: Police, Faculty/Staff, Residence Life, Students, and Community.

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## General Student Services

### Admissions

[www.uakron.edu/admissions](https://www.uakron.edu/admissions) (<https://www.uakron.edu/admissions/>)  
800-655-4884  
[admissions@uakron.edu](mailto:admissions@uakron.edu)

### New Student Orientation

[www.uakron.edu/nso/](https://www.uakron.edu/nso/) (<https://www.uakron.edu/nso/>)  
330-972-2622  
[orientation@uakron.edu](mailto:orientation@uakron.edu)

### Bursar

[www.uakron.edu/student-accounts/](https://www.uakron.edu/student-accounts/) (<https://www.uakron.edu/student-accounts/>)  
330-972-5100  
[cashier@uakron.edu](mailto:cashier@uakron.edu)

### Office of Financial Aid

[www.uakron.edu/finaid/](https://www.uakron.edu/finaid/) (<https://www.uakron.edu/finaid/>)  
800-621-3847  
[finaid@uakron.edu](mailto:finaid@uakron.edu)

### Information Technology Services

<https://www.uakron.edu/it/>  
330-972-6888

# ADDITIONAL ACADEMIC PROGRAMS AND SERVICES

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## Study Abroad

<http://www.uakron.edu/study-abroad> (<https://www.uakron.edu/study-abroad/>)

Global awareness and intercultural communication are critical competencies for graduates entering the workforce, regardless of intended profession. Participation in an Education Abroad program is an opportunity to develop these skills while enhancing one's academic and personal growth. Students at The University of Akron have the opportunity to study in almost any country for a few weeks to a full academic year. The International Center at UA cultivates exchange relationships with universities in countries such as France, South Korea, China, Vietnam, Japan, and the Netherlands. UA also maintains affiliation agreements with several outside organizations that offer a wide variety of education abroad opportunities. In addition, several academic units sponsor short-term faculty-led programs. For more information, students may schedule an advising appointment or attend the Education Abroad Fair in September.

## Learning Communities/Living-Learning Communities and Themed Housing

<http://www.uakron.edu/lc> (<https://www.uakron.edu/lc/>)

<http://www.uakron.edu/reslife/llc/index.dot> (<https://www.uakron.edu/reslife/llc/>)

A Learning Community is a group of students who take two to four classes together during their first semester focusing on a specific theme, academic major or interest. Learning Communities are designed to: ease transition into college, build connections and form study groups, experience intentionally designed activities and opportunities, and explore their major or common interests with peers. There are more than 40+ learning community opportunities to explore.

Living-Learning Communities (LLC) and Themed Housing allow students to: access an enhanced residential experience through specialized programs, experience increased faculty and staff contact outside the classroom (for living-learning communities), experience greater academic support opportunities, foster a greater connection to the University, and build lifetime friendships. From Outdoor Adventure to ROTC; Business to Pre-Med, there are LLCs and Themed Housing opportunities available to hundreds of students each year.

## Academic Achievement Programs

<https://www.uakron.edu/aap/>

Academic Achievement Programs is dedicated to the mission of preparing Akron middle and high school students for greater access and success in higher education. Systematic academic, social and cultural experiences are provided through four distinct programs during the academic year, along with a six week summer enrichment component. These experiences expand and enhance their academic instruction and adds value to the overall development of students. Activities are intended to empower students to make better decisions at home, in school and in

personal relationships, which will help improve their self worth, impact high school graduation rates and facilitate the successful admission to and graduation from post secondary educational institutions.

## The Reserve Officer Training Program (Army ROTC)

[https://www.uakron.edu/academics\\_majors/undergraduate\\_programs/rotc.dot](https://www.uakron.edu/academics_majors/undergraduate_programs/rotc.dot)

The University of Akron supports and promotes a robust officer training program – Army Reserve Officer Training Corps (ROTC). ROTC produces leaders for the Army while building better citizens for America. ROTC is a military educational program designed to give men and women the opportunity to become officers while earning a college degree. The program requires a set of classes and labs in addition to your other college courses. Typically, ROTC credits can be applied as general elective credits toward your degree. Students can also earn a Military Science Minor by completing 18 credit hours. ROTC offers generous scholarships, leadership training, and many other experiences simply not available through any other college course. ROTC classes and leadership training will help you sharpen your analytical skills; you'll learn to evaluate changing conditions and make appropriate decisions. Upon successful completion of the prescribed coursework and training, students receive a commission in either the active duty Army, Reserves or National Guard.

## Office of Multicultural Development

<https://www.uakron.edu/omd/>

The mission of the Office of Multicultural Development (OMD) at The University of Akron is to prepare students to live and excel in a global society. As an advocate for equity and social justice, they ensure that students of diverse ethnic, social and cultural backgrounds achieve their fullest potential in an affirming environment which supports access, retention, and successful completion of goals. This mission is characterized by extensive student-focused collaboration with all segments of the campus community.

Services of The Office of Multicultural Development include our Peer Mentoring program, Learning Communities and academic advising. Peer Mentoring, one-on-one relationship between an experienced student-mentor dedicated to student success. Our Peer Mentors go through intense and thorough training in order to meet the needs of students of all backgrounds and provide them a safe, stable and confidential place to be mentored. OMD's Learning Communities help to support the growth, retention, support and completion of a bachelors program by students from various ethnic, social and cultural backgrounds. OMD also provides first-year advising as a wrap-around services for students as well as a two-day New Student Orientation experience known as our ADVANCE New Student Orientation program.

The Office of Multicultural Development is also heavily involved with the planning and execution of the nationally recognized Black Male Summit which is held each spring, and created for educators, employers, parents/guardians of black males and other males of color in an effort to support this vulnerable demographic in the successful acceptance, attendance and completion of high school and college.

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## Adult Focus

<https://www.uakron.edu/uaf/>

Adult Focus is an academic support service designed to assist adults and military veterans as they transition in their role as students to The University of Akron. It offers academic support, transitional coursework, advocacy, scholarship referral and assistance throughout their academic career. Any student, regardless of age, whose primary life roles and responsibilities exist independent of the University and take precedence over the role of student in times of crisis or stress is considered to be an adult student.

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## Workforce Training Solutions

<https://www.uakron.edu/uabs/>

Workforce Training Solutions offers professional certification and noncredit courses to businesses, organizations and individuals. Classes are scheduled weekdays, evenings and weekends. Many courses are approved by professional, national and state organizations for certificate and license re-certification. More than 300 classroom and online courses are available each semester.

Workforce Training Solutions is a full service consulting firm operating from The University of Akron. We exist as a liaison between the immense collection of resources within the University, and our region's corporations of all sizes and industries. Our value, both to the University and to our clients, is a powerful and customizable solution-based service that identifies development opportunities and produces programs and solutions that can only come from the expertise of The University of Akron.

Workforce Training Solutions instructors customize and conduct employee training onsite for companies and organizations.

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## Additional Locations

[https://www.uakron.edu/academics\\_majors/locations.dot](https://www.uakron.edu/academics_majors/locations.dot)

The University operates several educational centers in our surrounding communities.

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## University Partnership Program - Lorain County Community College (LCCC)

<http://www.lorainccc.edu/UP> (<https://www.lorainccc.edu/UP/>)

The University Partnership Program brings colleges and universities, including The University of Akron, to the LCCC campus to offer the coursework and programs that students need for bachelor's and master's degrees. Degrees offered parallel those that LCCC offers, enabling students to move into higher level degrees without leaving LCCC. More information is available by calling the University Partnership at 800-995-5222 ext. 4949.

# FEES AND EXPENSES

Fees subject to change without notice.

## Student Expenses

Following are comprehensively outlined fees for students at the University who are studying for credit and noncredit in all areas of instruction. Included also are the additional expenses required for special academic services available to students and other miscellaneous fees, such as application fees. It is the responsibility of the student to know the correct amount of all fees, including the non-Ohio resident surcharge.

In any question concerning fees, surcharges or residence, it is the responsibility of the student, parents or court-appointed guardian to furnish such proof as may be required by The University of Akron. A student who is in doubt about residency status should consult with the University registrar.

It is the responsibility of the registrar to assess fees and surcharges at the time of registration; information given by the student at that time is used in the assessment. Each registration is later audited by the University auditor, and appropriate additional charges or refunds will be made.

All fees and surcharges are due at the time of registration or on the specified fee payment deadline. The status of the student as of the opening day of the semester or session will determine the final, correct amount of fees and surcharges.

An Installment Payment Plan for tuition and fees is available to all students.

## Tuition and Fees

Tuition and fee information for Undergraduate and associate degree programs is available on the Office of Admissions website ([https://www.uakron.edu/admissions/undergraduate/tuition\\_fees.dot](https://www.uakron.edu/admissions/undergraduate/tuition_fees.dot)).

### Admission Application Fees (Nonrefundable)

Fee	Cost
Undergraduate	\$50
Entering postbaccalaureate or graduate	\$50
Transient students (first enrollment only)	\$50
International Students (non-refundable)	\$60

### Orientation Program Fees

Fee	Cost
New Student Orientation Program: University Commitment Fee (Confirms new student intent to attend orientation and enroll in classes for next academic term. Placement tests taken on UA campuses are included in this fee.)	\$145
International Student Orientation	\$145

Placement Test Fees: Individual retesting and external users \$25/test

## Registration and Other Related Fees

Fee	Cost
Administrative Fees, Assessed each term (all students except high school students taking University courses; transient, unclassified and special students; and undergraduate students who have completed 96 credits or more)	\$30/term
Late Payment Fees (charged to students who have not paid for tuition and mandatory fees by the invoice due date)	\$100
Co-op Course Fee	\$55
Alternative Credit Fees	
Bypassed Credit, per credit	\$5
CLEP, per test	\$25 (plus ETS fee paid to ETS)
Credit by Examination (undergraduate and postbaccalaureate) per credit	\$30
TestPrep Tutorial	\$100 per course

## Facility Fee

Fee	Cost
Student Facility Fee	\$18.55/credit hour up to a maximum of 12 credit hours

## General Service Fee

Fee	Cost
Akron Campus & College of Applied Science and Technology pursuing a bachelor's degree	\$35.70/credit hour up to a maximum of 12 credit hours
Akron Campus pursuing an associate's degree in College of Applied Science and Technology	\$27.60/credit hour up to a maximum of 12 credit hours
Medina County University/Center Wayne College	\$7.34/credit hour up to a maximum of 12 credit hours

## Technology Fee

Fee	Cost
Academic Level: 0-95.5 Credits	\$13.20/credit hour
Academic Level: 96 Credits or More	Exempt

## Residence Hall Refunds

### Refund/Release and Forfeiture Policy

A contract for housing accommodations at The University of Akron upon being breached by the student or otherwise terminated by The University of Akron is subject to the following refund provisions:

A **full refund** of room fees and the Prepayment under the following circumstances:

- Graduation of the student from The University of Akron;
- Academic dismissal of the student from The University of Akron;

- Non-attendance or complete withdrawal by the student from The University of Akron prior to the start of the Contract term (except the advance rental payment of one hundred fifty dollars which shall be forfeited). The one hundred fifty dollar deposit be refunded for new entering students and new transfer students when notification of intent to break Contract is received prior to the fifteenth of May for the following fall semester and the fifteenth of October for Contracts initiated for spring semester; or
- In the event mandatory or recommended participation in academic programs of The University of Akron requires the student to commute regularly beyond the Akron metropolitan area (i.e., student teaching or co-op assignments)

Once occupancy has been established (i.e. acceptance of room keys and signing occupancy document) and the student remains enrolled at The University of Akron, the student must petition for contract release and the student will only be released if able to demonstrate extenuating circumstances.

If the student is released from the contract, either by petition or non-enrollment for the then current term, the student will be subject to a refund schedule based on a percentage refund from the first day of class through the twenty-eighth calendar day. In addition, if the Student is granted release from the contract after taking occupancy during the fall term or prior to the twenty-eighth calendar day of the spring term, a cancellation fee of two hundred dollars will be charged.

Refund policy for housing charges:

- First day of class through day seven equals ninety percent refund;
- Day eight through day fourteen equals eighty percent refund;
- Day fifteen through day twenty-one equals sixty percent refund;
- Day twenty-two through day twenty-eight equals forty percent refund; and
- Day twenty-nine or after equals zero percent refund.

The housing refund date will be established based on the date that the Student officially surrenders use of the university housing and returns all appropriate keys (room and apartment keys) to university staff and satisfies university mandated housing separation requirements and procedures.

A student shall remain responsible for the full cost of the then-current residence hall Contract term if the University, at its sole discretion, terminates the contract:

- For reasons related to the orderly operation of the residence halls, or for reasons relating to the health, physical or emotional safety and well-being of the persons or property of students, faculty, staff or University property; or
- In the event that the student is dismissed or suspended from The University of Akron for disciplinary reasons in accordance with law or the rules and regulations of the Board of Trustees, or, if the student is suspended or placed on terms of disciplinary probation in accordance with law or the rules and regulations of the Board of Trustees, whereby such terms of probation prohibit the student from residing in University housing accommodations

**Notice requirements.** All notices of intent to break this contract must be submitted in writing to the Department of Residence Life and Housing. If the student is under the age of eighteen years, the written notification of termination must be co-signed by the student's parent or legal guardian.

**No-Show Policy.** The University will hold a student's assignment until close of business on Wednesday of the first week of each semester. At that time the room will be reassigned, student's Contract will be cancelled and Prepayment will be forfeited, or cancellation fee incurred, whichever is applicable.

## Audit and Non-Credit (Developmental) Courses

The cost is the same whether a course is taken for credit non-credit (developmental) or audit.

## Miscellaneous Fees

### Career Advantage Services Fees

Fee	Cost
All undergraduate students except students with 96 credits or more	\$3/credit hour

### Career Services

Fee	Cost
Registration Fee for alumni and reciprocity (covers 12-month cost of employer referrals)	\$45

### LeBron James Family Foundation College of Education

Fee	Cost
Tk20 Portfolio	\$100

### Counseling, Testing and Career Center

Fee	Cost
Cognitive Functioning and Academic Achievement Tests	\$55
Learning Disability Battery	\$100
ACT Residual Test	\$60
ACT Residual Test Standby (\$20 plus \$60 ACT fee)	\$80
College Level Examination Program (CLEP)	\$25 (plus ETS fee paid to ETS)
Educational Testing Services Fee	(Currently \$80; subject to change throughout the year. Fee is paid directly to ETS.)
Correspondence Testing	\$20/hr
Miller Analogies Test	\$90
Professional Consultation Fee per hour	\$120
Individual Administration of ACT Residual Test	\$155
Psychological and Career Tests	\$10
Psychological Assessment (not part of Counseling - an independent test)	\$50
Attention Deficit Disorder (ADD/ADSD) Assessment	\$150
CDs (For relaxation, stress management, etc.)	\$1

### Dance Institute Fees

Fee Description	Period	Amount
Placement Fee with Pre-Registration		\$20.00

Placement Fee without Pre-Registration		\$30.00
New Student Registration Fee		\$10.00
<b>Summer Curriculum (1-4 weeks)</b>		
Advanced	4 weeks	\$1,020.00
	3 weeks	\$800.00
	2 weeks	\$538.00
	1 week	\$318.00
Intermediate II	4 weeks	\$900.00
	3 weeks	\$710.00
	2 weeks	\$510.00
Intermediate I	4 weeks	\$848.00
	3 weeks	\$662.00
	2 weeks	\$476.00
Beginner/Advanced-Beginner	2 weeks	\$311.00
Afternoon Beginner/Advanced-Beginner Arts Camp w/ dance (2 weeks)		\$140.00
Afternoon Arts Camp only (2 weeks)		\$204.00
Pre-Ballet/Storybook Dance (one 45-minute classes/week)	4 weeks	\$55.00
Tap (2 classes/week)		\$110.00
Adults:(one class/week)	5 weeks	
Ballet/Jazz/Modern - 1.5 hours		\$70.00
Pilates -based Mat Exercise/Hip-Hop/ Ballet - 1 hour		\$57.00
Summer Single Classes		\$15.00
<b>Program Discounts (only one type of discount may be applied)</b>		
UA Faculty & Staff Family		20% off per person
Multiple Child/Family Member Attending		25% off 2nd, 30% off 3rd
UA Dance Majors/Minors		20% off full summer program and/or single class
<b>Academic Year Curriculum (two 16-week semesters total)</b>		
Advanced	9 classes/week	\$3,100.00
Intermediate II	7 classes/week	\$2,624.00
Intermediate I	6 classes/week	\$2,318.00
Advanced-Beginner	4 classes/week	\$1,722.00
Beginner B	3 classes/week	\$1,304.00
Beginner A	2 classes/week	\$872.00

Pre-Ballet	1 class/week	\$438.00
Storybook Dance	1 class/week	\$438.00
Tap	1 class/week	\$438.00
<b>Adults:</b>		
Ballet/Jazz/Modern - 1.5 hours	1 class/week	\$448.00
Pilates-based Mat Exercise/Hip-Hop/ Ballet - 1 hour	1 class/week	\$360.00
Academic Year Single Classes		\$15.00
Singles Classes for UA Dance students		\$7.50
<b>Program Discounts</b>		
UA Faculty & Staff Family		20% off per person
Multiple Child/Family Member Attending		25% off 2nd, 30% off 3rd
Dance Institute Refund Service Charge (per refund)		\$25.00

This fee would be charged to any student or student's parent who has paid tuition and requests a refund due to an injury or an extenuating circumstance. (No charge would be incurred for crediting the tuition to the time period when the student returns.)

Late Pick-up Fees (beginning 10 minutes after the end of the last class) <sup>1</sup>	\$15 per hour
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<sup>1</sup> For students who are not picked up following the last class of the day--must be paid at the time of pickup or before the beginning of the next scheduled class.

### Developmental Support Fees

Fee	Cost
Charged to all students enrolled in Developmental courses	\$12.50/credit hour

### Engineering Infrastructure Fee – All Engineering Courses

Fee	Cost
Infrastructure Fee – all engineering courses	\$26/credit hour

### English Language Institute

Fee	Cost
Late Registration	\$50
Application fee	\$50

Materials fee, per level, per semester/8-week session \$50/40

### Health Services

Fee	Cost
Allergy injections	\$6
Immunizations	\$24-\$61
Laboratory Tests (avg. costs for most common tests)	\$6-\$196
Prescribed Medications/Treatments	\$3.60-\$43.20
Visit fee	\$15

### ID Fees

Fee	Cost
ZipCard Replacement	\$20

### Insufficient Funds Fees

Fee	Cost
"Insufficient Funds" or returned check charge and VISA/Mastercard returns for Insufficient Funds	\$25

### International Programs

Fee	Cost
Guest Travel Abroad Participant Fee	\$300

### Liability Fees

Fee	Cost
Liability Insurance Fee, Student Nursing	\$15
Liability Insurance Fee, Allied Health Technology/Surgeon's Assistant	\$61.50
Liability Insurance Fee, Allied Health Technology/Other than Surgeon's Assistant	\$15

### Library Fees (Bierce, Auburn Science and Wayne)

Fee	Cost
Library Fee (excluding seniors, Law School and Wayne College students); College of Applied Science and Technology associate students 0-95.5 credit hours	\$4/credit hour; \$3/credit hour
Photocopies and printing charges	\$.07/page

### Overdue Materials

UA students, undergraduate (\$20 maximum)	.10/day
Non-University borrowers (\$20 maximum)	.25/day
Replacement	Cost plus \$20 surcharge
Fines for recalled materials	\$1/day
Fines for hourly reserve materials	\$2/hour (\$50 max.)
Fines for daily reserve materials	\$2/hour (\$50 max.)
Fines for OhioLINK loans	\$.50/day (\$50 max.)
Fines for laptop computer late fee	\$10/hour (\$100 max.)

### Archival Services

Photograph for personal use	\$5 + costs
Photograph for commercial use	\$75 + costs

Research time by assistant (min. 2 hrs) \$20/hour

Photocopying time by assistant (min. 2 hrs)	\$15/hour + copies
Photocopies	\$.25/copy + postage
Film footage for commercial use (price varies)	\$45/second

### Research Service (1-hour minimum charged)

UA students, faculty and staff	At cost
Research fee (charged in 15 min. increments)	\$90/hour

### Nutrition Center

Fee	Cost
Minimum Fee	\$5
Initial Comprehensive Nutrition Assessment	\$80
Individual 50-minute session	\$50
Additional quarter session	\$12.50
Additional half session	\$25
Follow-up Nutrition Session	\$25
Nutrition Screening	\$15
Computerized Nutrient Analysis	\$30/day
Group Sessions (per session, per member)	\$15

### Special Services

Indirect Calorimetry	\$75
Body Composition Testing (BIA, skinfold measurement)	\$15
Nutrition Education Presentation	\$120
Menu Planning Consultation	\$75
Computerized Menu Analysis (per hour)	\$75
Food Systems Management Consultation (per hour)	\$75
Sports Nutrition Testing & Consultation (per-hour)	\$80

### Athletic Team Performance

<b>&amp; Recovery Service</b> (Includes three 50-minute group sessions, three screening sessions and two on- or off-season education presentations)	
Up to 20 athletes	\$2,000
21 or more athletes	\$100 each additional athlete
Nutrition Education/Instruction Materials	Acquisition cost x 1.5

(A sliding scale or the Health & Human Services guideline on poverty will be used if the client has no insurance and if the family income and the number of dependents indicate there is a need.)



**Off-Campus Student Services**

Fee	Cost
Locker Rental Fee per semester	\$25
Damaged or Lost Equipment Fee	Cost + 10%

**Student Conduct and Community Standards**

Fee	Cost
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**Administrative Fees**

Finding of Responsibility:

Agreement reached during Fact Finding \$50

Agreement reached through Hearing Board Process \$75

**Disciplinary Fines**

Restitution for lost/stolen/damaged while in possession (max) Cost plus 20%

Substance Abuse Violations:

Alcohol use/possession/distribution 1st, 2nd, 3rd offense \$50, \$100, \$150

Drug/controlled substance use/possession 1st, 2nd, 3rd offense \$100, \$150, \$250

Serious Violations of the Code of Conduct

Violent/threatening behavior \$150

Theft \$150

Weapons \$150

Drug sales/distribution, 1st offense \$150

Other Fines: Impose a fine on the student which corresponds to the nature of the violation, not to exceed the maximum value of \$250.

For example, fines may be imposed for issues such as students who host or promote large parties or events that are not in compliance with Akron city regulation and/or result in negative consequence for the university community.

**Student Recreation and Wellness Services**

Full details including the full list of membership and guest fees can be found at the Student Recreation and Wellness Services (<https://www.uakron.edu/rec/>) website

**University Police Department**

Fee	Cost
Police Service Calls (for vehicle assistance)	\$10
Special Events Detail (3 hour minimum)	\$44/hour
Police Report – 1-5 pages	No Charge
6 or more pages	.05/page
Fingerprinting – Students, faculty and staff	\$5/card
All others	\$15/card
Photo	\$5

Web-based records check: BCI only/ \$29/\$31/\$56  
FBI only/BCI and FBI

**Parking and Transportation Fees**

Students and employees who desire a twenty-four hours per day, seven days per week parking privilege may apply for a permit and be assessed an optional parking permit fee for such privilege. The University may limit the locations that such permit shall be valid, and may limit the number of such permits that will be issued per year, per academic term, or other period. Qualified residence hall students will receive this parking privilege pursuant to the terms of their residence hall contract, without the necessity of paying an additional optional parking permit fee.

Complete student transportation information and instructions and costs of obtaining a parking permit can be found on the Parking Services website (<https://www.uakron.edu/parking/>).

**Enrollment Cancellation**

An undergraduate student whose financial account shows an amount due after their assigned due dates risks having all or part of their registration for current and/or future terms cancelled; however, non-payment of fees does not guarantee enrollment cancellation. If a student enrolls in classes and then decides not to attend, it is still the student's responsibility to drop their classes to ensure the proper credit toward fees for the term, as defined by the current refund policy.

How to drop a class (<https://www.uakron.edu/zipassist/academics.dot?opane=9>)

**Payment Plans and Options**

Payment plans are available to help those students who cannot pay the full charges for tuition, on-campus housing and/or the meal plan at the start of the semester. To read more and sign up, visit the Payment Options portion of the Office of Student Accounts website ([https://www.uakron.edu/student-accounts/payments\\_and\\_billing/payment-options.dot](https://www.uakron.edu/student-accounts/payments_and_billing/payment-options.dot)).

**Student Health and Accident Insurance**

All registered students taking six or more credit hours, doctoral students, ELI students and other special academic program students are eligible to enroll in a student health insurance plan offered by the Leonard Insurance Company on behalf of the University. All registered international students taking credit hours are required to purchase this insurance plan unless proof of comparable coverage is furnished. Visit the Student Health Insurance page (<https://www.uakron.edu/healthservices/insurance/>) located within the Student Health Services website.

**Veterans Information**

The mission of the Center is to provide comprehensive enrollment and referral services to veterans and their families, making the transition to The University of Akron as smooth as possible. Full veteran information can be found at the Military Services Center website (<https://www.uakron.edu/veterans/>).

**Regulations Regarding Refunds**

The Office of Student Accounts helps students and parents by addressing questions and concerns about refunds if needed. Complete details are located on that website (<https://www.uakron.edu/student-accounts/refunds/>).

# FINANCIAL AID

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Financial aid programs were developed by federal and state governments, as well as by institutions of postsecondary learning to assist students from families with limited resources in meeting their educational expenses. The primary purpose of financial aid is to ensure that no person is denied the opportunity of attending college because of financial need.

Generally, financial aid is provided in four forms: scholarships, grants, loans and work. To apply for all types of state and federal aid and programs, complete the Free Application for Federal Student Aid (FAFSA). You will be required to complete a separate application for University and non-university scholarships.

## Mission Statement

The Mission of The University of Akron's Office of Student Financial Aid is to help students achieve their educational potential. This office accomplishes this by:

- Adhering to state and federal regulations as well as University policies regarding the awarding of aid funds
- Being committed to removing financial barriers for those who wish to pursue postsecondary learning
- Making every effort to assist students with financial need
- Having an awareness of the issues affecting our students and advocating for our students' interests at the institutional, state and federal levels
- Educating our students and their families by providing quality consumer information
- Respecting the dignity and diversity of each one of our students by providing services that do not discriminate on the basis of race, gender, ethnicity, sexual orientation, religion, disability, age or economic status
- Ensuring the confidentiality of our students' information
- Assuring the uniform application of all needs analysis formulas consistently across The University of Akron's full population of financial aid applicants
- Committing to the highest level of ethical behavior by avoiding conflict of interest or the appearance of such a conflict

Maintaining the highest level of professionalism reflects the Student Financial Aid office's commitment to the goals and mission of The University of Akron.

The Financial Aid website (<https://www.uakron.edu/finaid/>) will serve as your guide. It has all the information needed to get started with financial aid applications and learn about the process of using aid to pay for college.

# RESEARCH CENTERS AND INSTITUTES

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- Akron Global Polymer Academy (p. 555)
- Akron Polymer Technology Services (p. 555)
- Center for Advanced Vehicles and Energy Systems (p. 555)
- Center for Conflict Management (p. 556)
- Center for Emergency Management and Homeland Security Policy Research (p. 556)
- Center for Environmental Studies (p. 556)
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- Center for Silver Therapeutics Research (p. 557)
- Center for Statistical Consulting (p. 557)
- English Language Institute (p. 557)
- Fisher Institute for Professional Selling (p. 557)
- Gary L. and Karen S. Taylor Institute for Direct Marketing (p. 558)
- H. Kenneth Barker Center for Economic Education (p. 558)
- Institute for Biomedical Engineering Research (p. 558)
- Institute for Global Business (p. 558)
- Institute for Human Science and Culture (p. 559)
- Institute for Life-Span Development and Gerontology (p. 559)
- National Center for Education and Research on Corrosion and Materials Performance (p. 559)
- Nutrition Center (p. 559)
- Ray C. Bliss Institute of Applied Politics (p. 559)
- The Drs. Nicholas and Dorothy Cummings Center for the History of Psychology (p. 559)
- The EX[L] Center for Experiential Learning (p. 560)
- The University of Akron Archival Services (p. 560)
- Training Center for Fire and Hazardous Materials (p. 560)
- University of Akron Magnetic Resonance Center (UA/MRC) (p. 560)
- William and Rita Fitzgerald Institute for Entrepreneurial Studies (p. 561)
- Workforce Training Solutions (p. 561)

## Akron Global Polymer Academy

The Akron Global Polymer Academy provides opportunities for teachers and students of all ages to experience the exciting world of polymers through a variety of offerings, including: in-school visits featuring engaging hands-on demonstrations, polymer family science nights, field trips to our exciting research college, and many polymer-related classroom resources available through this educational website.

AGPA also connects with K-12 students through an assortment of STE(A)M (Science, Technology, Engineering, Art, and Mathematics) initiatives, like: the Akron Regional Science Olympiad (<https://www.uakron.edu/polymer/agpa-k12outreach/science-olympiad/>), the Western Reserve District 5 Science Day (<https://uakron.edu/wrsd/>), our annual Rubber Band Contest for 5th-8th graders ([http://](http://rubberbandcontest.org/)

[rubberbandcontest.org/](http://rubberbandcontest.org/)), as well as an ongoing STEM research experience for high school students.

Our K-12 outreach group also provides professional development for teachers. One example is through our Research Experience for Teachers (<https://www.uakron.edu/polymer/agpa-k12outreach/research-experience-for-teachers/>) (RET) program, which is an NSF funded program that brings teachers into the College of Polymer Science and Polymer Engineering's cutting-edge research laboratories, where they work alongside an actual research group. RET teachers work on developing their own research inspired lesson plans, designed to bring their cool research experiences back into their classrooms!

Website: Akron Global Polymer Academy (<https://www.uakron.edu/cpspe/agpa-k12outreach/>)

## Akron Polymer Technology Services

At Akron Polymer Technology Services (formerly the Akron Polymer Training Center and Applied Polymer Research Center), our mission is to advance all sectors of the polymer industry through the delivery of training, testing, and processing services that enrich learning and optimize industrial performance. Services are enhanced by the capabilities within The University of Akron and by developing domestic and international partnerships with business, industry, community, and other institutions of higher education.

If you have questions, please contact:

Dr. Crittenden (Critt) Ohlemacher  
330-972-7265  
[cjohlem@uakron.edu](mailto:cjohlem@uakron.edu).

Website: Akron Polymer Technology Services (<https://www.uakron.edu/aps/>)

## Center for Advanced Vehicles and Energy Systems

The Center for Advanced Vehicles and Energy Systems (CAVES), established in 2005, focuses on the research, development and dissemination of advanced automotive technology and alternative energy systems and their enabling technologies. The Center's efforts are geared toward product-oriented research, development and commercialization of efficient cost-effective solutions to alternative transportation systems, advanced energy sources and storage and their real-time control platforms. In addition to providing research services to industry, private and government agencies, CAVES also provides knowledge dissemination through symposia, lectures, seminars and project-oriented graduate and undergraduate design experiences.

The Electrical and Computer Engineering and Mechanical Engineering departments have graduate and undergraduate students and faculty currently involved in hybrid vehicle technology, energy systems and related areas. CAVES' activities are housed within a number of facilities, including the Power Electronics Laboratory, the Controls Research Laboratory, the Battery Research Facility, the Hybrid Electric Facility and the Pervasive Automation Laboratory, among others.

Website: Center for Advanced Vehicles and Energy Systems (<https://www.uakron.edu/engineering/research/caves.dot>)

## Center for Conflict Management

The University of Akron has a long and proud history of the interdisciplinary study of conflict because understanding the nature of conflict is the first step toward reducing conflict and violence at home, in our communities, workplaces and schools. The Center for Conflict Management, jointly administered by the departments of Political Science and Sociology, seeks to build on that tradition by combining courses in several departments to enhance the capacity of students to effectively work toward reducing the harms associated with conflict and violence—from interpersonal to international.

For more information, please contact:

Dr. Bill Lyons  
202 Olin Hall  
330-972-5855  
wtlyons@uakron.edu

Website: Center for Conflict Management (<https://www.uakron.edu/conflict/>)

## Center for Emergency Management and Homeland Security Policy Research

The Center for the Emergency Management and Homeland Security Policy Research is dedicated to create a supportive environment for research, academics and outreach in emergency management and homeland security. It supports and encourages multidisciplinary endeavors in these fields that make a positive contribution to society. The Center is a collaborative partnership between The University of Akron and The Ohio Emergency Management Agency.

The Center focuses on policy and its interaction with the function of emergency management. This policy analysis and research relates to contemporary emergency management questions and issues on both state and national levels. Project areas include terrorism preparedness, business and industry continuity, disaster response and recovery assessment, as well as management practices relating to crises and disasters.

Website: Center for Emergency Management and Homeland Security Policy Research (<https://www.uakron.edu/cem/>)

## Center for Environmental Studies

The University of Akron's Center for Environmental Studies, located in Crouse Hall 215, was founded in 1970 to encourage multidisciplinary approaches to address environmental issues and resolve environmental problems.

The Center is a cooperative effort of several departments including Biology, Chemistry, Chemical Engineering, Civil Engineering, Economics, Education, Geosciences, History, library, Political Science, and Sociology. There are about ninety affiliated faculty.

The Center provides opportunities for scientists, educators, students and special interest groups to work together on issues of environmental concern.

In recent years the Center has: directed an undergraduate and graduate certificate program of study; fielded responses to local inquiries regarding

environmental problems; and sponsored workshops and seminars on environmental issues

Website: Center for Environmental Studies (<https://www.uakron.edu/envstudies/>)

## Center for Family Studies

The Center for Family Studies, established in 1979, was designed to stimulate and encourage the interdisciplinary study of the family. It serves both the University and the community by fostering collaboration between faculty, students, practitioners and community leaders on curriculum development, educational conferences and seminars (<https://www.uakron.edu/cfs/events/Seminars/>), research (<https://www.uakron.edu/cfs/events/research/>) and training (<https://www.uakron.edu/cfs/events/Trainings/>) and public policy relevant to important family issues. The Center is a member of the Sloan (Foundation) Work and Family Research Network and can supply current and credible information on work-family issues to its constituencies.

The Center is represented by faculty from a variety of disciplines. It also includes leaders from various community systems, such as schools, hospitals, courts, churches, mental health, social and health care agencies. In addition, the Center has a fellows program in which outstanding faculty and community leaders are named as fellows, adjunct fellows or senior fellows.

The Center offers certificates in the following specialty areas: Parent Education (<https://www.uakron.edu/cfs/Certificate-Programs/parent-education/>), Divorce Mediation (<https://www.uakron.edu/cfs/Certificate-Programs/divorce-mediation/>) and Home-Based Intervention (<https://www.uakron.edu/cfs/Certificate-Programs/home-based-intervention/>).

Any student, faculty member or community person interested in family issues is invited to contact the director (<https://www.uakron.edu/cfs/contact-us/>) to learn how they can participate or learn more about the Center's activities.

Website: Center for Family Studies (<http://www.uakron.edu/cfs/>)

## Center for Information Technologies and eBusiness

The Center for Information Technologies and eBusiness (CITe) is a multi-disciplinary Center within the College of Business Administration. CITe provides an important resource connecting IT Executives with Information Systems (IS)/Business Analytics (BA) Faculty and IS/BA Students that will provide educational, research and networking opportunities. CITe was created in 2000 with the mission to teach students and develop faculty in the principles and practices of the related disciplines of Information Technology (IT) and electronic business. Today, the Center has expanded its focus to include Business Analytics (BA) and Data Science (DS). CITe will accomplish its mission by providing scholarships, mentoring, internships & co-op opportunities to students in the IS/BA discipline; provide resources to conduct research in the IS/BA discipline to faculty, and conduct several outreach activities and day long conferences that promote IT and Business Analytics among the NE Ohio companies.

CITe is made up of an advisory board of Information Technology leaders from the North-East Ohio region and the College of Business Administration faculty, staff, and students. The objectives of CITe are to advance information systems (IS), and Business Analytics (BA) programs,

research, best practices, and related activities at The University of Akron. The vision of CITE is to be widely recognized as an important resource connecting IT executives with IS/BA faculty & students at The University of Akron that will provide educational, research, and networking opportunities for students, faculty and local businesses.

Website: Center for Information Technologies and eBusiness (<https://www.uakron.edu/cite/>)

## Center for Literacy

The Center for Literacy furthers the mission of both The University of Akron and the LeBron James Family Foundation College of Education through a variety of programs that support development of expertise and dissemination of knowledge about language learning. The Center brings preservice, inservice and university teachers together with children and families in the greater Akron area through a wide range of literacy related projects.

Website: Center for Literacy (<http://www.uakron.edu/education/community-engagement/literacy/>)

## Center for Organizational Research

The Center for Organizational Research (COR) is a consulting center operating within the Psychology Department at The University of Akron. The purpose of COR is to provide organizations with evidence-based solutions to the issues that confront people in work environments, with areas of specialization including human resource management, organizational development, and survey work. COR is able to offer a tailored approach to the client's needs because of its smaller client base and research orientation. Our consulting services are delivered by teams of graduate students and I/O faculty members. Collaboration with faculty gives COR a unique strength, as the I/O Psychology Department at The University of Akron consistently ranks as one of the top ten programs in the nation. As such, COR is in an excellent position to provide top quality consultation and research-based interventions to the business community. Some of our services offered include: adverse impact analysis, leadership training and development, performance management, customized research studies, employee attitude surveys, training development and evaluation, job analysis, and item and test writing and development.

Website: Center for Organizational Research (<https://www.uakron.edu/cor/>)

## Center for Silver Therapeutics Research

The Center for Silver Therapeutics Research is a research consortium composed of UA faculty researchers from many different departments and colleges. The center seeks to advance the use of silver ion-containing compounds for the treatment of a wide range of infections and in the antineoplastic area.

Website: Center for Silver Therapeutics Research (<https://www.uakron.edu/cstr/>)

## Center for Statistical Consulting

The mission of the Center for Statistical Consulting in the Department of Statistics is to provide the University community and the community

at large with professional assistance in the design and analysis of statistical problems for theses, dissertations and research. For more information or to arrange an appointment, please contact Dr. Rich Einsporn ([rle@uakron.edu](mailto:rle@uakron.edu)). When requesting statistical consulting, refer to the Center's website, fill out the Request for Statistical Consulting form and email it to the department on the available link. The department will contact you for an appointment.

Website: Center for Statistical Consulting (<https://www.uakron.edu/statistics/about-us/center-for-statistical-consulting.dot>)

## English Language Institute

Established in 1979, the English Language Institute (ELI), part of the Buchtel College of Arts & Sciences, offers a program in English as a Second Language (ESL) instruction. The English for Academic Purposes Program (<https://www.uakron.edu/eli/eap/>) provides non-credit ESL courses to international students and nonnative residents who plan to pursue an undergraduate or graduate degree at The University of Akron or another U.S. university. The intensive, 20-hours per week program also serves individuals who wish to improve their English to meet their own professional and/or personal goals.

ELI courses at four levels of English proficiency target language and academic skills needed for successful study at a U.S. university: reading efficiently, writing clearly, taking lecture notes and communicating effectively in English. Students also study grammar and vocabulary and prepare for language proficiency tests to meet the University's English requirement. In addition to its instructional program, the ELI administers The University of Akron Developed English Proficiency Test (<https://www.uakron.edu/eli/uadept/>) (the U-ADEPT), which assesses the speaking ability of prospective international teaching assistants at UA and determines their readiness to provide classroom-related services in their graduate departments.

The ELI serves as a resource on issues relating to language proficiency for University faculty, staff and students as well as for members of the local community. For more information, visit the ELI website, email [ua-eli@uakron.edu](mailto:ua-eli@uakron.edu) or call 330-972-7544.

Website: English Language Institute (<https://www.uakron.edu/eli/>)

## Fisher Institute for Professional Selling

Established through a generous gift from Ronald and Diane Fisher in 1992, the Ronald R. and Diane C. Fisher Institute for Professional Selling was officially launched in January 1994 with a new facility and a new Director, Dr. Jon Hawes. The University of Akron was the second university in the United States to officially start a sales program, after offering sales classes since the mid 1980's. In April of 2002, U.A. was one of nine founding member universities to create the University Sales Center Alliance (U.S.C.A.). The sole purpose of this organization is to enhance professionalism in sales, and share best practices to further the development and training of future sales professionals. Currently, the University of Akron is one of only 32 Full Member (56 total member), schools which are accredited by the U.S.C.A. Considered by many as one of the nations best sales education programs, our University of Akron sales and marketing students are the benefactors of the Fisher Institute for Professional Selling, resulting in the support of over 30 Corporate Partnerships, and virtually 100% job placement for nearly a decade.

Per the vision of Ronald and Diane Fisher, the mission of the Fisher Institute for Professional Selling is: to enhance the image of the sales profession and to promote professional selling and sales management as a rewarding lifelong career; to provide world-class, high-quality excellence in sales education through our sales major, minor in professional selling, and our three sales certificate programs (General, Healthcare and Engineering). Our robust sales education delivered by our outstanding and experienced sales faculty, along with our one-of-a-kind, state-of-the-art sales facility has resulted in outstanding sales readiness of our sales students. Well prepared sales students quickly grow into top sales talent for the corporate partners. Our brand new Fisher Institute has 9 large sales lab rooms with dual zooming cameras and cloud-based video and audio recording which can be accessed from anywhere in the world where Wi-Fi is available. With over 1,000 sales program graduates, the University of Akron alumni has made a profound positive impact on the local and regional business community.

In business today, the sales function generates the revenue that enables the rest of the corporation to operate. Jobs are usually abundant in the field of sales and out current job placement for our graduating sales majors and minors is 100% (compared to 37% in some other majors).

Coming Soon... U.A. will be re-launching executive sales training for our Fisher Corporate Partners and regional companies. Please visit our Fisher website for more information.

Website: Fisher Institute for Professional Selling (<https://www.uakron.edu/fisher/>)

## Gary L. and Karen S. Taylor Institute for Direct Marketing

The Gary L. and Karen S. Taylor Institute for Direct Marketing was established at The University of Akron's College of Business Administration (CBA) in 2005 with a major gift from Gary and Karen Taylor, both of whom are UA alumni and leaders in the field of direct marketing.

The Taylor Institute was founded to support undergraduate and MBA students in the specialized ideas, issues, and techniques of Direct/Interactive Marketing, including:

- Social Media Marketing
- Marketing Analytics & Database Marketing
- Qualitative Marketing Research
- Integrated Marketing Campaign Development
- Teleservices
- Digital Marketing (SEO and SEM)

The Taylor Institute is charged with a mission to advance best practices and disseminate new Direct/Interactive Marketing knowledge through the development of marketing business leaders through Education, Research, and Service.

Taylor Institute programs and initiatives are designed to be integrated with the Marketing curriculum and provide experiential learning opportunities to supplement the theoretical learning students receive in the classroom making the Taylor Institute truly the location "*where theory meets practice.*"

Website: Gary L. and Karen S. Taylor Institute for Direct Marketing (<https://www.uakron.edu/cba/centers-and-institutes/taylor/>)

## H. Kenneth Barker Center for Economic Education

This center exists to improve the economic literacy of individuals to help them function competently as citizens, producers and consumers. It conducts workshops, seminars and economic programs for teachers, students and interested groups. It provides consulting services in the area of economic education and acts as a clearinghouse for the gathering and dissemination of economic education materials and programs. It also fosters an understanding and appreciation of the American economic system.

Website: H. Kenneth Barker Center for Economic Education (<https://www.uakron.edu/barkercenter/>)

## Institute for Biomedical Engineering Research

This institute was established in 1979 to promote interdisciplinary studies in the rapidly growing areas of knowledge, which overlap the fields of biology and medicine, on the one hand, and engineering and the physical sciences, on the other. It conducts seminars, courses and degree programs in biomedical engineering in association with the College of Engineering and individual departments.

In addition to its research and educational functions, the institute provides a research service to local hospitals and industry, as well as to private and government agencies. The premise for this program is that the combined resources of the University, Northeastern Ohio Universities College of Medicine and affiliated organizations will often permit more cost-effective solutions than would be possible by an individual or group doing the research independently.

The work of the institute is carried out by faculty of the Department of Biomedical Engineering in association with "members" selected from the faculties of The University of Akron and Northeastern Ohio Universities College of Medicine, as well as from the ranks of area physicians, engineers and scientists. The institute and the department occupy the third floor of the Olson Research Center on the north edge of the campus.

Website: Institute for Biomedical Engineering Research (<https://www.uakron.edu/engineering/research/centers.dot>)

## Institute for Global Business

The Institute for Global Business (IGB) was established in 1996 with the mission to educate high-quality business students with the skills and understanding necessary to assume leadership roles in an increasingly global business world.

The dynamic changes in the world's physical, political, economic and cultural environments have created new challenges along with new opportunities to effectively compete in the marketplace as it exists today and will evolve tomorrow.

In addition to our academic programs, the IGB connects students to hands-on professional development programs and practical experiences that build global fluency and prepare students to enter the global marketplace career-ready and connected. The Institute also facilitates the study abroad programs (<https://www.uakron.edu/cba/centers-and-institutes/igb/study-abroad-programs/>) within The College of Business Administration and provides scholarships for students to attend these programs. With a focus on providing our students a holistic academic

experience with significant global learning opportunities, the IGB has been an integral component of CBA since its inception. Dedicated faculty having varied international experience and expertise are committed to student success and pursue an active research agenda to provide enriched learning opportunities for students.

For more information, please contact:

Dr. Mahesh Srinivasan  
Director  
330-972-5440  
maheshs@uakron.edu

Dr. Il-Woon Kim  
Associate Director  
330-972-7461  
ikim@uakron.edu.

Website: Institute for Global Business (<https://www.uakron.edu/cba/centers-and-institutes/igb/>)

## Institute for Human Science and Culture

The Institute for Human Science and Culture (IHSC) is a multidisciplinary institute that promotes education and research in the history, preservation, documentation, and interpretation of the human experience. The mission of the IHSC is to explore what it means to be human. The IHSC promotes document- and object-based, experiential education in arts, humanities, and science.

Website: <https://www.uakron.edu/chp/institute/>

## Institute for Life-Span Development and Gerontology

The Institute for Life-Span Development and Gerontology, founded in 1976, coordinates multidisciplinary credit certificate programs in gerontology at the undergraduate and graduate levels.

The Institute of Life-Span Development and Gerontology has grown into a campus-wide program involving more than 63 faculty in more than 20 different departments, representing six colleges. Students in the certificate programs carry out field placements at numerous community service settings. There are more than 40 courses at the undergraduate and graduate levels. Research, education, training and service support has been received from the U.S. Administration on Aging, National Institute on Aging, U.S. Department of Education, Office of Special Education and Rehabilitation Services, National Institute on Disability and Rehabilitation Research, AARP Andrus Foundation, Ohio Department of Aging and Area Agency on Aging 10B. The Institute also served as a major site for the Rehabilitation Research and Training Center Consortium on Aging and Development Disabilities involving seven universities in six states.

The Institute houses the Tri-County Senior Olympics.

Website: Institute for Life-Span Development and Gerontology (<https://www.uakron.edu/ilsdg/>)

## National Center for Education and Research on Corrosion and Materials Performance

Housed at The University of Akron, the National Center for Education and Research on Corrosion and Materials Performance (NCERCAMP) provides a multi-disciplinary approach to help government and industry develop solutions for corrosion and materials performance challenges, whether they are unique or day-to-day problems.

The Center has a comprehensive set of programs and services in education, workforce training, research, technology development, outreach, and public policy activities.

Website: National Center for Education and Research on Corrosion and Materials Performance (<https://www.uakron.edu/ncercamp/>)

## Nutrition Center

The University of Akron Nutrition Center is a comprehensive regional center for the study and delivery of effective nutrition interventions. It provides the needed link between UA nutrition expertise and the extensive preventative health care needs of the campus and our surrounding community. The Center serves as an educational resource for students and the community, provides nutrition services and conducts research in sports nutrition, chronic disease treatment, wellness and disease prevention, nutrition information technology, food safety and sanitation and community nutrition.

Website: Nutrition Center ([https://www.uakron.edu/nutritiondietetics/nutrition\\_center.dot](https://www.uakron.edu/nutritiondietetics/nutrition_center.dot))

## Ray C. Bliss Institute of Applied Politics

The Ray C. Bliss Institute of Applied Politics is a public education and research adjunct of Buchtel College of Arts and Sciences. The broad purposes of the institute, in keeping with the career of its namesake, Ray C. Bliss, are: to give all citizens, and particularly students, an opportunity to learn how to become active and competent in political life; to help maintain a tradition of ethical public service in politics; to foster useful relationships between applied politics and political science; to promote public comprehension of political organizations and the requirements for their effectiveness; and to improve understanding of continuity and change in American political institutions.

Website: Ray C. Bliss Institute of Applied Politics (<https://www.uakron.edu/bliss/>)

## The Drs. Nicholas and Dorothy Cummings Center for the History of Psychology

The Drs. Nicholas and Dorothy Cummings Center for the History of Psychology (CCHP) is an internationally recognized research and humanities center that cares for, provides access to, and interprets the historical record of psychology and related human sciences. Founded at The University of Akron in 1965, it has grown to become the largest collection of its kind in the world. A Smithsonian Affiliate, the CCHP

includes the National Museum of Psychology (<https://www.uakron.edu/chp/museum/>), the Archives of the History of American Psychology (<https://www.uakron.edu/chp/archives/>), and the Institute for Human Science and Culture (<https://www.uakron.edu/chp/institute/>).

The CCHP reflects the interdisciplinary nature of the examination of what it means to be human and includes specialists in both psychology and library science. Scholars, students of all ages, and the public are welcome to participate in coursework, programs, research, and exhibitions, that utilize the CCHP's one-of-a-kind collections.

The CCHP offers an 18 credit-hour undergraduate certificate in Museum and Archives Studies. The certificate provides students with a basic set of skills that prepares them for work in museum and archives professions and for graduate study in these areas.

Website: Cummings Center for the History of Psychology (<https://www.uakron.edu/chp/>)

## The EX[L] Center for Experiential Learning

Experiential learning is a process through which students gain knowledge and skills while advancing their understanding of themselves as effective members of our evolving society. Fundamentally interdisciplinary in nature, experiential learning opportunities challenge students to integrate information from a range of fields or perspectives and to work with team members or others and in the process to explore new ways of doing and thinking about a specific topic or concern.

Experiential learning at UA is distinguished by the following elements. First, experiential learning opportunities engage students actively in a combination of intellectual, physical, creative, social, and/or emotional ways. Second, these opportunities require students to take initiative, participate in decision-making, and stand accountable for outcomes of their activity. Third, experiential learning is structured so that reflection on individual and/or group activity occurs across the semester. Finally, this reflection leads to critical thinking, relevant analysis and synthesis, and a consideration of how the experience has shifted the students' understanding of themselves as scholars and global citizens.

Experiential learning at UA includes a wide variety of activities: internships, co-ops, practicum and clinical activities, service learning, student teaching, fieldwork, participatory research, community-based research, lab-based research, study abroad, unclasses, juried exhibitions, and performances.

Website: The EX[L] Center for Experiential Learning (<https://www.uakron.edu/exl/>)

## The University of Akron Archival Services

Archival Services of University Libraries (<https://www.uakron.edu/libraries/>) collects, preserves, and provides access to primary and secondary source materials that document the history of The University of Akron and the region in order to support the operational needs of the institution and the teaching and research activities at the university and in the wider intellectual community. Archival Services consists of University Archives, Special Collections, and Records Management. University Archives serves as the official repository of The University of Akron and its predecessor institutions from its founding as Buchtel

College in 1870 to the present and includes the official records of the university that have lasting historical value. Special Collections serves as an archival repository for historic materials that document the history of the geographic region of which the university is a part and includes personal papers and records of local governments, businesses, labor unions, and civic, religious, and cultural organizations. Collecting focuses include the history of Akron/Summit County, the rubber and polymer industry, lighter-than-air flight, Ohio canals, the B-26 Marauder and 9<sup>th</sup> Air Force, and the book and print culture. Records Management provides campus offices guidance and training regarding the retention and disposition of university records in all formats. Archival Services hosts historical displays and exhibitions and provides reference and research assistance, bibliographic instruction, and class visits and tours.

Website: The University of Akron Archival Services (<https://www.uakron.edu/libraries/archives/>)

## Training Center for Fire and Hazardous Materials

The Training Center for Fire and Hazardous Materials brings the University, government and industry together into one comprehensive regional center to integrate educational programs, fire and hazardous materials training and other applications of fire and safety technology. The Center is chartered from the Division of EMS and offers all State Certified Classes for firefighter certification. The Center employs 190 certified Emergency Services Instructors to fill any training requirement for municipal and business and industry. The center coordinates seminars and workshops presented by the Federal Emergency Management Agency (FEMA), the National Fire Academy, the Division of State Fire Marshal and other related organizations. Training in all phases of hazardous materials containment and fire prevention and control is provided under contract to various municipalities, industries and agencies. The programs are supported by the faculty of the Fire Protection Technology degree program and the Emergency Management degree program in association with other state and nationally recognized professionals. The Training Center services a multi-county area, having partnerships with Portage Lakes Career Center, Macedonia Fire Department, and Lakemore Fire Department. We also run 3 University of Akron Fire Academies and 3 high school Fire Academies that include Portage Lakes Career Center, Four Cities Compact, and Cuyahoga Valley Career Center.

Website: Training Center for Fire and Hazardous Materials (<https://www.uakron.edu/fire/>)

## University of Akron Magnetic Resonance Center (UA/MRC)

The MRC provides UA students and faculty, and the industrial and external academic scientific community, with access to routine and state-of-the-art magnetic resonance facilities and technical expertise. These capabilities include instruments for solution and solid state NMR, electron paramagnetic resonance, and the expertise of technical staff with experience in using these instruments for problem solving in chemistry, biological sciences, polymer science and engineering. Students and faculty are trained in the use of the instruments and NMR techniques in general through an ongoing educational process. The Center has instruments in The Knight Chemical and Goodyear Polymer buildings.



Website: University of Akron Magnetic Resonance Center (UA/MRC)  
(<http://www.uakron.edu/chemistry/magnet/>)

## **William and Rita Fitzgerald Institute for Entrepreneurial Studies**

In 1995, a generous gift from William and Rita Fitzgerald created the Fitzgerald Institute for Entrepreneurial Studies in the College of Business Administration. The Institute was established to promote the principles of free enterprise and encourage entrepreneurial spirit and practices both within the University's curriculum and throughout the business community.

The Fitzgerald Institute focuses on the development of curriculum appropriate for both new ventures and the entrepreneurial development and growth of existing businesses. The Institute provides the needed link between the University and the community of entrepreneurs critical to business development in the future.

Website: William and Rita Fitzgerald Institute for Entrepreneurial Studies  
(<https://www.uakron.edu/cba/centers-and-institutes/fitzgerald/>)

## **Workforce Training Solutions**

The mission of Workforce Training Solutions is to serve the people of Northeast Ohio by offering courses and programs that increase access to The University of Akron, linking it with community, business and industrial workforce needs.

Workforce Training Solutions at The University of Akron provides a wide range of educational, technical and research services that enhance the effectiveness and quality of workforce learning. In addition, Workforce Training Solutions provides services that require the special expertise of the faculty and staff to better serve the economic and social development of Northeast Ohio.

Website: Workforce Training (<https://www.uakron.edu/uabs/>) Solutions  
(<https://www.uakron.edu/uabs/>)

# COURSES OF INSTRUCTION

## Course Numbering System

Each course at the University has two numbers. One designates the college and department of which it is part; one specifies the subject matter of the particular course. For instance:

3300:220 English Literature

In the above example, the first four digits of the number (3300) indicate the department. In this case, 3300 represents the Department of English. The second set of digits (220) following the colon, indicates exactly which course in the Department of English is being specified. The course number also indicates the level at which the course is being taught and the point at which the student is ready to take the course.

An explanation of the course numbering system follows:

Course Number	Description
100-199	First-year-level courses
200-299	Second-year-level courses
300-399	Third-year-level courses
400-499	Fourth-year-level courses
500-699	Master's-level courses
600-799	J.D.-level courses
700-899	Doctoral-level courses

When approved 400-level undergraduate courses are taken for graduate credit, they are designated as 500-level courses. A student must apply for and be admitted to the Graduate School to receive graduate credit.

**NOTE:** Courses listed each term contain an additional three-digit number indicating the specific section(s) offered.

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## A&S: Cooperative Education (3000)

### 3000:200 Job Search Strategies for Liberal Arts & Science Majors (2 Credits)

Students engage in comprehensive career planning and develop job search strategies. Course topics include navigating a search, creating resumes/cover letters, interviewing, and portfolio development.

### 3000:301 Cooperative Education (0 Credits)

For cooperative education students only. Work experience in business, industry, or governmental agency. Comprehensive performance evaluation and written report required. (May be repeated)

## Accounting (6200)

### 6200:201 Accounting Principles I (3 Credits)

Prerequisite: 24 hours of college credit. Introduction to accounting principles including accounting for revenues, expenses, assets, liabilities, equity, accounting standards and financial statements.

### 6200:202 Accounting Principles II (3 Credits)

Prerequisite: 6200:201. Information needs of management. Analysis of cash flow and financial statements. Study of product costing systems; standard costs; planning, budgeting, and control systems; overhead cost allocation; cost-volume-profit analysis; relevant costing; and capital budgeting.

### 6200:250 Spreadsheet Modeling & Decision Analysis (3 Credits)

Prerequisite: Spreadsheet proficiency. In-depth study of spreadsheet applications and databases to support decision-making and problem-solving in business and accounting.

### 6200:290 Specialized Study (1-3 Credits)

Prerequisite: Grade of C or better in 6200:201. Opportunity to study a specialized area in accounting at the sophomore or junior level (may be repeated with change of subject).

### 6200:301 Cost Management and Control (3 Credits)

Prerequisites: [3250:200 or 3250:244], grades of not less than "C" in 6200:201, 6200:202, and 6200:250, and admission to a major in the College of Business Administration. Product cost accumulation, cost management strategies, performance evaluation, and application of cost in business decisions.

### 6200:305 Cooperative Education in Accounting (0 Credits)

Prerequisites: 6200:201, 6200:202, 6200:250. Approved work experience in accounting and taxation. Performance evaluation and written report required.

### 6200:316 Financial Applications Development (3 Credits)

Prerequisite: 6200:201, 6500:315. Analysis, design and development of financial and control applications. Integration of intelligent agents into financial information systems for risk assessment, control, and assurance of businesses processes.

### 6200:320 Accounting Systems and Internal Control (3 Credits)

Prerequisites: A grade of not less than "C" in 6200:201 and 6200:250, and admission to a major in the College of Business Administration. Covers analysis design, implementation, governance and evaluation of accounting systems; business process modeling and accounting transaction cycles; and internal control.

### 6200:321 Financial Reporting and Analysis I (3 Credits)

Prerequisite: Admission to a major in the College of Business Administration, a grade of not less than a "C" for accounting majors in 6200:201 or permission. Financial reporting and analysis of cash, receivables, inventories, property, plant and equipment, intangibles and liabilities. Covers U.S. GAAP, IFRS, SEC reporting, and corporate financial reporting policy. Emphasizes professional accounting research.

### 6200:322 Financial Reporting and Analysis II (3 Credits)

Prerequisite: Admission to a major in the College of Business Administration and a grade of not less than a "C" in 6200:321 or permission. Financial reporting and analysis of owners' equity, investments, revenue recognition, tax allocations, pensions, leases, accounting changes, cash flows, segments, and interim periods. Covers U.S. GAAP, IFRS, SEC reporting, and corporate financial reporting policy. Emphasizes professional accounting research.

### 6200:330 Contemporary Federal Taxation (3 Credits)

Prerequisites: Admission to a major in the College of Business Administration and 6200:201 with a grade of C or better. Pre/Corequisite: 6200:321. Examines current federal tax practices with an emphasis on individual taxes.

### 6200:405 Experiential Learning in Accounting (3 Credits)

Corequisite: 6200:305. Approved experiential learning in accounting. Instructor approval required.

### 6200:408 International Financial Reporting & Analysis (3 Credits)

Prerequisites: Admission to a major in the College of Business Administration, a grade of not less than a "C" in 6200:201 and 6200:202, and [an international business major (6800) or 6200:321]. Covers international accounting standards, analysis of foreign financial statements, international tax issues, accounting for foreign currency, transfer pricing and international auditing standards.

### 6200:410 Taxation for Financial Planning (3 Credits)

Provides students preparing for careers in financial planning with the necessary knowledge of federal tax law as applied to individuals and businesses. Not to be used as an accounting elective.

### 6200:420 Advanced Financial Reporting and Analysis (3 Credits)

Prerequisite: Admission to a major in the College of Business Administration and 6200:322. Examination of accounting theory and financial reporting practices for business combinations, partnerships, foreign operations, nonprofit entities and consolidated statements. Covers U.S. GAAP, IFRS, SEC reporting, and corporate financial reporting policy. Emphasizes professional accounting research.

### 6200:424 Business Law (3 Credits)

Prerequisite: Completion of 64 credits. Understand business law and concepts dealing with the legal environment of business and their applications, including: business ethics, the American legal system, tort law, contracts, secured transactions, bankruptcy, real property, business entities, environmental law, antitrust.

### 6200:431 Business Entity Taxation (3 Credits)

Prerequisites: 6200: 330 and admission to a major in the College of Business Administration. Federal income tax law related to partnerships, corporations, trusts and estates; also includes an overview of federal estate and gift tax law.

**6200:440 Assurance Services and Professional Responsibilities (3 Credits)**

Prerequisites: 6200:320, 6200:322, 6200:330, and admission to a major in the College of Business Administration. Examines assurance services including external auditing and professional responsibilities. Focuses on standards, professional ethics and independence requirements, and procedures used in conducting assurance services.

**6200:441 Information Systems Audit & Control (3 Credits)**

Prerequisites: Admission to a major in the College of Business Administration, 6200:440 and 6200:454 or permission. Learn the fundamental concepts and practices of information systems audit control. Use of contemporary control frameworks, objectives and standards to discuss integrity, control, governance, assurance and effectiveness of financial information systems.

**6200:450 Advanced Spreadsheet Modeling & Decision Analysis (3 Credits)**

Prerequisites: Admission to a major in the College of Business Administration, 6200:202, 6200:250, 6200:322, 6400:301 and 6500:304 or permission. Study advanced topics in spreadsheet modeling and decision analysis in the context of accounting and finance, including security, control and quality assurance of spreadsheets.

**6200:454 Information Systems Security (3 Credits)**

Prerequisites: [6200:320 or 6500:310] and admission to a major in the College of Business Administration. Focus on information systems risk and security in distributed business environments; develop policies, practices and systems for security of computers and data in business with emphasis on financial information systems.

**6200:460 Advanced Managerial Accounting (3 Credits)**

Prerequisites: Admission to a major in the College of Business Administration, 6200:301, 6200:320, and [6500:330 or 6500:333]. The use of financial and non-financial information in decision making, performance evaluation of business units, strategy and governance, and management control.

**6200:470 Governmental Accounting (3 Credits)**

Prerequisites: 6200:321 or equivalent. Theory and procedures involved in application of fund accounting, budgetary control, appropriations and various accounting systems to governmental units, educational, medical and other non-profit institutions. Covers financial reporting for government and not for profit entities and GASB standards.

**6200:490 Special Topics in Accounting (1-3 Credits)**

Prerequisite: Permission of instructor. Opportunity to study special topics and current issues in accounting. May be repeated with a change of subject.

## Aerospace Studies (1500)

**1500:113 Heritage and Values I (1 Credit)**

Survey course introducing the U.S. Air Force and ROTC. Officership and military customs and courtesies are discussed. Foundations of Air Force communication are covered.

**1500:114 Heritage and Values II (1 Credit)**

Survey course covering the origin and organization of the Air Force. Selected topics contributing to an understanding of the Air Force are covered.

**1500:115 Leadership Laboratory (1 Credit)**

Prepares an individual to undertake a broad range of technical tasks. Optional for academic credit; Mandatory for Air Force ROTC credit for scholarship/commissioning.

**1500:253 Team & Leadership Fundamentals I (1 Credit)**

Survey course examining air and space power from an historical perspective. Course covers early flight and World War I to the Korean War and ICBMS.

**1500:254 Team & Leadership Fundamentals II (1 Credit)**

Survey course examining air and space power from the Vietnam War to the Gulf War plus a look at the Air Force of the future.

**1500:255 Leadership Laboratory (1 Credit)**

Prepares an individual to undertake a broad range of technical tasks. Optional for academic credit; Mandatory for Air Force ROTC credit for scholarship/commissioning.

**1500:303 Leading People/Effective Communication I (3 Credits)**

Prerequisite: Permission of instructor. Study of leadership, professional knowledge and communication skills required for an Air Force officer. The roles of a leader as supervisor and counselor are discussed.

**1500:304 Leading People/Effective Communication II (3 Credits)**

Prerequisite: Permission of instructor. Study of quality management fundamentals and communication skills for the Air Force officer. The Air Force personnel evaluation system and military ethics are discussed.

**1500:305 Leadership Laboratory (1 Credit)**

Prepares an individual to undertake a broad range of technical tasks. Optional for academic credit; Mandatory for Air Force ROTC credit for scholarship/commissioning.

**1500:453 Leading National Security/Leadership Responsibilities I (3 Credits)**

Prerequisite: Permission of instructor. Examines political, economic and social constraints on national security and defense structure. The role of the military, including joint operations and regional defense, are discussed.

**1500:454 Leading National Security/Leadership Responsibilities II (3 Credits)**

Prerequisite: Permission of instructor. Roles of the military, regional defense, current Air Force issues, and other topics relevant to preparing an Air Force officer for active duty are covered.

**1500:455 Leadership Laboratory (1 Credit)**

Prepares an individual to undertake a broad range of technical tasks. Optional for academic credit; Mandatory for Air Force ROTC credit for scholarship/commissioning.

## Aerospace Systems Engineering (4900)

**4900:165 Tools for Aerospace Systems Engineering (2 Credits)**

Prerequisite: Permission. Corequisite: 3450:149. Computer applications, spreadsheets, CAD software, MATLAB, and introduction to aerospace engineering program and curriculum; outside speakers; project involving design and construction of small RC aircraft.

**4900:166 Aerospace Systems Project Management (1 Credit)**

Prerequisite: 4900:165. Teamwork and project planning; semester project involving continuation of design and construction of small RC aircraft in conjunction with SAE Aero Design.

**4900:240 Aerospace Systems Engineering I (3 Credits)**

Prerequisite: 3450:223. An introductory systems course focusing on systems thinking, systems engineering tools, reliability, life-cycle analysis and statistics.

**4900:320 Aerospace Systems Engineering II (3 Credits)**

Prerequisites: 4600:340, 4900:240 and admission to an engineering major within the College of Engineering and Polymer Science. An extended study of systems topics including linear programming, optimization, decision making, critical path scheduling, and verification.

**4900:336 Aerospace Structures (3 Credits)**

Prerequisites: 4300:202, 3450:335. Basic theory and methods for analysis and design of aerostructures are covered. Topics include torsion, shear flow, buckling, fracture, and fatigue of beams and plates.

**4900:340 Avionics I (3 Credits)**

Prerequisites: 4400:307 and admission to an engineering major within the College of Engineering and Polymer Science. Electronics for aircraft applications. Amplifiers, filters, regulators, current sources, buffers, sensor and actuator circuits, transmitters, and receivers.

**4900:380 Aerospace Materials (3 Credits)**

Prerequisites: 3150:151, 3150:152, 4300:202 and admission to an engineering major within the College of Engineering and Polymer Science or permission. Theory in science and application of materials for aerospace structures, macroscopic behavior of materials, order and disorder in mechanical behavior, evaluating and quantifying mechanical response.

**4900:420 Object Oriented Design & Management (3 Credits)**

Prerequisites: 4900:320 and admission to an engineering major within the College of Engineering and Polymer Science. An introduction to the area of object-oriented design and management of systems, including abstraction, inheritance, polymorphism, dynamic interactions, hierarchies, patterns, reflection, and distributed objects.

**4900:440 Avionics II (3 Credits)**

Prerequisites: 4600:412, 4900:340 and admission to an engineering major within the College of Engineering and Polymer Science. Communication and control for aircraft applications. Fourier analysis, AM and FM principles, modulators demodulators, communication systems. aircraft system dynamics, classical control system principles and applications.

**4900:450 Aerospace Computations (3 Credits)**

Prerequisites: 4300:202, 4600:315, 4600:360, 4600:411 and admission to an engineering major within the College of Engineering and Polymer Science or permission of instructor. Introduction to finite element and finite volume methods in aerospace engineering; fundamental principles of FEM and FVM discussed and illustrated through structural, and aerodynamic applications.

**4900:460 Aerospace Systems Manufacturing (3 Credits)**

Prerequisites: 4600:360 or equivalent and admission to an engineering major within the College of Engineering and Polymer Science or permission of instructor. Using computer systems to assist in creation, modification, analysis, or optimization of engineering designs, planning, management and control of manufacturing, CAD software with manufacturing applications.

**4900:490 Aerospace Design Project (2 Credits)**

Prerequisites: Senior standing and admission to an engineering major within the College of Engineering and Polymer Science or permission. Detailed senior design project. Design, feasibility and cost analysis, final design and implementation; engine, airframe and aerodynamic testing.

**Gen Ed:** Tier 3 - Complex Systems

**4900:497 Aerospace Honors Project (2 Credits)**

Prerequisite: Senior standing in Honors College or permission. Individual creative project in Aerospace Systems, supervised by faculty member of the department. Includes design, feasibility and cost analysis, final design and implementation.

**Gen Ed:** Tier 3 - Complex Systems

## Allied Health (2780)

**2780:102 Overview of Simulation Healthcare (4 Credits)**

An overview of the use of simulation technology in healthcare education: simulation design, development, implementation and evaluation. Department consent is needed.

**2780:201 Simulation Technology Basic Repair (4 Credits)**

Prerequisites: 2440:247, 2750:121, and 2780:102. Use of simulation technology from manufacturing to use in healthcare education, clinical practice, maintenance and repair.

**2780:206 Applied Human Anatomy & Physiology I (3 Credits)**

This course is designed to familiarize students to the structure, function, and physiology of the human body. Topics covered include organization of the body, chemistry, cells, tissues, integumentary system, the skeletal, articulations, muscular system, respiratory system, blood, and cardiovascular system.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**2780:207 Applied Human Anatomy & Physiology II (3 Credits)**

This course is designed to familiarize students the structure, function, and physiology of the human body. This course is the second portion of a two part course. Topics covered include the following body systems: nervous system, senses, endocrine system, lymphatic system, immune system, digestive system, urinary system, male reproductive system, female reproductive, and life span development.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**2780:210 Applied Human Anatomy & Physiology Lab I (1 Credit)**

Pre/Corequisite: 2780:206. This course is an adjunct to the lecture of the structure and function of the human body. This course will be hands on learning to assist in the understanding of anatomy and physiology. Topics covered include organization of the body, chemistry, cells, tissues, skeletal system, muscular system, hematology, cardiovascular, and respiratory systems.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**2780:211 Applied Human Anatomy & Physiology Lab II (1 Credit)**

Pre/Corequisite: 2780:207. This course is an adjunct course of an introduction to the structure and function of the human body. This course will be hands on learning to assist in the learning of anatomy and physiology. Topics covered include the following body systems; nervous, senses, endocrine, digestive, urinary, reproductive, lymphatic, and human development.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**2780:290 Special Topics: Allied Health (1-2 Credits)**

Prerequisite: Permission. Selected topics or subject areas of interest in allied health. (May be repeated for a total of four credits)

## Allied Healthcare Administration (2750)

### 2750:120 Medical Terminology (3 Credits)

Medical Terminology includes the study of medical prefixes, suffixes, word roots, combining forms, and with an emphasis on pronunciation, spelling, and abbreviations. Medical Terminology related to the body systems will be emphasized. The purpose of the course is to equip the student with a basic understanding of the tools needed to learn medical terminology as it relates to the body systems with an emphasis on spelling and pronunciation.

### 2750:121 Study of Disease Processes (3 Credits)

Prerequisite: 2750:120. This course studies human disease and the disease process including treatments, causes, incidence, signs and symptoms, and diagnosis.

### 2750:122 Emergency Responder I (1 Credit)

Theory and practice in recognition and response to emergencies by the medical professional including but not limited to: breathing difficulty, cardiac arrest, heart attack, stroke, bleeding, wound care, musculoskeletal injuries, burns, poisonings, heat and cold exposure, and diabetic care.

### 2750:200 Health Record Content (3 Credits)

Introduction to the contents and design of health records (paper and electronic) and discussion of how clinical documentation facilitates the function of the delivery system.

### 2750:226 Healthcare Statistics and Registries (3 Credits)

Prerequisites: 2030:130 and 2440:105. This course covers computations of routine healthcare institutional statistics, the presentation and interpretation of healthcare data, and the use of disease and procedural registries.

### 2750:227 Basic Procedural Coding (3 Credits)

Prerequisite: 2750:120. Class focuses on converting the procedural language into industry standard character strings for purposes of reimbursement CPT and HCPCS codes; learning how to convert procedural statements into CPT and HCPCS codes; learning how to apply carrier rules for reimbursement.

### 2750:229 Basic Diagnostic Coding (3 Credits)

Prerequisite: 2750:120. This class focuses on converting the diagnostic language into industry standard character strings ICD-10-CM for purposes of reporting, research, and reimbursement.

### 2750:230 Basic Pharmacology (3 Credits)

This course is an introduction to pharmacology, organized and presented by therapeutic classification. Topics will include pharmacokinetics, factors which influence drug actions, routes or administration, and adverse effects.

### 2750:301 Quality Management in Healthcare (2 Credits)

Prerequisites: 2750:200 and 2750:328. An introduction of the methods used to define, implement, and monitor total quality management in health care.

### 2750:302 Clinical Information Systems (3 Credits)

Prerequisite: 2740:127. Discussion of clinical systems including history of EHR and EMR, the theories behind systems, implementation, evaluation pathways, "Meaningful Use" and the architecture in different settings.

### 2750:303 Advanced Coding II (3 Credits)

Prerequisites: 2750:227 and 2750:229. Through case studies, the class is intended to prepare the student for either the AAPC CPC or the AHIMA CCS-P certification exam.

### 2750:304 Healthcare Management Foundations (3 Credits)

Prerequisite: 2420:300. This course focuses on the circumstances unique to the health care industry management as manifested by patient privacy, outsourcing, and telecommunications.

### 2750:310 Healthcare Finance (3 Credits)

Prerequisites: 2420:211, 2420:213, 2750: 227, and 2750:328. Integration of principles learned in accounting, coding, and insurance prerequisites into an exploration of financial management in the sector of the economy that is healthcare.

### 2750:328 Medical Insurance (3 Credits)

Prerequisites: 2750:120, 2570:227, and 2750:229. This course examines the nature of medical insurance reimbursement for medical services. Students will be equipped with an understanding of insurance and reimbursement methodologies.

### 2750:331 Advanced Coding I (3 Credits)

Prerequisites: 2750:120, 2750:227, and 2750:229. An advanced coding course that builds on the CPT and HCPCS codes sets and the ICD-10-CM code set and introduces a series of detailed management topics related to coding.

### 2750:336 Legal Concepts of Healthcare (2 Credits)

Prerequisite: 2740:127. Study of legal principles related to patient care and patient records.

### 2750:350 Coding Practicum (3 Credits)

Prerequisites: 2750:227, 2750:229, 2750:303, and 2750:331. The coding practicum course provides professional experience in an approved site under the direction of a coding or HIM faculty member and an onsite coordinator.

### 2750:401 Management Information Systems (3 Credits)

Prerequisites: 2740:127, 2750:235, 2750:301 and 2750:302. This senior level course focuses on the management of HIM through case studies and textbook work.

### 2750:410 Healthcare Research (3 Credits)

Prerequisites: 2020:222 and 3470:260. Through review of research, HIM students in this class will learn how to support clinicians' data needs while research is conducted.

### 2750:412 Current Topics in HIM (3 Credits)

Prerequisites: 2750:200, 2750:301, 2750:302, 2750:303, 2750:304, 2750:310, 2750:331, and 2750:336. Concepts of HIM are integrated and applied through the analysis of case studies and the completion of a capstone project.

### 2750:420 HIM Capstone (4 Credits)

Prerequisites: 2750:200, 2750:226, 2750:301, 2750:302, 2750:303, 2750:304, 2750:310, 2750:331, and 2750:336. This course prepares senior HIM students for the Registered Health Information Administrator (RHIA) national certification examination.

### 2750:450 HIM Practicum (3 Credits)

Prerequisites: 2750:200, 2750:301, 2750:302, 2750:303, 2750:304, 2750:310, 2750:331, and 2750:336. The HIM practicum course provides professional experience in an approved site under the direction of a coding or HIM faculty member and an onsite coordinator.

## Anthropology (3230)

### 3230:150 Human Cultures (3 Credits)

This course examines what culture is, how human cultures vary and how they change. We then explore opportunities/conflicts presented by contemporary human cultural issues.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Global Diversity

**3230:151 Human Evolution (4 Credits)**

Study of biological evolution of Homo Sapiens, including primate comparisons and cultural development. One-hour laboratory using interactive computer programs, casts and Anthropology's cultural collection.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3230:251 Human Diversity (3 Credits)**

This course examines human diversity in global perspective by considering how and why human beings vary physically and ways categories of difference are culturally constructed.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Global Diversity

**3230:304 Primates: Behavior, Morphology and Evolution (3 Credits)**

Prerequisite: 3230:151. Extant primate diversity, behavior, morphology and primate paleontology.

**3230:309 Medicine & the Humanities (3 Credits)**

Medical history, literature, and ethics from the perspective of the Humanities, with readings from original sources and literary works on medical subjects.

**3230:310 Human Paleontology: The Australopithecines (3 Credits)**

Prerequisite: 3230:151. A study of the fossil record of the earliest hominids of the Miocene and Pliocene epochs.

**3230:311 Human Paleontology: Genus Homo (3 Credits)**

Prerequisite: 3230:151. The origins of the Genus Homo and the evolution of anatomically modern Homo sapiens.

**3230:340 Human Osteology (3 Credits)**

Prerequisites: 3230:151 and 3240:100 or permission. An intensive study of bone, bone growth, and the human skeleton; ageing and sexing techniques; application of demographic techniques to paleoanthropological populations.

**3230:357 Magic, Myth, & Religion (3 Credits)**

Analysis of the origins, roles, and functions of myth, magic and religion in a broad range of societies, with emphasis on the non-Western, pre-industrial societies.

**3230:358 Indians of North America (3 Credits)**

Ethnographic survey of native cultures of North America, with emphasis on variations in ecological adaptations, social organization and modern American Indians in anthropological perspective. Lecture.

**Gen Ed:** Tier 3 - Domestic Diversity

**3230:359 Anthropological Theory (3 Credits)**

Prerequisites: 3230:150 and 3230:151. Advanced seminar addressing the history of anthropological theory and current theoretical debates within the discipline.

**Gen Ed:** Tier 3 - Critical Thinking

**3230:370 Globalization and Culture (3 Credits)**

Prerequisite: [3230:150 or 3850:100]. A critical examination of socio-cultural processes of globalization that serve to complicate conventional notions of culture. Emphasizes how globalization affects a range of local places.

**Gen Ed:** Tier 3 - Complex Systems

**3230:397 Anthropological Research (1-3 Credits)**

(May be repeated) Individual study of problem areas of specific interest to an individual student under guidance of a faculty member.

**3230:398 Introduction to Anthropological Data (3 Credits)**

Prerequisite: 3230:150, 3230:151 and 3240:100. This course focuses on the characteristics of anthropological evidence through hands-on activities and examination of the uses of data in published works.

**3230:400 Seminar: Human Origins (3 Credits)**

Prerequisites: 3230:151 and [3230:304, 3230:310, 3230:311, 3230:401, 3230:410, or 3230:474]. Advanced seminar addressing current discoveries and theoretical issues in human paleontology. Content varies by semester.

**3230:401 History of Physical Anthropology (3 Credits)**

Prerequisites: 3230:151 and [3230:310 or 3230:311] or instructor's permission. History of evolutionary theory pertaining to the biological origins of humans covering pre-Darwinian thought to the most recent fossil discoveries.

**3230:410 Evolution and Human Behavior (3 Credits)**

Prerequisite: 3230:151. Critical examination of the theory of natural selection and its usefulness for understanding the origins and evolution of early hominid and modern human social behavior.

**3230:416 Anthropology of Sex and Gender (3 Credits)**

Prerequisites: 3230:150 or 3850:100. This course explores cross-cultural variation regarding sex, gender and sexuality. It examines the ways that cultures create, maintain and reproduce gender concepts and gender relations.

**Gen Ed:** Tier 3 - Global Diversity

**3230:420 The Anthropology of Food (3 Credits)**

Utilizing anthropological approaches and theories, this course explores the social relations and cultural beliefs associated with food cross-culturally.

**Gen Ed:** Tier 3 - Complex Systems

**3230:457 Medical Anthropology (3 Credits)**

Prerequisite: 3230:150 or permission of instructor. Analyzes various aspects of Western and non-Western medical systems from an anthropological perspective. Compares traditional medical systems around the world.

**Gen Ed:** Tier 3 - Complex Systems

**3230:460 Field Methods in Cultural Anthropology (4 Credits)**

Prerequisite: 3230:150 or permission of instructor. Community-based research and service-learning course in which students design and undertake a project. Addresses ethics, data collection, management and analysis in collaboration with community partners.

**Gen Ed:** Tier 3 - Complex Systems

**3230:472 Special Topics: Anthropology (3 Credits)**

(May be repeated) Prerequisite: 3230:150. Selected topics in anthropology. May include field schools, independent or faculty-led research, laboratory training or advanced course work not regularly offered by department.

**3230:474 Special Topics in Biological Anthropology (3 Credits)**

Prerequisite: 3230:151. Advanced topics in biological anthropology, human paleontology and primate behavioral ecology. May be repeated, but no more than six credits can be applied towards the major in Interdisciplinary Anthropology.

**3230:497 Senior Honors Project in Anthropology (3 Credits)**

The topic and scope of this individually chosen project is directed by an Anthropology faculty member in conjunction with Honors College preceptors under the guidelines of the Honors College.







**7520:63 Jazz Electric Bass (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. Prerequisite: Permission of applied instructor. For students whose performance skills are not sufficient for placement at the 100 level or for elective credit in non-music programs. No credit toward any major in music. A fee is charged in addition to regular tuition.

**7520:64 Jazz Piano (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. Prerequisite: Permission of applied instructor. For students whose performance skills are not sufficient for placement at the 100 level or for elective credit in non-music programs. No credit toward any major in music. A fee is charged in addition to regular tuition.

**7520:65 Jazz Trumpet (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. Prerequisite: Permission of applied instructor. For students whose performance skills are not sufficient for placement at the 100 level or for elective credit in non-music programs. No credit toward any major in music. A fee is charged in addition to regular tuition.

**7520:66 Jazz Trombone (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. Prerequisite: Permission of applied instructor. For students whose performance skills are not sufficient for placement at the 100 level or for elective credit in non-music programs. No credit toward any major in music. A fee is charged in addition to regular tuition.

**7520:67 Jazz Saxophone (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. Prerequisite: Permission of applied instructor. For students whose performance skills are not sufficient for placement at the 100 level or for elective credit in non-music programs. No credit toward any major in music. A fee is charged in addition to regular tuition.

**7520:68 Jazz Composition (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. Prerequisite: Permission of applied instructor. For students whose performance skills are not sufficient for placement at the 100 level or for elective credit in non-music programs. No credit toward any major in music. A fee is charged in addition to regular tuition.

**7520:69 Jazz Vocal Styles (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. Prerequisite: Permission of applied instructor. For students whose performance skills are not sufficient for placement at the 100 level or for elective credit in non-music programs. No credit toward any major in music. A fee is charged in addition to regular tuition.

**7520:121 Percussion (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:122 Classical Guitar (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:123 Harp (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:124 Voice (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.



**7520:135 Tuba (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:136 Flute or Piccolo (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:137 Oboe or English Horn (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:138 Clarinet or Bass Clarinet (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:139 Bassoon or Contrabassoon (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:140 Saxophone (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:141 Harpsichord (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:142 Composition (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level. (May be repeated) Prerequisites: 7500:252 and permission of instructor; 7500:452 recommended. Private instruction in composition. Primarily for student whose major is theory-composition.

**7520:161 Jazz Percussion (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.









**7520:242 Composition (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level. (May be repeated) Prerequisites: 7500:252 and permission of instructor; 7500:452 recommended. Private instruction in composition. Primarily for student whose major is theory-composition.

**7520:261 Jazz Percussion (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:262 Jazz Guitar (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:263 Jazz Electric Bass (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:264 Jazz Piano (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:265 Jazz Trumpet (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:266 Jazz Trombone (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:267 Jazz Saxophone (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:268 Jazz Composition (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.





**7520:340 Saxophone (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:341 Harpsichord (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:342 Composition (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level. (May be repeated) Prerequisites: 7500:252 and permission of instructor; 7500:452 recommended. Private instruction in composition. Primarily for student whose major is theory-composition.

**7520:361 Jazz Percussion (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:362 Jazz Guitar (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:363 Jazz Electric Bass (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:364 Jazz Piano (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:365 Jazz Trumpet (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:366 Jazz Trombone (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.





**7520:438 Clarinet or Bass Clarinet (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:439 Bassoon or Contrabassoon (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:440 Saxophone (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:441 Harpsichord (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:442 Composition (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level. (May be repeated) Prerequisites: 7500:252 and permission of instructor; 7500:452 recommended. Private instruction in composition. Primarily for student whose major is theory-composition.

**7520:461 Jazz Percussion (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:462 Jazz Guitar (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:463 Jazz Electric Bass (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:464 Jazz Piano (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:465 Jazz Trumpet (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:466 Jazz Trombone (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:467 Jazz Saxophone (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:468 Jazz Composition (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

**7520:469 Jazz Vocal Styles (2-4 Credits)**

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition. The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.

## Arabic (3501)

**3501:101 Beginning Arabic I (4 Credits)**

Sequential. Acquisition of basic speaking, listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3501:102 Beginning Arabic II (4 Credits)**

Sequential. Prerequisite: 3501:101 or equivalent. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3501:201 Intermediate Arabic I (4 Credits)**

Sequential. Prerequisite: 3501:102 or equivalent. Continuing acquisition of competence in speaking, listening comprehension, reading and writing through use of culturally authentic materials, with emphasis on developing accuracy and self-expression. (Conducted in Arabic).

**3501:202 Intermediate Arabic II (4 Credits)**

Sequential. Prerequisite: 3501:201 or equivalent. Continuing acquisition of competence in speaking, listening comprehension, reading and writing through use of culturally authentic materials, with emphasis on developing accuracy and self-expression. (Conducted in Arabic).

**3501:210 Arabic Culture through Film (3 Credits)**

Prerequisites: 32 credit hours including English Composition I and II [3300:111 and 3300:112] or equivalent. Exploration of Arabic culture through viewing of films subtitled in English. Readings and discussions in English. Does not count toward minor in Arabic.

**Gen Ed:** Tier 2 - Humanities

**3501:301 Composition and Conversation (4 Credits)**

Prerequisite: 3501:202 or equivalent. Further development of language skills acquired at the intermediate level: Writing, Speaking, Listening Comprehension and Reading. (Conducted in Arabic).

**3501:302 Arabic Media (4 Credits)**

Prerequisite: 3501:202 or equivalent. Further development of practical language skills with a focus on Arabic media. The course also will enrich students' understanding of Arabic culture. (Conducted in Arabic).

**3501:303 Introduction to Modern Arabic Literature (4 Credits)**

Prerequisite: 3501:202 or equivalent. Enhancement of students' communicative skills with emphasis on development of the ability to read, appreciate and discuss Modern Arabic Literature. (Conducted in Arabic).

**3501:304 Cultural Readings in Arabic (4 Credits)**

Prerequisite: 3501:202 or equivalent. Enhancement of communicative skills in Arabic with a focus on development of the ability to read, appreciate and discuss Arabic writing. (Conducted in Arabic).



**3501:311 Arabic Cultural Experience Abroad (1-8 Credits)**

Prerequisite: Permission of Department Chair. Residence and study abroad in an Arabic-speaking country. May be repeated once with different content. Only 8 credits allowable for minor in Arabic.

**3501:422 Special Topics in Arabic (1-4 Credits)**

Prerequisite: Two of the group of [3501:301, 3501:302, 3501:303, 3501:304] or permission of instructor. Development of specialized language skills or reading of significant works of literature or culture not studied in other courses. (Conducted in Arabic.) (May be repeated once with different topic for a maximum total of 8 credits.)

**3501:497 Individual Reading in Arabic (1-4 Credits)**

Prerequisite: 3501:202 and permission of the instructor and department chair. Individual study under the guidance of professor. May be repeated once with departmental permission for a total of 8 credits.

## Archaeology (3240)

**3240:100 Introduction to Archaeology (3 Credits)**

Introduction to the study of ancient cultures based on material remains. Course covers basic archaeological concepts and tools, types of data and interpretation.

**Gen Ed:** Tier 2 - Social Science

**3240:150 Time Before History (3 Credits)**

Survey of world prehistory from the first appearance of anatomically modern humans to the rise of state-level societies from an archaeological perspective. Web Components.

**3240:300 Historical Archaeology (3 Credits)**

This course explores recent developments in historical archaeology and how material culture can be used to study race, class, gender, and ethnic identities.

**3240:313 Archaeology of Greece (3 Credits)**

The ruins and monuments of Greece; history reconstructed by examination of the material remains. No foreign language necessary.

**3240:314 Archaeology of Rome (3 Credits)**

The ruins and monuments of Rome; history reconstructed by examination of the material remains. No foreign language necessary.

**3240:345 Egyptology (3 Credits)**

Introduction to ancient Egyptian civilization, with emphasis on sites and artifacts representative of socio-political and ideological transformations from the Prehistoric through Ptolemaic Periods.

**3240:360 Ancient Near Eastern Archaeology (3 Credits)**

General survey of the archaeological material culture and written history of the ancient Near East. Covers principal human achievements from the Paleolithic to Alexander's conquest.

**3240:400 Archaeological Theory (3 Credits)**

Prerequisite: 3240:100. Advanced seminar covering history of scientific archaeological exploration, major theoretical paradigms and current trends in archaeology. Required for Certificate in Field Archaeology.

**Gen Ed:** Tier 3 - Critical Thinking

**3240:410 Archaeogeophysical Survey (3 Credits)**

Prerequisite: [3240:100 or 3370:101 or 3350:310]. Advanced instruction in principles of subsurface geophysical survey techniques in archaeology. Emphasizes magnetic gradiometry and electrical resistivity techniques. Includes both laboratory and fieldwork.

**3240:420 Archaeology of Ohio (3 Credits)**

Provides a detailed overview of Ohio's prehistoric cultures and the early historic period focusing on cultural evolution and environmental relationships.

**3240:440 Archaeological Laboratory Methods (3 Credits)**

Prerequisite: 3240:100. Laboratory processing and study of lithic, ceramic, paleofaunal, paleobotanical, metallic, archaeological materials. Emphasis varies with instructor expertise. Involves instrumental or statistical analysis.

**3240:450 Archaeological Field School (1-6 Credits)**

Prerequisite: 3240:100 or permission. A field-based course teaching based archaeological techniques, mapping, excavation of prehistoric and historic sites, survey and documentation. (May be repeated for a maximum of 6 credits.)

**3240:460 Seminar in Ancient Near East (3 Credits)**

Prerequisite: 3240:360 or 3400:307. Advanced undergraduate seminar on selected topics covering the archaeological remains and historical texts in translation of the ancient Near East.

**3240:472 Special Topics: Archaeology (3 Credits)**

Prerequisite: 3230:150 or permission. Selected topics in archaeology. May include field school, independent or faculty-led research, laboratory training or advanced course work not regularly offered by department.

**3240:499 Senior Honors Project in Archaeology (1-6 Credits)**

Prerequisite: Permission of instructor. Student-designed archaeology project directed by an Archaeology faculty member in conjunction with Honors College preceptors under the guidelines of the Honors College. (May be repeated for a maximum of six credits.)

## Art - Myers School of (7100)

**7100:100 Survey of History of Art I (3 Credits)**

Prerequisite: 2020:121 or 3300:110 or 3300:111. Introductory survey of world art from prehistory to c.1250 C.E.

**Gen Ed:** Tier 2 - Arts; Tier 3 - Critical Thinking

**7100:101 Survey of History of Art II (3 Credits)**

Prerequisite: 7100:100. Introductory survey of world art from 1250 to 1850 C.E.

**Gen Ed:** Tier 2 - Arts; Tier 3 - Global Diversity

**7100:102 Survey of History of Art, Part 3 (3 Credits)**

Prerequisite: 7100:101 or permission of instructor. The third component in a 3-part series of introductory art history courses, this class covers the modern era, from Realism, Impressionism, and the Pre-Raphaelites through the present moment.

**7100:103 Arts Orientation (0 Credits)**

Corequisite: with first 7100 art course. Orientation to the information and strategies necessary to aid new art students in their understanding of the field of art.

**7100:104 Visual Arts Application in the Elementary Classroom (3 Credits)**

Exploration of methods, materials, processes and visual techniques relating two- and three-dimensional art experiences for the teacher of elementary children. No credit as an elective course for art majors.

**7100:105 Introduction to Art Education (3 Credits)**

An introduction to becoming Artist as Teacher in traditional school based and non-traditional community based settings. 10 hours field experience required.

**7100:110 Introduction to New Media (3 Credits)**

Students learn state of the art knowledge and activities of New Media. This course will be in addition or cross-listed with the 7000:100 course.

**7100:111 Emerging Technologies (3 Credits)**

This course provides a hands on introductory exploration of several technologies currently being used by the creative areas of Art and Design.

**7100:131 Foundation Drawing I (3 Credits)**

Corequisite: 7100:103. Introduction to drawing materials and techniques with an emphasis on observation, representation, and formal principles of composition and design.

**7100:132 Introduction to Design (3 Credits)**

An introductory graphic design course focusing on teaching the principles and elements of design through theory and practice.

**7100:144 Foundation 2D Design (3 Credits)**

Fundamental information about the theory and practice of visual design as applied to surfaces, including composition, color and pictorial illusions with lecture and studio experience.

**7100:145 Foundation 3D Design (3 Credits)**

Introduction to meaning of "design" and act of designing in real space. Study of naturally occurring form, structure and process.

**7100:184 Typography I (3 Credits)**

Prerequisite: 7100:132. Studio experience in concept development and processes, tools and materials of graphic designers. Elementary design problems in graphic design.

**7100:189 Production I (3 Credits)**

An introduction to graphic design industry standard software and hardware. Students learn proper development procedures for creating production-ready, professional digital files.

**7100:210 Visual Arts Awareness (3 Credits)**

Prerequisite: 2020:121 or 3300:110 or 3300:111. Lecture course providing appreciation and understanding of arts of various types/periods with emphasis on topics and influences on societies, rather than historical sequence.

**Gen Ed:** Tier 2 - Arts

**7100:213 Introduction to Printmaking (3 Credits)**

Prerequisite: 7100:131 or 7100:144. A fast-paced introduction to traditional and contemporary high-tech/low-tech printmaking processes including relief, intaglio, lithography, and screenprint as well as digital printmaking.

**7100:214 Relief/Screenprint (3 Credits)**

Prerequisite: 7100:213. An introduction to the history, process, and contemporary practice of relief printing and screenprinting.

**7100:216 Intaglio/Lithography (3 Credits)**

Prerequisite: 7100:213. An introduction to the history, process, and contemporary practice of intaglio and lithographic printing.

**7100:222 Introduction to Sculpture (3 Credits)**

Prerequisite: 7100:145. Exploration of aesthetic factors influencing sculptural statements. Development of proficiency in the use of tools, materials and techniques.

**7100:223 Sculpture: Stone (3 Credits)**

Prerequisite: 7100:222. Beginning level lecture and studio course using both traditional hand tools for the creation of stone sculpture. History of the use of stone, evolution of stone working technology and contemporary artists working with stone.

**7100:224 Installation Art (3 Credits)**

Prerequisite: 7100:222. Lecture and studio course introducing the student to the medium of installation art, a major emphasis in the contemporary art scene. The history and evolution of installation art and its use by contemporary artists.

**7100:231 Intermediate Drawing (3 Credits)**

Prerequisite: 7100:131. Continued investigation of basic drawing concepts. Introduction to drawing in color with further development of observation, design, technique and conceptual skills.

**7100:233 Introduction to Life Drawing (3 Credits)**

Prerequisite: 7100:131. Perceptual problems in drawing from the life model. Study of skeletal, muscular, mechanical nature of human figure and application of this knowledge to the resolution of aesthetic problems.

**7100:234 Anatomy for Artists (3 Credits)**

Prerequisite: 7100:233. Studio/lecture experience in drawing and sculpture with an emphasis on human skeletal, muscular, and surface structure.

**7100:243 Introduction to Painting (3 Credits)**

Prerequisites: 7100:131 and 7100:144. Study of aesthetic and technical problems involved in painting. Emphasis on painting from observation, and understanding of color in painting.

**7100:244 Color Concepts (3 Credits)**

Prerequisites: 7100:131 and 7100:144. Lecture and studio experience giving information concerning perception of color, additive color phenomena of light, subtractive color phenomena of pigments and dyes, color notation systems and psychological effects of color.

**7100:246 Introduction to Water-based Media (3 Credits)**

Prerequisites: 7100:131 and 7100:144. Experimentation with water-based media such as tempera, acrylic, and gouache.

**7100:250 Foundation Forum: Lecture (1 Credit)**

Prerequisites: 7100:131, 7100:144, and 7100:145. Corequisite: 7100:252. Credit/noncredit course. Lecture and review designed to broaden students' knowledge by including investigations into materials and technologies to synthesize an understanding in the visual arts.

**7100:251 Watercolor (3 Credits)**

Prerequisites: 7100:131 and 7100:144. Students will investigate traditional and contemporary watercolor techniques and mixed media while addressing issues of composition and conceptual concerns.

**7100:252 Foundations Forum: Studio (2 Credits)**

Prerequisites: 7100:131, 7100:144, and 7100:145. Corequisite: 7100:250. Studio course addresses theory and application of 2D and 3D skills to the production of artworks in preparation of the foundation forum: lecture and review.

**7100:253 Ceramics for Non-Art Majors (3 Credits)**

Hand-building, glazing and kiln loading. Link skills to personal experience, ceramic history and contemporary art and craft issues. No credit toward a major in art.

**7100:254 Introduction to Ceramics (3 Credits)**

Prerequisites: 7100:131 and 7100:144. Studio/lecture course exploring potentials of hand-building techniques in both sculptural and functional forms. Clay processing, glaze application and practical kiln firing.

**7100:266 Introduction to Metalsmithing (3 Credits)**

Prerequisite: 7100:144 and 7100:145. Studio experience in which student is introduced to properties of metals, processes of silversmithing and design and production of jewelry.

**7100:267 Intermediate Jewelry (3 Credits)**

Prerequisite: 7100:266. This class builds on acquired in Introduction to Metalsmithing. Emphasis will be placed on fine jewelry techniques including working with silver.

**7100:268 Color in Metals (3 Credits)**

Prerequisite: 7100:266. Introduction to a variety of techniques to achieve and/or combine color in metals. Techniques such as anodizing aluminum, enameling and the application of color resins and plastics will be explored.

**7100:273 Introduction to Digital Photography (3 Credits)**

Prerequisites: 7100:131 and 7100:144; or permission. An introductory digital photography course covering technical, aesthetic and conceptual issues. Digital camera with manual exposure controls required. No credit for photography majors.

**7100:274 Photography I for Non-Art Majors (3 Credits)**

Film-based black and white photography including camera control, film processing, and darkroom printing. 35mm camera with full manual control required. No credit toward art major.

**7100:275 Introduction to Photography (3 Credits)**

Prerequisites: 7100:131 and 7100:144. Film-based black and white photography including camera control, film processing and darkroom printing. 35mm film camera with full manual control required.

**7100:276 Introduction to Commercial Photography (3 Credits)**

Prerequisite: 7100:273, 7100:274, or 7100:275. Students are introduced to studio and location lighting techniques and related software applications while working through a series of photographic projects.

**7100:280 Digital Imaging (3 Credits)**

Prerequisites: 7100:189 or 7100:276. An exploration of contemporary digital image capture, manipulation, output and distribution, emphasizing digital image concepts, aesthetics and production.

**7100:281 Web and Devices I (3 Credits)**

Prerequisite: 7100:189. This course introduces the process of planning, designing and producing industry standard websites. Emphasis on front-end development and the creative aspect of web design. (May be repeated for a total of six credits.)

**7100:283 Drawing Techniques (3 Credits)**

Prerequisites: 7100:131 and 7100:189. Includes advanced drawing and presentation techniques commonly used in graphic design. Various presentation and design problems will be encountered stressing use of selected drawing methods and processes.

**7100:288 Typography II (3 Credits)**

Prerequisite: 7100:184. Introduction to typographic design to communicate. Study of letterforms, history, comping skills, layout design and digital technology.

**7100:300 Art Since 1945 (3 Credits)**

Prerequisite: [7100:101 and 7100:102] or permission of instructor. Consideration of significant developments in visual art forms since World War II in architecture, sculpture, printing, photography, metal, textile, ceramics, printmaking and graphic design.

**7100:301 Medieval Art (3 Credits)**

Prerequisite: 7100:101 or permission of instructor. Painting, mosaics, architecture, sculpture, and luxury arts of medieval Europe from 4th through 14th centuries.

**7100:302 Art in Europe During the 17th-18th Centuries (3 Credits)**

Prerequisite: 7100:101 or permission of instructor. Analysis of major European examples of architecture, landscape design, painting, prints and sculpture from beginning of the 17th century until approximately 1850.

**7100:303 Italian Renaissance Art (3 Credits)**

Prerequisite: 7100:101 or permission of instructor. Study of architecture, painting and sculpture of Italy during 13th through 16th centuries.

**7100:306 Renaissance Art in Northern Europe (3 Credits)**

Prerequisite: 7100:101 or permission of instructor. Painting, architecture, and sculpture of northern Europe from 14th through 16th centuries.

**7100:307 History of Graphic Design (3 Credits)**

Prerequisite: 7100:101 or permission of instructor. A lecture course analyzing the development of graphic design as an art form from Neolithic sources to the present.

**7100:309 Greek Art (3 Credits)**

The course presents art and architecture of ancient Greeks, and focuses on major monuments, myths, rituals, socio-political constructs, and methodological issues associated with Greek art.

**7100:310 Motion Design (3 Credits)**

Prerequisites: 7100:189 and 7100:288, or permission. Study of the history of moving images, principles of animation and motion graphics. Design in a non-linear environment, emphasis on narrative, video, type and image.

**7100:311 UI/UX Design (3 Credits)**

Prerequisites: 7100:189 and 7100:288, or permission. Introduction to user interface and user experience design. Emphasis is on the design principles, type and image for screen design and the user experience.

**7100:312 Roman Art & Architecture (3 Credits)**

Study of Roman art and architecture from the sixth century B.C.E. through the fourth century C.E.

**7100:313 Survey of Asian Art (3 Credits)**

This course introduces the student to the historical, cultural, political, and religious aspects of civilization that influenced the aesthetics of Asian art.

**7100:316 Biodesign (3 Credits)**

Prerequisite: Sophomore or higher standing or instructor permission. Biodesign combines an introduction into biomimicry/biomimetic design with a studio design exercise, using nature as a model for creating innovative solutions.

**7100:317 Print Matrix (3 Credits)**

Prerequisites: 7100:214 and 7100:216. Intermediate printmaking class requiring the application of printmaking to the production of imagery for specific printmaking applications - Book Arts, Hybrid Prints, Serial Imagery, etc.

**7100:318 Portrait Lighting (3 Credits)**

Prerequisite: 7100:276. Studio and location lighting techniques for commercial and fine art portraiture.

**7100:319 Printmaking Review (0 Credits)**

Prerequisite: 7100:317. A committee of full-time faculty review portfolio of studio work completed in all printmaking courses.

**7100:320 Product Photography (3 Credits)**

Prerequisite: 7100:276. Professional skills are further developed via studio and tabletop photography assignments based on current trends in illustration and advertising photography.

**7100:322 Sculpture II (3 Credits)**

Prerequisite: 7100:222 or permission from instructor. Continuation of 222. Addresses more advanced techniques. May include fabrication, casting, carving, or assemblage. (May be repeated for a total of nine credits)

**7100:323 Lost Wax Casting (3 Credits)**

Prerequisites: 7100:222 or 7100:266. Bronze and aluminum casting using the lost wax process. Students learn foundry techniques and apply them to individual artistic statements. (May be repeated for a total of six credits.)

**7100:330 New Media II (3 Credits)**

Prerequisite or Corequisite: 7100:110 or 7100:100. Students practice various New Media technologies. No prior art experience is required. This course will be in addition or cross-listed with the 7000:300 course.

**7100:335 Intermediate Life Drawing (3 Credits)**

Prerequisites: 7100:233. Continued development of the content established in Life Drawing with additional emphasis on draped models, drawing materials and aesthetics. (May be repeated for a total of nine credits.)

**7100:346 Intermediate Water-Based Media (3 Credits)**

Prerequisite: 7100:246. Development of personal concepts and imagery through investigation of historical and contemporary styles, techniques, and issues. (May be repeated for six credits.)

**7100:348 Intermediate Painting (3 Credits)**

Prerequisite: 7100:243. Development of personal concepts and imagery through investigation of historical and contemporary styles and issues. (May be repeated for a total of six credits, but limited to a maximum of three credits in a given medium)

**7100:350 Painting/Drawing Portfolio Review (0 Credits)**

Prerequisite: Two courses in 7100:348 Intermediate Painting. A committee of full-time faculty review portfolio of student work completed in prerequisite courses.

**7100:353 Throwing (3 Credits)**

Prerequisite: 7100:254. Emphasis on making pottery using the potter's wheel as well as organization and planning skills needed to make glazes and fire kilns.

**7100:356 History of Craft (3 Credits)**

This course is designed to illuminate selected aspects of the history of the making of things as these apply to current practice in the crafts.

**7100:366 Metalsmithing II (3 Credits)**

Prerequisite: 7100:266. Continuation of experiences presented in 266 with further development of skills and expansion of technical knowledge. (May be repeated for a total of six credits)

**7100:368 Color in Metals II (3 Credits)**

Prerequisite: 7100:268. Continuation of 268. Advanced projects designed to develop the student's aesthetic values in color in metals. Emphasis on individual approach and experimentation. (May be repeated for a total of 12 credits.)

**7100:369 Production for Jewelry (3 Credits)**

Prerequisite: 7100:266. This class will investigate ways of producing artwork and jewelry in multiples and limited production runs. Attention will also be given to packaging, display, and marketing the work.

**7100:370 History of Photography (3 Credits)**

Prerequisite: 7100:102. A lecture course studying the history of photography from its invention to contemporary issues.

**7100:374 Photography II for Non-Art Majors (3 Credits)**

Prerequisite: 7100:274. Projects designed to expand the student's awareness of technical conceptual and aesthetic issues in photographic images. 35mm film camera with full manual control required.

**7100:375 Photography II (3 Credits)**

Prerequisite: 7100:275. Projects designed to expand student's awareness of technical, conceptual and aesthetic issues in photographic images. 35mm film camera with full manual control required.

**7100:377 Medium and Large Format Photography (3 Credits)**

Prerequisite: 7100:374 or 7100:375. A technical course using medium and large format film cameras, which are furnished for the course's duration. Topics include camera movements, advanced exposure and development techniques.

**7100:378 Alternative Photographic Processes (3 Credits)**

Prerequisites: 7100:374 or 7100:375. Exploration in alternative photographic processes using hand-coated Cyanotype, Van Dyke Brown and Platinum emulsions, with digitally created large-format negatives.

**7100:380 Illustration (3 Credits)**

Prerequisite: 7100:283 or permission of instructor. Application of painting and drawing skills and aesthetic sensitivity to specific commercial illustration and editorial art assignments. (May be repeated for a total of nine credits.)

**7100:381 Digital Imaging II (3 Credits)**

Prerequisite: 7100:280. Advanced digital imaging development and manipulation with an emphasis on preparation and use of digital images in print, multimedia and web applications.

**7100:382 Graphic Design Junior Review (1 Credit)**

Prerequisites: 7100:250, 7100:252, and 7100:288. Corequisites: 7100:384 and 7100:387. Junior level review by graphic design faculty. Students present a portfolio of work from specified courses that exemplify creative and technical competencies.

**7100:384 Professional Design Practices (2 Credits)**

Prerequisite: 7100:288. Corequisites: 7100:382 and 7100:387. Comprehensive overview of standard business practices specific to the graphic design field. Prepares students to work as interns in professional creative environments.

**7100:385 3D Modeling, Printing and Prototyping (3 Credits)**

Prerequisite: 7100:189. Computer imaging course with an emphasis in three-dimensional modeling and preparation of files for output to various 3D devices for production or screen. (May be repeated for a total of nine credits)

**7100:387 Typography III (3 Credits)**

Prerequisite: 7100:288. Corequisites: 7100:382 and 7100:384. Incorporation of typography, photography, and concept development into advertising and design composition. Emphasis is given to integration of type and image, typography structure and refinement.

**7100:388 Production II (3 Credits)**

Prerequisites: 7100:276 and 7100:387. More complex projects with emphasis given to mechanical preparation of finished art for various printing processes.

**7100:401 Special Topics: History of Art (1-3 Credits)**

(May be repeated for credit when a different subject or level of investigation is indicated) Prerequisites: 7100:101 or permission of instructor. Lecture course in which subject is specified each time course is offered. Focuses upon an art movement, time period, the production of a single artist or a specific art medium.

**7100:402 Museology (3 Credits)**

Lecture course dealing with museum science, including museum history, staff structures, art handling, storage, and presentation and exhibit preparation.

**7100:403 Art and Critical Theory (3 Credits)**

Prerequisites: 7100:102 or permission of the instructor. This course, designed for both studio and art history majors, surveys the major theoretical currents in contemporary criticism and art history.

**7100:405 History of Art Symposium (1-3 Credits)**

Prerequisite: One Art History course beyond 7100:101 or permission of instructor. Lecture, individual research and evaluation, group discussion related to a specific time period or to an artistic problem. (May be repeated for credit when a different subject is indicated)

**7100:407 Methods of Art History (3 Credits)**

Prerequisite: 7100:101 or permission of the instructor. This course explores the history of the discipline and the permutations it has undergone since its establishment in the early years of the nineteenth century.

**7100:409 Time-Based Media (3 Credits)**

Prerequisite: 7100:285. Through the development of increasingly complex projects, students explore the conceptual and aesthetic considerations of creating motion media based presentations. (May be repeated for a total of six credits.)

**7100:410 Methods of Teaching Elementary Art (3 Credits)**

Prerequisite: 7100:105. Corequisite: 7100:428. A field based course presenting the necessary skills and knowledge to successfully implement, plan, instruct, and assess a diverse art-based curriculum for the elementary classroom.

**7100:411 Methods of Teaching Secondary Art (3 Credits)**

Prerequisite: 7100:105. Corequisite: 7100:429. A field based course presenting the necessary skills and knowledge to successfully implement, plan, instruct, and assess a diverse art-based curriculum for the secondary classroom.

**7100:412 Student Teaching Colloquium (1 Credit)**

Prerequisite: Senior status, successful completion of field experience, and permission of instructor. Corequisite: 5300:495. Lecture course providing the skills and knowledge necessary for art education licensure. Student will gain knowledge in resume building, licensure requirements, and practical pedagogical techniques.

**7100:418 Multiples and Multiplicity (3 Credits)**

Prerequisites: Student must have Junior standing and have completed at least one 7100:300 level course in their major. Advanced printmaking class recommended for studio majors working with multiples, variability, and production requiring students to define and complete their own projects.

**7100:419 Special Topics in Print (3 Credits)**

Prerequisite: 7100:131 or 7100:144 or 7100:145. Investigation in specialized printmaking media like Photogravure, Digital Printing, and Book Arts among others. May be offered in conjunction with university sponsored residency or travel.

**7100:420 Sculpture Portfolio Review (0 Credits)**

Prerequisite: 7100:422. Corequisite: 7100:422. A committee of full-time faculty reviews portfolio of studio work completed in prerequisite/corequisite courses.

**7100:422 Advanced Sculpture (3 Credits)**

Prerequisite: 7100:250 and 7100:322. Development of individual points of view and sculptural statements. (May be repeated for a total of 15 credits.)

**7100:423 Art Bomb Brigade: Methods for Creating Public Art (3 Credits)**

An experiential learning studio course in which students explore how artists work with community stakeholders to develop ideas for site specific mural projects.

**7100:424 Middle School Materials & Techniques (3 Credits)**

A studio course exploring current topics and media/materials and techniques in middle school art education.

**7100:425 Ceramics: Methods, Materials, & Concepts (3 Credits)**

Prerequisites: 7100:131 and 7100:145. (Lab) Ceramics for teachers. Introduces the potter's wheel, hand-building, firing kilns, history of ceramics and ceramic forms, safety in the studio and strategies for teaching ceramics.

**7100:426 Early Childhood Art Education (3 Credits)**

A lecture course for art educators exploring visual arts as a vehicle for whole child development and learning across the curriculum in PK-5 school settings.

**7100:427 Art in the Inclusive Classroom (3 Credits)**

Prerequisite: 5100:220. Art education course exploring the use of art with diverse populations through lecture, hands on art making and site visitations.

**7100:428 Elementary Field Exp: Art Licensure (1 Credit)**

Corequisite: 7100:410. Instructional experience in the PK-6 art classroom to apply theory and research into practice.

**7100:429 Secondary Field Exp: Art Licensure (1 Credit)**

Corequisite: 7100:411. Instructional experience in the 7-12 art classroom to apply theory and research into practice.

**7100:430 Professional Practices for Creative Careers (3 Credits)**

Studio course with experiential learning component introduces students to professional practices for securing creative careers after graduation.

**7100:435 Contemporary Art Issues (3 Credits)**

Prerequisite: 7100:102. Discussion course for advanced students in any visual arts discipline, dealing with concepts and critical theories related to current practice of the visual arts.

**7100:440 New Media III (3 Credits)**

Prerequisite or Corequisite: [7100:110 and 7100:330] or [7000:100 and 7000:330]. Students create their original New Media projects through proposals, productions, and a show. This course will be in addition or crosslisted with the 7000:400 course.

**7100:450 Advanced Life Drawing (3 Credits)**

Prerequisite: 7100:335. Drawing from the live model, with an experimentation leading to an individual style. (May be repeated for a total of 9 credits).

**7100:452 Service Learning in Art (3 Credits)**

Prerequisite: Senior standing. An interdisciplinary, lecture/studio course that integrates fine art and design to promote understanding of the importance of sustained community outreach and serving as arts advocates.

**7100:453 Advanced Throwing (3 Credits)**

Prerequisite: [7100:250 and 7100:353] or permission of instructor. Emphasis on making pottery using the potters wheel beyond the beginning level including organization and planning skills needed to make and exhibit or sell items. (May be repeated for a total of six credits.)

**7100:454 Advanced Ceramics (3 Credits)**

Prerequisite: 7100:250 and [7100:353 or 7100:354]. Emphasis on refinement of technique toward personal aesthetic statement in preparation for professional or private studio production. Student may choose a general survey of subject matter or a more concentrated area of study. (May be repeated for a total of 18 credits.)

**7100:455 Advanced Painting (3 Credits)**

Prerequisites: 7100:231 and 7100:348. Exploration of aesthetic and conceptual issues involved in developing an individual stylistic approach to image making, leading to senior portfolio and BFA exhibition. (May be repeated for a total of 15 credits)

**7100:456 Ceramic Portfolio Review (0 Credits)**

Prerequisite: 7100:454. A committee of full-time faculty reviews portfolio of studio work completed in prerequisite courses.

**7100:457 Professional Practices (3 Credits)**

Prerequisite: Junior or Senior status. This course covers business, marketing and professional development practices, while also introducing students to issues and strategies in contemporary art.

**7100:460 The Myers Forum: Studio (1-3 Credits)**

Prerequisites: 7100:102 and 7100:250, and successful completion of at least one 300 level course in the Myers School of Art, or permission of the instructor. Cross-disciplinary studio addressing current issues related to theory and practice of visual communication.

**7100:461 The Myers Forum: Seminar (1-3 Credits)**

Prerequisites: 7100:102 and 7100:250, and successful completion of at one 300 level course in the Myers School of Art, or permission of the instructor. Cross-disciplinary seminar addressing current issues related to the theory and practice of visual communication.

**7100:465 Painting/Drawing Senior Exhibition Preparation (0 Credits)**

Prerequisites: Senior standing, the second 7100:455 Advanced Painting/Drawing. Preparation of the portfolio to be exhibited in the Senior Exhibition.

**7100:466 Advanced Metalsmithing (3 Credits)**

Prerequisites: 7100:250 and 7100:366. Investigation in depth of aesthetic and technical problems of metalsmithing. Student works on individual projects under guidance from instructor. (May be repeated for a total of 18 credits.)

**7100:467 Metalsmithing Portfolio Review (0 Credits)**

Prerequisite: 7100:466. Corequisite: 7100:466. A committee of full-time faculty review portfolio of studio work completed in prerequisite courses.

**7100:471 Web and Devices II (3 Credits)**

Prerequisite: 7100:281. Students learn dynamic back-end understanding of website development while maintaining an emphasis on design and creative solutions. (May be repeated for a total of six credits.)

**7100:472 Photography III: Color for Non-Art Majors (3 Credits)**

Prerequisite: 7100:374. Advanced level lecture, studio and lab experience in color photography introducing students to technical, aesthetic and conceptual issues of the medium.

**7100:473 Photography III: Color (3 Credits)**

Prerequisite: 7100:375. Advanced level lecture, studio and lab experience in color photography introducing students to technical, aesthetic and conceptual issues of the medium.

**7100:474 Advanced Photography for Non-Art Majors (3 Credits)**

Prerequisite: 7100:374. Studio course with emphasis on advanced individual projects.

**7100:475 Advanced Photography (3 Credits)**

Prerequisites: 7100:250, 7100:375, and 7100:473. Photographic media, light and photographic equipment manipulated experimentally to produce creative graphic images. Student works under guidance of instructor on advanced individual projects. (May be repeated for a total of 21 credits.)

**7100:476 Photography Portfolio Review (0 Credits)**

Prerequisite: 7100:475. A committee of full-time faculty reviews portfolio of studio work completed in prerequisite/corequisite courses.

**7100:479 Professional Photographic Practices (3 Credits)**

Prerequisites: 7100:475 and senior standing. Introduction to business and marketing practices in the fine art and commercial photography industry. Financial, legal, organizational, promotional, interpersonal, and ethical practices will be covered.

**7100:480 Advanced Graphic Design (3 Credits)**

Prerequisite: 7100:382 or permission of instructor. Student works on advanced-level individual projects under supervision of instructor. (May be repeated for a total of nine credits.)

**7100:481 Design X Nine (3 Credits)**

Prerequisite: 7100:382. Course focusing on professional business practices. Students chosen by portfolio review in junior year. Practical experience gained through working with clients and outside sources. (May be repeated for a total of nine credits.)

**7100:482 Corporate Identity & Graphic Systems (3 Credits)**

Prerequisites: 7100:382 and 7100:384. Advanced projects in corporate identity and graphic systems analysis. Problem solving for these specific areas of graphic design within limitations of physical and digital reproduction.

**7100:483 Graphic Design Presentation (3 Credits)**

Prerequisite: 7100:482. Students prepare a professional portfolio and resume. The course includes project development, portfolio review and exhibition.

**7100:485 Advanced Illustration (3 Credits)**

Prerequisite: 7100:380 or permission of instructor. Development of a personal, unique visual voice. Exploration of traditional and/or digital approaches to illustration advancing technical proficiency, imaginative problem solving, and entrepreneurial thinking. (May be repeated for a total of nine credits)

**7100:487 Packaging Design (3 Credits)**

Prerequisite: 7100:382. Students solve packaging problems by synthesizing two and three-dimensional design concepts and researching materials and processes applicable to packaging of diverse products.

**7100:488 Typography IV (3 Credits)**

Prerequisite: 7100:387. Senior level investigation of complex sequential type systems; including publications, corporate communications and multi-application projects for comprehensive buildout while emphasizing preparation of files for various output.

**7100:489 Special Topics in Studio Art (3 Credits)**

Group Investigation of Topics not offered elsewhere in curriculum. (May be repeated for credit when a different subject or level of investigation is indicated)

**7100:490 Workshop in Art (1-4 Credits)**

Prerequisite: advanced standing in art or permission of instructor. Group investigation of a particular phase of art not offered by other courses in curriculum. (May be repeated for credit when a different subject or level of investigation is indicated - 7100:490 to maximum of eight credits; 7100:590 to maximum of 12 credits.)

**7100:491 Architectural Present I (3 Credits)**

Prerequisite: 7100:144. Studio practice in architectural design and presentation methods in residential and commercial interiors.

**7100:492 Architectural Present II (3 Credits)**

Prerequisite: 7100:491 or 7100:591. Continuation of concepts covered in Architectural Presentations I with additional work in color rendering techniques. Emphasis on a variety of rendering mediums.

**7100:493 Advanced Photography: Digital Printing (3 Credits)**

Prerequisites: 7100:280 and 7100:475. Digital technologies for fine-art photographers including scanning negatives; workflow; color management; image adjustment, correction and optimization; inkjet printing; and digital asset management.

**7100:494 Special Topics: Art Education (1-3 Credits)**

May be repeated for credit when a different subject or level of investigation of topics of interest to the art education student is not covered elsewhere in the curriculum.

**7100:495 Senior Exhibition (0 Credits)**

Prerequisite: Senior standing and permission. Exit review of work from B.F.A. candidate's major courses.

**7100:496 Art Internship/Professional Experience (1-6 Credits)**

Prerequisites: Junior standing in major program and permission of Internship Director. In-depth professional training affording the intern on-the-job experience in selected areas of specialization. (Repeatable for credit. No more than six credits of internship may apply toward the elective requirement for completion of any art department major.)

**7100:497 Independent Study: Art (1-7 Credits)**

Prerequisites for art majors: completion of at least one advanced course in the major with a grade of A or A- and permission of instructor. Investigation in depth of aesthetic and technical problems within a studio-selected area of specialization. Student must present in writing a proposed study plan and time schedule for instructor approval. Prerequisites for non-art majors: permission of instructor. (May be repeatable for seven credits).

**7100:498 Senior Thesis in the History of Art (1-3 Credits)**

Prerequisites: 14 credits in art history and permission of instructor. Individual research in art history centered around limited topic, such as specific time period, history of specific techniques, a single artist or movement in art history. No more than 10 credits will be counted toward major. (May be repeated for credit when a different subject or level of investigation is indicated)

**7100:499 Honors in Art (3 Credits)**

Prerequisites: senior standing in the Honors Program and approval of honors project by faculty advisor. To be used for research in the Honors Program established by student and his/her adviser(s). (May be repeated for a total of six credits)

## Automated Manufacturing Engineering Technology (2870)

**2870:301 Computer Control of Automated Systems (3 Credits)**

The development of computer based systems and computer programs using robotics and machine controllers as the solutions for automated manufacturing problems.

**2870:311 Facilities Planning (3 Credits)**

Prerequisite: 2940:180 or 2940:210 or permission. An application based study of facilities analysis, design and layout utilizing software based solutions.

**2870:332 Management of Technology Based Operations (3 Credits)**

A study of the techniques and knowledge necessary to effectively manage technical personnel.

**2870:348 CNC Programming I (3 Credits)**

Prerequisites: [2030:154 and 2920:121] or 2880:248, or permission. Introduction to CAM (Computer Aided Manufacturing) based CNC (Computer Numerical Control) programming; development of milling, drilling, and turning programs.

**2870:441 Advanced Quality Practices (3 Credits)**

Prerequisite: 2880:241 or permission. Specific quality assurance procedures will be developed conceptually, proven mathematically, and then tested in lab exercises. Industry accepted SQC software will be used.

**2870:448 CNC Programming II (3 Credits)**

Prerequisite: 2870:348. The study of advanced CNC programming techniques utilizing an industry standard CAM programming software package and CNC program verification software.

**2870:470 Simulation of Manufacturing Systems (3 Credits)**

Prerequisite: 2880:211. Computer simulation solutions applied to the traditional manufacturing problems of equipment justification, production line balancing, and capacity planning.

**2870:480 Automated Production (3 Credits)**

Prerequisites: 2870:301, 2870:448, and 2880:201. A study of the automated production system. The various systems studied thus far, CNC, robotics, automated machines via PLCs, and facilities design, are integrated and analyzed from a production standpoint.

**2870:485 SME Manufacturing Technologist Certification Preparation (2 Credits)**

Prerequisites: 2870:441 and 2920:347. Pre/Corequisite: 2870:480. Provides a review for the SME Manufacturing Technologist Certification Exam. Topics include a review of materials and manufacturing processes, automated systems and control, quality and process control methods, manufacturing management, and other topics appearing on the exam.

**2870:490 Manufacturing Project (2 Credits)**

Prerequisite: Senior status. Advanced CAD/CAM topics are presented. A comprehensive project is undertaken.

**2870:495 Individual Investigation in Manufacturing Engineering Technology (2 Credits)**

Selected topic(s) that provide for specific individual study in the area of manufacturing engineering technology under the direct supervision of a faculty member.

**2870:496 Special Topics in Manufacturing Engineering Technology (1-3 Credits)**

Prerequisite: Permission. Selected topic(s) that provide for specific course work in the area of manufacturing engineering technology offered once or only occasionally in areas where no formal course exists.

**2870:499 Workshop in Manufacturing Engineering Technology (1-3 Credits)**

Prerequisite: Permission. Group studies of special topics in manufacturing engineering technology.

## Biology (3100)

**3100:100 Introduction to Botany (4 Credits)**

Identification and biology of common plants of this region. Recommended for teachers of nature study. Not available for credit toward a degree in biology. Laboratory.

**3100:101 Introduction to Zoology (4 Credits)**

Identification and biology of common animals of this region. Recommended for teachers of nature study. Not available for credit toward a degree in biology. Laboratory.

**3100:103 Natural Science: Biology (4 Credits)**

Designed for non-science majors. Laboratory and class instruction illustrate concepts of living organisms with emphasis on mankind's position in, and influence on, the environment.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3100:106 Exploring Biology (3 Credits)**

Exploration of how science works and the cellular organization, genetic inheritance and diversity of living things. Not available for credit toward a degree in biology.

**Gen Ed:** Tier 2 - Natural Science

**3100:108 Introduction to Biological Aging (3 Credits)**

Prerequisite: 3100:103. Survey of normal anatomical and physical changes in aging and associated diseases. (For students in gerontological programs at Wayne College. Not for B.S. biology credit.)

**Gen Ed:** Tier 2 - Natural Science

**3100:111 Principles of Biology I (4 Credits)**

Prerequisite or Corequisite: 3150:151 Molecular, cellular basis of life; energy transformations, metabolism; cell reproduction, genetics, development, immunology, evolution, and origin and diversity of life (through plants). Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3100:112 Principles of Biology II (4 Credits)**

Prerequisite: 3100:111 with a grade of C- or better. Animal diversity; nutrients, gas exchange, transport, homeostasis, control in plants and animals; behavior; ecology. (3100:111 and 3100:112 are an integrated course for biology majors.) Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3100:113 Professional Development for Biology Majors (1 Credit)**

Prerequisite/Corequisite: 3100:111. This course is for Biology majors in their first year of study to provide useful tools as they pursue a Biology career. Recommended, not required.

**3100:130 Principles of Microbiology (3 Credits)**

Basic principles and terminology of microbiology; cultivation and control of microorganisms; relationships of microorganisms; medical microbiology. Laboratory. Not available for credit toward a degree in biology.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3100:131 The Biology of Monsters (1 Credit)**

Many movie monsters use exaggerations or extrapolations of real biological concepts. This course uses monsters to teach key biological concepts in a fun and accessible way. A short lecture is followed by a screening of the movie.

**3100:180 BS/MD Orientation (1 Credit)**

Orientation to the BS/MD Program. Restricted to students in the BS/MD Program. Graded credit/no credit. Not available for credit toward a biology degree.

**3100:190 Health-Care Delivery Systems (1 Credit)**

Health-care principles and practices. Restricted to the student in NEOU COM, six-year BS/MD program. Graded credit/noncredit. Not available toward credit as major in biological sciences.

**3100:191 Health-Care Delivery Systems (1 Credit)**

Health-care principles and practices. Restricted to the student in NEOU COM, six-year BS/MD program. Graded credit/noncredit. Not available toward credit as major in biological sciences.

**3100:200 Human Anatomy & Physiology I (3 Credits)**

Study of structure and function of the human body. Molecular, cellular function, histology, integumentary system, skeletal system, muscular system, nervous system, and the sense organs. Not available for credit toward a degree in biology.

**Gen Ed:** Tier 2 - Natural Science

**3100:201 Human Anatomy & Physiology Laboratory I (1 Credit)**

Laboratory devised to allow hands on experience using models, dissections of various animals, virtual dissection, and physiological exercises. Not available for credit toward a degree in biology.

**3100:202 Human Anatomy & Physiology II (3 Credits)**

Prerequisite: 3100:200. Study of structure and function of the human body. Endocrine system, cardiovascular system, lymphatics, respiratory system, urinary system, digestive system, and reproductive systems. Not available for credit toward a degree in biology.

**Gen Ed:** Tier 2 - Natural Science

**3100:203 Human Anatomy & Physiology Laboratory II (1 Credit)**

Laboratory devised to allow hands on experience using models, dissections of various animals, virtual dissection, and physiological exercises. Not available for credit toward a degree in biology.

**3100:211 General Genetics (3 Credits)**

Prerequisite: Completion of 3100:112 with a grade of "C-" or better. Principles of heredity, principles of genetics.

**3100:212 Genetics Laboratory (1 Credit)**

Prerequisite: 3100:112 with a grade C- or better, and prerequisite or corequisite: 3100:211. Laboratory experiments in genetics with emphasis on scientific method; techniques in molecular biology.

**3100:217 General Ecology (3 Credits)**

Prerequisite: Completion of 3100:112 with a grade of "C-" or better. Study of interrelationships between organisms and environment.

**3100:225 Biology of AIDS (1 Credit)**

Prerequisite: Permission. Course examines the Human Immunodeficiency Virus and the disease of AIDS. Virus structure, replication, therapy, transmission, epidemiology, disease process and social consequences are studied. Not available for credit toward a degree in biology.

**3100:238 Biomimicry Foundations (3 Credits)**

An introduction to biomimicry through the analysis of case studies, including those from Northeast Ohio, and a consideration of the major tools and methods.

**3100:265 Introductory Human Physiology (4 Credits)**

Study of physiological processes in human body, particularly at organ-systems level. Not open to preprofessional majors. Laboratory. Not available for credit toward a degree in biology.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3100:290 Health-Care Delivery Systems (1 Credit)**

Health-care principles and practices. A continuation of 190/191 for a second year student in NEOU COM six-year BS/MD program. Graded credit/noncredit. Not available toward credit as major in biological sciences.



**3100:291 Health-Care Delivery Systems (1 Credit)**

Health-care principles and practices. A continuation of 190/191 for a second year student in NEUCOM six-year BS/MD program. Graded credit/noncredit. Not available toward credit as major in biological sciences.

**3100:295 Special Topics in Biology (1-3 Credits)**

Prerequisite: Permission. Special courses offered occasionally in areas where no formal course exists. Not available for credit toward a degree in biology.

**3100:311 Cell & Molecular Biology (4 Credits)**

Prerequisites: 3150:151, 3150:152, 3150:153, 3150:154, and 3100:211. Study of structure and function of cells, with emphasis on both classical and modern approaches to understanding organelles, energy balance, protein synthesis, and replication.

**3100:312 Neuroscience in Health and Disease (3 Credits)**

Prerequisite: 3100:112 with a C or better or 3100:202 with a C or better or 3750:320 with a C or better. Discover how neurons communicate and explore how the brain functions under conditions of normal health, as well as conditions of disease.

**3100:315 Evolutionary Biology Discussion (1 Credit)**

Prerequisite: 3100:211 with a grade of C- or better. Informal discussions of various aspects of organic evolution of general or special interest.

**3100:316 Evolutionary Biology (3 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Description of core evolutionary concepts and the history of evolutionary thought including natural selection, sexual selection, genetic drift, higher level selection and speciation.

**3100:318 Biomimicry Design Challenge (3 Credits)**

A studio design course using nature as a model for creating innovative solutions targeting a specific design problem. It combines a brief introduction into biomimetics and is open to students from different disciplines in the arts, sciences, and engineering.

**3100:331 Microbiology (4 Credits)**

Prerequisites: 3100:112, 3100:211, and 3150:263 (or corequisite). Survey of monera with emphasis on the bacteria: their morphology, cultivation and chemical characteristics. Relationships of microorganisms to humans and their environment. Laboratory.

**3100:342 Flora & Taxonomy (3 Credits)**

Prerequisite: 3100:112 with a C- or better. Origins of Ohio flora, ecological and evolutionary relationships. Survey of local flowering plant families, collection and identification of flora. Laboratory and field trips.

**3100:343 Diversity of Plants (3 Credits)**

Prerequisites: 3100:112 with a grade of C- or better, and 3100:217. A broad survey of the traditional plant "branches" of the tree of life. Diversity, structure, and function of fungi, algae, and land plants.

**3100:344 Diversity of Plant Laboratory (2 Credits)**

Prerequisites: 3100:112 with a grade of C- or better, and 3100:217. Corequisite: 3100:343. A broad laboratory survey of the traditional plant "branches" of the tree of life. Students will have hands-on experience with fungi, algae, and land plants.

**3100:345 Biology of Vascular Plants (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. A lecture and laboratory course which presents an overview of the anatomy, morphology, development and evolution of vascular plants.

**3100:363 Foundations of Physiology I (3 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Fundamentals of physiology including integrating systems (neurophysiology, sensory processes, and endocrinology), movement, and muscle. For all pre-professional students and Biology majors.

**3100:364 Foundations of Physiology Laboratory I (2 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Corequisite: 3100:363. Laboratory experiments in animal physiology. (Transport processes, neurophysiology, endocrinology, muscle physiology.) Presentation of results in written scientific format.

**3100:365 Histology (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Cellular structure of organs in relation to their functional activity, life history, comparative development. Laboratory.

**3100:367 Genomics (3 Credits)**

Prerequisites: 3100:111 and 3100:112. Study of genomes from all branches of life to develop a deeper understanding of functional genomics, genomic architecture, and impacts (ethical and social) of advances in genomics.

**3100:401 Human Anatomy for Biology Majors (4 Credits)**

Prerequisite: 3100:112 with a C- or better. Organizing principles and patterns found in human organs and systems. Laboratory integrates creative, analytical and virtual approaches to translate concept into practical application of anatomy.

**3100:404 Digital Skills for Biologists (3 Credits)**

This course teaches students with no prior experience the fundamentals of programming, electronics, 3D printing, actuation and robotics for application to biological experiments.

**3100:406 Principles of Systematics (3 Credits)**

Prerequisites: 3100:112 with a grade of C- or better, and 3100:211, and 3100:316. The science of identifying, naming, and classifying the diversity of life. Topics include: nomenclature, types, techniques of data collection, and methods of phylogenetic reconstruction.

**3100:418 Field Ecology (4 Credits)**

Prerequisite: 3100:217 (statistics strongly recommended). Introduction to sampling methods, design of experiments and observations, and computer analysis; some local natural history. Laboratory.

**3100:421 Tropical Field Biology (4 Credits)**

Prerequisites: Completion of courses 3100:111 and 3100:112 with a grade of C- or better, or equivalent. Ecology of coral reefs, tide pools, mangroves, intertidal zones, terrestrial flora and fauna, island biogeography. Taught at a field station in the tropics. Field trips involved; transportation costs.

**3100:422 Conservation Biology (3 Credits)**

Prerequisite: 3100:217. Explores the factors affecting survival of biodiversity, and how to develop practical approaches to resolve complicated conservation issues.

**3100:423 Population Biology (3 Credits)**

Prerequisites: 3100:211 and 3100:217. Discussions of animal and plant ecology and evolutionary biology from a species and population level perspective. Includes topics in population ecology and population genetics.

**Gen Ed:** Tier 3 - Critical Thinking

**3100:426 Wetland Ecology (4 Credits)**

Prerequisite: 3100:217. Wetland ecology; principles and conservation. Field studies will be conducted at Bath Nature Preserve. Laboratory.

**3100:427 Freshwater Ecology (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better, or by permission. The course explores the diversity of aquatic life and key characteristics of freshwater ecosystems with emphasis on the Laurentian Great Lakes. Includes field trips, laboratory.

**3100:428 Biology of Behavior (3 Credits)**

Prerequisites: 3100:211, 3100:217, and 3100:316. Biological basis of behavior, ethology, and behavioral ecology. An evolutionary perspective is emphasized.

**3100:429 Biology of Behavior Laboratory (1 Credit)**

Prerequisite or corequisite: 3100:428 and permission of instructor. Individualized, directed study to provide the student with first-hand experience in observing, describing and interpreting animal behavior.

**3100:430 Community/Ecosystem Ecology (3 Credits)**

Prerequisite: 3100:217. An examination of the components, processes, and dynamics in communities and ecosystems. Includes reading and discussion of primary literature.

**3100:433 Medical Microbiology (4 Credits)**

Prerequisite: 3100:331. Pathogenic microorganisms, including bacteria, viruses, fungi, helminthes, and how they cause disease; host-pathogen interactions and the function of the immune response in controlling disease. Laboratory.

**3100:437 Immunology (4 Credits)**

Prerequisite: 3100:211 and 3100:311. Nature of antigens, antibody response, and antigen-antibody reactions. Site and mechanism of antibody formations, hypersensitivity, immunologic tolerance and immune diseases considered. Laboratory.

**3100:439 Advanced Immunology (3 Credits)**

Prerequisite: 3100:437. Immunology is studied from a historical and current perspective. Topics include T cells, B cells, antigen presentation, HIV, and transplantation.

**3100:440 Mycology (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Structure, life history, classification of representative fungi with emphasis on the importance of fungi to humans. Laboratory.

**3100:443 Phycology (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Examination of the major groups of algae with emphasis on life histories and their relationship to algal form and structure. Laboratory.

**3100:444 Field Marine Phycology (3 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Collection and identification of tropical marine algae on San Salvador Island, The Bahamas. Discussion of characteristics and ecology of major groups of Caribbean algae. Laboratory.

**3100:451 General Entomology (4 Credits)**

Prerequisites: 3100:112 with a grade of C- or better, and 3100:217. Structure, physiology, life cycles, economic importance and characteristics of orders and major families of insects. Laboratories parallel lectures.

**3100:453 Invertebrate Zoology (4 Credits)**

Prerequisites: 3100:112 with a grade of C- or better, and 3100:217. Invertebrate groups, their classification, functional morphology, adaptive radiation and life history. A phylogenetic approach is used. Laboratories parallel lectures.

**3100:454 Parasitology (4 Credits)**

Prerequisites: 3100:112 with a grade of C- or better. Principles of parasitism; host parasite interactions; important human and veterinary parasitic diseases; and control measures. Laboratories parallel lectures.

**3100:455 Ichthyology (4 Credits)**

Prerequisites: 3100:217. Study of fishes; incorporates aspects of evolution, anatomy, physiology, natural history, and commercial exploitation of fishes. Laboratory incorporates field-based exercises and fish taxonomy.

**3100:456 Ornithology (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Introduction to biology of birds: classification, anatomy, physiology, behavior, ecology, evolution, natural history and field identification. Laboratory and field trips.

**3100:457 Herpetology (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Survey of the diversity, ecology and evolution of amphibians and reptiles. Special emphasis is given to Ohio species. Laboratory.

**3100:458 Vertebrate Zoology (4 Credits)**

Prerequisite: 3100:316 or permission. Biology of vertebrates, except birds evolution, ecology, behavior, systematics and anatomy. Laboratory with field trips.

**3100:460 Medical Histology (4 Credits)**

Prerequisite: 3100:311. 100% online course. Structure of human cells and tissues and their identification. Functional organization of the human cell and tissues.

**3100:463 Exercise Physiology (3 Credits)**

Prerequisite: 3100:363 or instructor permission. Through lecture, reading and critical analysis of current literature, physiologic mechanisms of exercise in animals will be explored.

**3100:465 Advanced Cardiovascular Physiology (3 Credits)**

Prerequisite: 3100:202, or 3100:363, or 3100:473. Study of biological mechanisms involved in heart attack, strokes, fluid balance, hypertension and heart disease. Controversial issues in each area will be examined and current research presented.

**3100:466 Vertebrate Embryology (3 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. Lectures focus on development of model vertebrate organisms, and cellular and molecular mechanisms underlying animal development.

**3100:467 Comparative Vertebrate Morphology (4 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. An introduction to the comparative morphology of major vertebrates. The laboratories consist of dissections of representative vertebrates.

**3100:468 The Physiology of Reproduction (3 Credits)**

Prerequisites: 3100:112 with a grade of C- or better, or 3100:202. Study of the physiological mechanisms of reproduction throughout the animal kingdom with emphasis upon mammalian endocrinological control. Controversial issues and current research will be examined.

**3100:469 Respiratory Physiology (3 Credits)**

Prerequisite: 3100:202, or 3100:363, or 3100:473. Study of mechanisms determining gas exchange including mechanics, ventilation, blood flow, diffusion, and control systems. Emphasis is given to normal human lung function. (Clinical aspects are not considered in detail.)

**3100:470 Lab Animal Regulations (1 Credit)**

Required of anyone working with animals, and covers government regulations, care of animals and a lab to teach basic animal handling and measurement techniques.

**3100:471 Physiological Genetics (4 Credits)**

Prerequisite: 3100:211 or equivalent and [3100:202, or 3100:363, or 3100:473]. The integrative study of how genetics and physiology influence complex systems from molecular to behavioral in plants and animals. Laboratory.

**3100:472 Biological Mechanisms of Stress (3 Credits)**

Prerequisite: 3100:202, or 3100:363, or 3100:473. Study of mechanisms from molecular to behavioral of how stress influences body systems and signals. The latest research and experimental issues are discussed.

**3100:473 Foundations of Physiology II (3 Credits)**

Prerequisite: 3100:363. Continuing fundamentals of physiology including metabolism and temperature, respiration and circulation, and osmoregulation. Adaptation to extreme environments is emphasized.

**3100:474 Foundations of Physiology Laboratory II (1 Credit)**

Prerequisite: 3100:364; corequisite 3100:473. Laboratory experiments in animal physiology (respiration, circulation, metabolism, osmoregulation). Presentation of results in scientific format and as oral reports.

**3100:475 Comparative Biomechanics (3 Credits)**

Investigation of how physical constraints on biological materials, structural mechanics and locomotion relate to the survival and evolution of living organisms.

**3100:478 Renal Physiology (3 Credits)**

Prerequisite: 3100:112 with a grade of C- or better. The study of how the kidneys affect other body systems and how, in turn, they are affected by these systems.

**3100:480 Molecular Biology (3 Credits)**

Prerequisite: 3100:211 and 3100:311. Fundamentals of molecular biology, including recombinant DNA technology, applications in biotechnology, medicine, and genetic engineering. Mechanisms of gene regulation.

**3100:481 Advanced Genetics (3 Credits)**

Prerequisite: 3100:211. Nature of the gene; genetic codes; hereditary determinants; mutagenesis and genes in population. Lecture and seminar.

**3100:482 Neurobiology (3 Credits)**

Prerequisites: Completion of 3100:111 and 3100:112 with a grade of "C-" or better. History of Neuroscience; organization, function and development of the central nervous system; electrophysiological properties of nerve cells; learning and memory; molecular basis for mental diseases.

**3100:483 Research Techniques in Neuroscience (3 Credits)**

Prerequisite: [3100:112, or 3100:202, or 3750:320] with a C or better. Discover how the most cutting edge neuroscience research techniques are designed and implemented to further our understanding of the brain and visual system.

**3100:485 Cell Physiology (3 Credits)**

Prerequisite: 3100:112 with a grade of C- or better and 3150:401. Explores molecular and biochemical aspects of energy metabolism, inter and intracellular signaling, growth and death of cells. Emphasizes up-to-date scientific literature.

**3100:486 Cell Physiology Laboratory (2 Credits)**

Prerequisite: 3100:112 with a grade of C- or better and 3150:401. Corequisite: 3100:485. Practice of modern cell physiology laboratory techniques. Emphasis on student directed original research.

**Gen Ed:** Tier 3 - Critical Thinking

**3100:494 Workshop in Biology (1-3 Credits)**

(May be repeated) Prerequisite: Permission of instructor. Group studies of special topics in biology. May not be used to meet undergraduate or graduate major requirements in biology. May be used for elective credit only.

**3100:495 Special Topics in Biology (1-3 Credits)**

Prerequisite: Permission. Special courses offered occasionally in areas where no formal course exists.

**3100:496 Internship in Biology (1-3 Credits)**

(May be repeated for maximum of 6 credits) Prerequisites: Permission of department and a minimum 3.0 GPA in Biology courses (20 credits minimum). Work experience to focus on career applications in Biology. Maximum 3 credits will count towards Biology electives.

**3100:497 Biological Problems (1-3 Credits)**

(May be repeated for a total of 6 credits) Prerequisites: Permission of department, 2.0 GPA or better in Biology coursework, and currently in the College of Arts & Sciences. Advanced level work, usually consisting of laboratory investigations. A maximum of 4 credits may apply toward the major degree requirements.

**3100:499 Senior Honors Program in Biology (1-3 Credits)**

(May be repeated for a total of five credits) Prerequisites: senior standing in Honors College and approval of honors preceptor. Open only to biology and natural sciences divisional majors in Honors College. Independent study leading to completion of approved senior honors.

## Biomedical Engineering (4800)

**4800:101 Tools for Biomedical Engineering (3 Credits)**

Prerequisite or Corequisite: 3450:221 or appropriate AP score. Introduction to Biomedical Engineering; basic operations using the Matlab environment; engineering graphics with Solidworks; and wet laboratory skills.

**4800:111 Introduction to Biomedical Engineering Design (3 Credits)**

Prerequisite: 4800:101. Prerequisite or Corequisite: 3450:222. Introduction to the interdisciplinary nature of Biomedical Engineering research and design through the use of lectures, discussions, homework and design projects.

**4800:201 Biomedical Engineering Sophomore Seminar (1 Credit)**

Prerequisites: 4800:101 and sophomore or greater standing. A seminar format to allow students to learn about current research and careers in Biomedical Engineering. Topics in technical communications will also be covered.

**4800:220 Biomedical Computing (3 Credits)**

Prerequisites: 3450:223, 4800:101 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 3450:335. Programming in Matlab environment to solve engineering problems using built-in and user-defined functions and various modules including signal processing and image processing. Concepts will be illustrated using relevant biomedical engineering examples.

**4800:300 Biomaterials (3 Credits)**

Prerequisites: 4300:202 and admission to an engineering major within the College of Engineering and Polymer Science. Properties of materials used in medicine and their interaction with biological materials will be discussed. Biocompatibility issues and materials properties and characterization will also be discussed.

**4800:305 Introduction to Biophysical Measurements (4 Credits)**

Prerequisites: 4800:101 and [4400:231 or 4400:307] and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 3100:202. Biomedical Engineering involves measurement of Physiological processes in living organisms. An understanding of the variety of instruments used and the limitations are introduced.

**4800:310 Modeling & Simulation of Biomedical Systems (3 Credits)**

Prerequisites: 3450:335, 4800:220, and admission to an engineering major within the College of Engineering and Polymer Science. Modeling and simulation of physiological systems.

**4800:325 Design of Medical Devices (3 Credits)**

Prerequisites: Junior/senior standing in the College of Engineering and Polymer Science or the College of Arts and Sciences. Design of Medical Devices, design criteria, human factors, patient care and monitoring devices, surgical devices, bench testing and legal liability.

**4800:360 Biofluid Mechanics (3 Credits)**

Prerequisites: 3450:335, 3150:133, 3650:292, and 4600:203. Introduction to the fundamentals of fluid mechanics and their application to biological, cardiovascular, respiratory and other biofluid systems.

**4800:362 Transport Fundamentals for Biomedical Engineering (3 Credits)**

Prerequisite: 3450:335, 4600:203 and admission to an engineering major within the College of Engineering and Polymer Science. Introductory topics in fluid, heat, and mass transfer including both integral and differential analysis as it applies to biological and biomedical systems.

**4800:365 Mechanics of Biological Tissues (3 Credits)**

Prerequisites: 4300:202 and admission to an engineering major within the College of Engineering and Polymer Science. The mechanical properties of musculoskeletal tissues are presented along with modeling techniques and testing procedures. Tendons, ligaments, cartilage and bone will be addressed.

**4800:370 Biomechanics of Human Movement (3 Credits)**

Prerequisites: 3100:202 and 4600:203. The application of engineering mechanics and anatomy to study and analyze human movement. Lectures and in-class labs will introduce students to experimental and theoretical techniques.

**4800:401 Introduction to Biomaterials Laboratory (2 Credits)**

Prerequisites: Admission into the Biomedical Engineering - Biomaterials and Tissue Engineering or the Biomedical Engineering - Biomaterials and Tissue Engineering / Cooperative Education program and 4800:101. Pre/Corequisite: 4800:400. Laboratory to explore techniques in biomaterials and tissue engineering and evaluate experimental outcomes. Biomaterials and Tissue Engineering Track students only.

**4800:420 Biomedical Signal & Image Processing (3 Credits)**

Prerequisites: 4800:220 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4800:305. Introduction to the basic problems associated with biological signal and image processing applications, and appropriate approaches to dealing with them.

**4800:422 Physiological Control Systems (3 Credits)**

Prerequisites: 3100:202, 3450:335. The basic techniques employed in control theory, systems analysis and model identification as they apply to physiological systems.

**4800:430 Design of Medical Imaging Systems (3 Credits)**

Prerequisites: 3100:200, 3650:292, 4400:340, 4400:353, 4800:305 and admission to an engineering major within the College of Engineering and Polymer Science or permission of instructor. Physical principles and engineering design of medical imaging systems, with emphasis on digital radiography, computed tomography, nuclear medicine, ultrasound and magnetic resonance.

**4800:435 Image Science (3 Credits)**

Prerequisites: 3100:200, 3650:292, 4400:343 or by permission of instructor. Principles of image science, image performance parameters and image assessment techniques of medical imaging systems, with emphasis on digital radiography, tomographic imaging, ultrasound and magnetic resonance.

**4800:437 Physics of Medical Imaging (3 Credits)**

Prerequisites: 3100:200, 3650:292, 4400:353, 4800:305. Physical principles of medical imaging modalities with emphasis on the properties, generation mechanisms and interaction of radiation with matter, physics of the image formation and optimization.

**4800:440 Advanced Biomaterials (3 Credits)**

Prerequisites: 4800:300 and admission to an engineering major within the College of Engineering and Polymer Science. The interactions between biomaterials and medical devices will be analyzed with respect to their potential fractionation of biological mechanisms.

**4800:445 Experimental Techniques in Biomaterials Tissue Engineering (3 Credits)**

Prerequisite: 4800:440. Laboratory experience that applies engineering concepts and practices to the analysis of biomaterials and tissue engineering.

**4800:450 Tissue Engineering (3 Credits)**

Prerequisites: 4800:300, 4800:365, 4800:362, and [4800:360 or 4200:321]. This course will explore topics to successfully design tissue engineered devices. For advanced engineering students with a back ground in materials, mechanics, and transport phenomena.

**4800:455 Biotransport (3 Credits)**

Prerequisites: 3100:202, 4800:220, and [4800:362 or 4200:321]. With the foundations of fluid, heat and mass transfer established, this course focuses on specific biological examples of transport phenomena.

**4800:460 Experimental Techniques in Biomechanics (3 Credits)**

Prerequisites: 4800:362, 4800:365 and admission to an engineering major within the College of Engineering and Polymer Science. Principles of testing and measuring devices commonly used for biomechanics studies. Laboratories for demonstration and hands-on experience.

**4800:464 Microfluidics for Biomedical Engineering (3 Credits)**

Prerequisites: 4800:362 or 4200:321 or 4800:360. This course will discuss fundamental principles of single and two phase flow of biofluids in microfluidic devices, and present the applications of lab-on-a-chip systems in BME.

**4800:470 Human Factors Engineering (3 Credits)**

Prerequisite: Admission to an engineering major within the College of Engineering and Polymer Science. Reliability and human error, human capabilities and limitations, crew protection, display systems, controls and controlling actions, interface design principles, risk management, Safety and accident prevention.

**4800:485 Special Topics in Biomedical Engineering (1-3 Credits)**

Prerequisite: Permission of advisor. Directed individual or group research or study in the student's field of interest. Topic subject to approval of advisor.

**4800:491 Biomedical Engineering Design I (2 Credits)**

Prerequisites: 4800:111, 4800:220, and {[4400:307 and 4800:300 and 4800:362 and 4800:365] or [4400:340 and 4400:360 and 4600:203 and 4800:310]} and admission to an engineering major within the College of Engineering and Polymer Science. Pre/Corequisite: 4800:305. The design process will be presented utilizing case studies and detailed biomedical engineering design projects.

**Gen Ed:** Tier 3 - Complex Systems

**4800:492 Biomedical Engineering Design II (2 Credits)**

Prerequisites: 4800:491 and admission to an engineering major within the College of Engineering and Polymer Science. The design process will be continued utilizing case studies and detailed biomedical engineering design projects.

**4800:498 Introduction to BME Research (2 Credits)**

Prerequisites: Permission of instructor. Directed individual or group study in research in biomedical engineering. Course is credit/no credit. May not be repeated.

**4800:499 BME Research Project (1-3 Credits)**

Prerequisites: 4800:498, permission of instructor. Directed individual or group study in research in biomedical engineering. May be repeated.

## Business Management Technology (2420)

**2420:103 Essentials of Management Technology (3 Credits)**

Survey of management principles for business and other organizations. Emphasizes the basic management functions including planning, organizing, staffing, influencing, and control.

**2420:104 Introduction to Business (3 Credits)**

Survey of business emphasizing the nature of business and including entrepreneurship concepts, form, marketing, management, human resources, financial resources and production.

**2420:117 Small Business Development (3 Credits)**

Prerequisite: 2420:211 with a grade of C or better or permission. Introduction to small business and entrepreneurship: opportunities and qualifications for establishing, financing, operating and developing managerial policies and procedures for small business.

**2420:125 Essentials of Personal Finance (3 Credits)**

Consumer decision making including credit and budgets, time value of money, major purchases, insurance, investments, tax planning, retirement and estate planning.

**2420:140 Keyboarding (2 Credits)**

Fundamentals in the operation of the keyboard; application emphasis on individual student needs such as resumes, application letters and forms, term reports, abstracting, etc.

**2420:202 Elements of Human Resource Management (3 Credits)**

Prerequisite: 2420:103 with a grade of C or better. Provides students with an overview of human resource management functions. Includes planning, EEO/AA, selection, development, legal environment, compensation, labor relations, appraisal systems and career planning.

**2420:211 Essentials of Financial Accounting (3 Credits)**

Explores accounting concepts, basic accounting cycle, financial statement preparation and interpretation. Coverage of revenues, receivables, inventory, long-term assets/liabilities, debt/equity financing and financial ratios.

**2420:212 Basic Accounting II (3 Credits)**

Prerequisite: 2420:211 with a grade of C or better. Accounting as it applies to partnerships and corporations. Includes stocks, bonds, cash flows, financial statement analysis, and specialized accounting software.

**2420:213 Essentials of Management Accounting (3 Credits)**

Prerequisite: 2420:211 with a grade of C or better. Study of the interpretation and use of accounting data by management in decision making and the planning and controlling of business activities.

**2420:214 Essentials of Intermediate Accounting (3 Credits)**

Prerequisite: 2420:212 with a grade of C or better. Study of development of financial accounting theory and its application to problems of financial statement generation, account valuation, analysis of working capital, and determination of net income.

**2420:215 Computer Applications for Accounting Cycles (3 Credits)**

Prerequisites: 2420:212, 2420:213, and 2540:270 all with grades of C or better. Develops the skills of computer accounting as used in today's marketplace through hands on experience with general ledger accounting software.

**2420:216 Survey of Cost Accounting (3 Credits)**

Prerequisite: 2420:213 with a grade of C or better. Provides student with conceptual understanding of how accounting information is developed and used for product costing, decision making and managerial planning and control.

**2420:217 Survey of Taxation (3 Credits)**

Survey course of basic tax concepts, research, planning, and preparation of returns for individuals. Federal, state and local taxes are discussed.

**2420:218 Automated Bookkeeping (2 Credits)**

Corequisite: 2420:212. Provides experience with accounting software packages to include the processing of general ledger, accounts receivable, accounts payable, and payroll transactions.

**2420:220 Applied Accounting (3 Credits)**

Prerequisites: 2420:212, 2420:213, and 2540:270 all with grades of C or better. An applied orientation focusing on all accounting functions through adjusted trial balance and basic payroll skills. Emphasis on skills required for the Certified Bookkeeping designation.

**2420:227 Entrepreneurship Projects (3 Credits)**

Prerequisites: 2420:103, 2420:104, 2420:117, 2420:212, 2420:243, and 2540:270 all with grades of C or better. Requires the student to research, design, and complete a comprehensive business plan which will become the blueprint for a new or existing business.

**2420:243 Survey in Finance (3 Credits)**

Prerequisites: 2420:170 and 2420:211 with grades of C or better. Survey of field including instruments, procedures, practices and institutions. Emphasis on basic principles.

**2420:245 Business Management Accounting Internship (3 Credits)**

Prerequisites: [2420:212 and 2420:213] or [2420:215 and 2420:216] with grades of C or better. An accounting field experience exposing the student to the actual accounting environment and general workplace.

**2420:246 Business Management Internship (3 Credits)**

Prerequisites: [2420:103, 2420:104, 2420:212, 2420:280 all with grades of C or better], 6300:201, 7750:230, and sophomore or greater standing. A management field experience exposing the student to the actual management environment and general workplace.

**2420:250 Problems in Business Management (3 Credits)**

Prerequisites: 2420:103, 2420:104, 2420:212, 2420:243, 2420:270, and 2520:101 all with grades of C or better. Capstone course studies the development of solutions and the formulation of policies to solve business problems, emphasizes case studies, group projects, oral and written presentations.

**2420:263 Professional Communications and Presentations (3 Credits)**

Application of the principles of communication in speeches, business presentations, group discussions, and business documents.

**Gen Ed:** Tier 1 - Speaking

**2420:270 Business Software Applications (3 Credits)**

Prerequisite: 2440:105; Wayne College students - 2440:125, 2540:241, and 2540:253. Use of business application software and critical thinking skills to solve business problems. Word processing, spreadsheets, database, presentation software, integration of applications, and the Internet.

**2420:280 Essentials of Business Law (3 Credits)**

History of the law and the judicial system, torts and criminal law affecting business, contracts with emphasis on sales under the UCC, and commercial paper.

**2420:290 Special Topics: Business Management Technology (1-3 Credits)**

Prerequisite: Permission. Selected topics or subject areas of interest in business management technology. (May be repeated for a total of four credits)

**2420:300 Supervision in a Technical Environment (3 Credits)**

Competencies required for successful transition from individual contributor to supervisor. Emphasis on working effectively with others and self-development as a leader.

**2420:301 Information Design (3 Credits)**

Prerequisites: [2020:121 and 2020:222] or [3300:111 and 3300:112] or equivalent. Principles of visual rhetoric and practice in communicating with text and graphics. Examines the role of design in a variety of workplace communication documents.

**2420:302 Ethics and Law in Business (3 Credits)**

Prerequisite: Junior or greater standing. Workplace ethical principles and legal issues such as liability, safety, quality, honesty, and confidentiality. Case studies and projects explore global, legal, and technological issues affecting employee interaction in the workplace.

**2420:310 Leadership Principles & Practices for Technical Organizations (3 Credits)**

Corequisite: 2420:300. Contemporary perspectives and issues in leadership and supervision. Development of effective leadership characteristics.

**2420:311 Corporate Social Responsibility and Leadership (3 Credits)**

Prerequisite or Corequisite: 2420:300 with a C or better. Theory and best practices in corporate social responsibility, community service and leadership in local, national and global settings. Identify leadership opportunities for future contributions.

**2420:312 Global Business Communication (3 Credits)**

Prerequisite: Completion of 48 credit hours. Emphasis on organizational and interpersonal communication needed in an integrated world economy. Provides an overview of business communication to effectively conduct global business and negotiations.

**2420:401 Leading Project Teams (3 Credits)**

Prerequisite: 2420:310 with the grade of C or better. Examines and applies the operational and human aspects of project team management from conception to completion.

**2420:402 Operational Assessments and Improvements (3 Credits)**

Prerequisites: [3470:250 or 3470:260] and 2420:310 with a grade of C or better. Methods for conducting business process assessments and evaluating results in organizations.

**2420:420 Human Resources Development (3 Credits)**

Prerequisite: 2420:310 with a grade of C or better. Overview of current theories and best practices in human capital development.

**2420:421 Senior Seminar in Organizational Supervision (3 Credits)**

Prerequisite: 2420:402 with a grade of C or better. Integration and application of professional knowledge, skills, and technologies to organizational issues.

## Business Studies (6100)

**6100:100 Career Planning in Business Administration (1 Credit)**

Examines the academic, professional, and personal skills required for a successful business career. Develops student career plan. Provides exposure to the variety of career opportunities available in public and private sector organizations.

**6100:101 Business Issues in a Connected World (3 Credits)**

An introductory course that examines the 'forces' that are changing how business will be conducted in the 21st century, the 'factors' that determine the success of firms and the impact of both on individuals as consumers and professionals.

**6100:110 College of Business Administration Success Seminar (1-3 Credits)**

This course is designed to help new CBA students transition from high school or work to the college environment and begin the career development process.

**6100:200 Personal Leadership Skills (1 Credit)**

Prerequisite: Must have completed 32 credit hours. An introductory course that will expose students to leadership theory and practice in organizations. Students will have an opportunity to self-reflect and investigate leadership styles, ethical issues and influence methods.

**6100:201 Introduction to E-Business (3 Credits)**

Prerequisite: 24 credits. Provides a broad overview of e-business strategies, products and technologies. Discusses transformation of marketing, production and other business functions; and related legal, political, ethical and cultural issues.

**6100:220 Global Culture and Business Field Experience (1-3 Credits)**

Prerequisite: Sophomore standing. Students travel on faculty led trips and study international business practices. Global business practices are examined and aspects of local culture are explored.

**6100:230 Business Communication (3 Credits)**

Prerequisites: 3300:111, 3300:112, and [7600:105 or 7600:106]. Students will obtain the knowledge and ability use writing and oral communication skills in a professional environment to effectively persuade others and to mobilize action among various organizational stakeholders.

**6100:350 Special Topics in Business (1-3 Credits)**

Opportunity to study special topics and current issues in business. May be repeated with a change of subject.

**6100:495 Internship in Business Administration (3 Credits)**

Prerequisite: Permission of designated faculty member. On-the-job experience with public or private sector organizations in the student's major field of study. Individual assignments are approved and supervised by the designated member of the faculty in the student's major field. Periodic reports and term papers are required.

**6100:497 Honors Project in Business Administration (1-3 Credits)**

Prerequisite: senior standing in Honors Program. Individual directed research relevant to the student's major. Group integrated symposium or an individualized study format available.

**6100:499 Independent Study in Business Administration (3 Credits)**

Prerequisite: Permission of designated faculty member. Provides a means for individualized study of a problem(s) or issue in the student's major field of study.

## CAST: Cooperative Education (2000)

**2000:201 Cooperative Education (0 Credits)**

(May be repeated) Prerequisite: cooperative education students only. Work experience in business, industry or governmental agency. Comprehensive performance evaluation and written report required.

**2000:301 Cooperative Education (0 Credits)**

(May be repeated) Prerequisite: cooperative education students only. Work experience in business, industry or governmental agency. Comprehensive performance evaluation and written report required.

## CBA: Cooperative Education (6000)

**6000:301 Cooperative Education (0 Credits)**

(May be repeated) For cooperative education students only. Work experience in business, industry, or governmental agency. Comprehensive performance evaluation and written report required.

## Chemical Engineering (4200)

**4200:101 Tools for Chemical Engineering (2 Credits)**

Corequisites: 4200:110 and 3450:149. Introduction to Chemical Engineering. Basic concepts of engineering practice. Introduction to professional level software including process simulation, control design, spreadsheets, mathematical computation, and process flow graphics.

**4200:110 Project Management and Teamwork I (1 Credit)**

Teams freshmen through senior Chemical Engineering and Corrosion Engineering undergraduates on a design team working on a realistic chemical engineering problem. Develops teamwork, communications, presentation, project management and information technology skills.

**4200:121 Chemical Engineering Computations (2 Credits)**

Prerequisites: 4200:101 or 4250:101. Computer programming language, flowcharting, introductory simulation and introductory numerical analysis.

**4200:194 Chemical Engineering Design I (1 Credit)**

Prerequisites: 4200:101 and permission. Individual or group project under faculty supervision. Introduction to chemical engineering processes and modern design technology. Written report is required.

**4200:200 Material & Energy Balances (4 Credits)**

Prerequisites: [4200:121 or 4250:105], 3150:151 and 3450:221. Introduction to material and energy balance calculations applied to solution of chemical engineering problems.

**4200:210 Project Management and Teamwork II (1 Credit)**

Prerequisite: 4200:110. Teams freshmen through senior Chemical Engineering and Corrosion Engineering undergraduates on a design team working on a realistic engineering problem. Develops teamwork, communications, presentation, project management and information technology skills.

**4200:220 Introduction to Thermodynamic Processes (3 Credits)**

Prerequisites: 3450:223 and [4200:200 or 4250:200]. First and Second Laws of Thermodynamics, work, entropy, heat engines and refrigeration cycles, equations of state, departure functions and reaction equilibria.

**4200:225 Equilibrium Thermodynamics (4 Credits)**

Prerequisites: 4200:200 or 4250:200 and 3450:223. Second law of thermodynamics, entropy, applications, comprehensive treatment of pure and mixed fluids. Phase and chemical equilibrium, flow processes, power production and refrigeration processes covered.

**4200:294 Chemical Engineering Design II (1-2 Credits)**

Prerequisites: 4200:121, 4200:200 and permission. Supervised individual or group design project. Analysis of multi-unit process using simulation and/or experimental techniques. Written report and oral presentation required.

**4200:305 Materials Science (2 Credits)**

Prerequisites: 3150:153. Corequisite: 3650:292. Structure, processing and properties of metals, ceramics and polymers. Special topics, such as composites, corrosion and wear.

**4200:308 Introduction to Bio-based Polymers (3 Credits)**

Prerequisite: 3150:263 and junior standing. This course introduces basic concepts of polymer science: building blocks, structure, elementary reactions and polymerization mechanisms, through seven natural polymers.

**4200:310 Project Management and Teamwork III (1 Credit)**

Prerequisites: 4200:210 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4250:300 or 4200:353. Teams freshmen through senior Chemical Engineering and Corrosion Engineering undergraduates on a design team working on a realistic chemical engineering problem. Develops teamwork, communications, presentation, project management and information technology skills.

**4200:320 Phase Equilibrium Thermodynamics (3 Credits)**

Prerequisites: 4200:220 and admission to an engineering major within the College of Engineering and Polymer Science. Thermodynamics of mixtures, excess properties, activity coefficients, mixture fugacity, mixture phase equilibrium and thermodynamic consistency.

**4200:321 Transport Phenomena (3 Credits)**

Prerequisites: [4200:200 or 4250:200], 3450:335 and admission to an engineering major within the College of Engineering and Polymer Science. Constitutive equations for momentum, energy and mass transfer. Development of microscopic and macroscopic momentum, energy and mass transfer equations for binary systems. Analogy and dimensionless analysis. Problems and applications in unit operations of chemical engineering.

**4200:330 Chemical Reaction Engineering (3 Credits)**

Prerequisites: 3450:335, 4200:225 and admission to an engineering major within the College of Engineering and Polymer Science. Nonequilibrium processes including chemical reaction mechanisms, rate equations and ideal reactor design applied to homogeneous and heterogeneous systems.

**4200:341 Process Economics (2 Credits)**

Prerequisites: [4200:200 or 4250:200] and admission to an engineering major within the College of Engineering and Polymer Science. Theory and application of engineering economy to multi-unit processes. Cost estimation, time value of money, profit analysis, decision making and introduction to project management.

**4200:351 Fluid & Thermal Operations (3 Credits)**

Prerequisite: 4200:321 and admission to the College of Engineering. Applications of fluid mechanics including piping, pumping, compression, metering, agitation and separations. Applications of heat transfer by conduction, convection and radiation to design of process equipment.

**4200:353 Mass Transfer Operations (3 Credits)**

Prerequisites: 4200:225 and [C- or above in 4200:200 or 4250:200] and admission to an engineering major within the College of Engineering and Polymer Science. Theory and design of staged operations including distillation, extraction, absorption. Theory and design of continuous mass transfer devices.

**4200:360 Chemical Engineering Laboratory (3 Credits)**

Prerequisites: 4200:353; corequisites: 4200:330, 4200:351. Comprehensive experiments in combined heat and mass transfer, thermodynamics, and reaction kinetics. Data collection and analysis. Comprehensive reports in various formats.

**4200:394 Chemical Engineering Design III (1-3 Credits)**

Prerequisites: 4200:351 and permission. Supervised individual or group design project. Develop, evaluate and design feasible solutions to an open-ended problem pertinent to chemical engineering. Written report and oral presentation required.

**4200:408 Polymer Engineering (3 Credits)**

Prerequisite: permission or senior standing. Commercial polymerization, materials selection and property modification, polymer processing, applied rheology and classification of polymer industry.

**4200:410 Project Management and Teamwork IV (1 Credit)**

Prerequisites: 4200:310 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisites: 4200:441 or 4250:440. Teams freshmen through senior Chemical Engineering and Corrosion Engineering undergraduates on a design team working on a realistic chemical engineering problem. Develops teamwork, communications, presentation, project management and information technology skills.

**4200:421 Fundamentals of Multiphase Transport Phenomena (3 Credits)**

Prerequisite: 4200:321 or equivalent, and instructor permission. Major topics to be covered: Intraphase and interphase transport phenomena, Transport phenomena in multiphase fluids, Transport in Porous Media, Transport in Gas/liquid pipe flows, Computational Fluid Dynamics of multiphase systems, and Case studies.

**4200:435 Process Analysis & Control (3 Credits)**

Prerequisites: 4200:330, 4200:353 and admission to an engineering major within the College of Engineering and Polymer Science. Response of simple chemical processes and design of appropriate control systems.

**4200:438 Energy Integration (3 Credits)**

Prerequisite: 4200:351. This course uses Pinch Design formalism to present the core energy integration tools for energy and area targeting, and tools for integration of reactors, distillation columns, and heat pumps.

**4200:441 Process Design I (3 Credits)**

Prerequisites: 4200:330, 4200:341, 4200:351, 4200:353 and admission to an engineering major within the College of Engineering and Polymer Science. Application of chemical engineering fundamentals to the design of a multi-unit process. Emphasis on use of process simulators. Advanced equipment design, oral and written communication skills and teamwork.

**4200:442 Process Design II (3 Credits)**

Prerequisites: 4200:441 and admission to an engineering major within the College of Engineering and Polymer Science. Teaches methods of process conceptualization, preliminary optimization. Specific topics include: chemical process design methodology, design heuristics, energy integration, and process safety review.

**4200:450 Chemical Product Design and Development (3 Credits)**

Prerequisite: senior standing or permission. Introduction to the strategies and processes used to design and development new chemical products from the idea stage through manufacturing.

**4200:461 Solids Processing (3 Credits)**

Prerequisites: 4200:321 and 4200:353 or permission. Comprehensive problems in sedimentation, fluidization, drying and other operations involving mechanics of particulate solids in liquid and gas continua.

**4200:462 Industrial Enzyme Technology (3 Credits)**

Prerequisites: 4200:330 and 4200:351. Application of chemical engineering to biological processes involving enzymes and their industrial applications. Special emphasis given to the kinetics, control, design, and process economics aspects.

**4200:463 Pollution Control (3 Credits)**

Prerequisite: 4200:353 or permission. Air and water pollution sources and problems. Engineering aspects and methodology.

**4200:466 Digitized Data & Simulation (3 Credits)**

Prerequisite: Permission. Data acquisition and analysis by digital devices, digital control applications and design.

**4200:470 Electrochemical Engineering (3 Credits)**

Prerequisites: 4200:321, 4200:330. Chemical engineering principles as applied to the study of electrode processes and to the design of electrochemical reactors. Topics include electrochemical thermodynamics, cell polarizations, Faraday's Laws, electrode kinetics, transport processes in electrochemical systems, current distributions, reactor design, experimental methods, commercial processes, and batteries and fuel cells.

**4200:471 Fuel Engineering (3 Credits)**

Prerequisite: 4200:330 or permission of instructor. Topics related to clean liquid and solid fuels technology. Special emphasis given to design, system analysis, environmental impacts, and novel technologies.

**4200:472 Separation Processes in Biochemical Engineering (3 Credits)**

Introduction to the separation and purification techniques pertinent to bioprocesses, with emphasis on engineering considerations for large scale operations.

**4200:473 Bioreactor Design (3 Credits)**

Prerequisite: 4200:330 or instructor's consent. Design, analysis, and scale-up of bioreactors for various biological processes.

**4200:488 Chemical Processes Design (3 Credits)**

Prerequisite: Permission of instructor or senior standing. Process design and analysis of emerging chemical technologies. Case studies, such as in-situ processing, alternative fuels, bioremediation, and engineering materials manufacture.



**4200:494 Design Project (3 Credits)**

Prerequisite: Permission or senior standing. Individual design project pertinent to chemical engineering under faculty supervision. Written report and oral presentation required.

**4200:496 Topics in Chemical Engineering (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission. Topics selected from new and developing areas of chemical engineering, such as electrochemical engineering, coal and synthetic fuels processing, bioengineering, simultaneous heat and mass transfer phenomena and new separation techniques.

**4200:497 Honors Project (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission. Individual creative project pertinent to chemical engineering culminating in undergraduate thesis, supervised by faculty member of the department.

**4200:499 Research Project: Chemical Engineering (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission. Individual research project pertinent to chemical engineering under faculty supervision. Report required.

## Chemistry (3150)

**3150:100 Chemistry & Society (3 Credits)**

Qualitative introduction to chemistry using current world problems and commercial products, such as the ozone layer, nuclear fission, polymers and drugs, to introduce chemical principles.

**3150:101 Chemistry for Everyone (4 Credits)**

Integrated, hands-on, laboratory instruction in the fundamental concepts of chemistry for general education and middle-level licensure for pre-service and in-service teachers.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3150:110 Introduction to General, Organic & Biochemistry I (Lecture) (3 Credits)**

Sequential. Introduction to principles of chemistry, fundamentals of inorganic, organic and biochemistry. Structure and chemistry of carbohydrates, lipids, proteins; biochemistry of enzymes, metabolism, radiation.

**Gen Ed:** Tier 2 - Natural Science

**3150:111 Introduction to General, Organic & Biochemistry I (Laboratory) (1 Credit)**

Prerequisite/Corequisite: 3150:110. Sequential. Laboratory course applying principles of chemistry and fundamentals of inorganic, organic and biochemistry.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3150:112 Introduction to General, Organic & Biochemistry II (Lecture) (3 Credits)**

Prerequisite: 3150:110. Sequential. Introduction to principles of chemistry, fundamentals of inorganic, organic and biochemistry. Structure and chemistry of carbohydrates, lipids, proteins; biochemistry of enzymes, metabolism, radiation.

**Gen Ed:** Tier 2 - Natural Science

**3150:113 Introduction to General, Organic & Biochemistry II (Laboratory) (1 Credit)**

Prerequisite/Corequisite: 3150:112. Sequential. Laboratory course applying principles of chemistry and fundamentals of inorganic, organic and biochemistry.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3150:151 Principles of Chemistry I (3 Credits)**

Prerequisite: placement in 3450:149 or higher or permission. Introduction to basic facts and principles of chemistry including atomic and molecular structure, states of matter and thermodynamics. For chemistry majors, pre-medical students and most other science majors. Discussion (day sections).

**Gen Ed:** Tier 2 - Natural Science

**3150:152 Principles of Chemistry I Laboratory (1 Credit)**

Pre/Corequisite: 3150:151. Laboratory course applying principles of thermodynamics, chemical analysis and laboratory practice.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3150:153 Principles of Chemistry II (3 Credits)**

Pre/Corequisite: 3150:151. Continuation of 151, 152, including aqueous solution theory, chemical kinetics, equilibrium, electrochemistry and nuclear chemistry. For chemistry majors, premedical students and most other science majors. Discussion (day sections).

**Gen Ed:** Tier 2 - Natural Science

**3150:154 Qualitative Analysis (2 Credits)**

Prerequisite: 3150:152; pre/corequisite: 3150:153. Laboratory course applying principles of chemical equilibrium to inorganic qualitative analysis.

**3150:199 Introductory Seminar in Chemistry (1 Credit)**

Basic concepts in chemistry practice including written and oral communication skills, computer skills, professional ethics, environmental issues, chemical literature, degree options, and career considerations.

**3150:263 Organic Chemistry Lecture I (3 Credits)**

Sequential. Prerequisite: 3150:153 or permission. Structure and reactions of organic compounds, mechanism of reactions.

**3150:264 Organic Chemistry Lecture II (3 Credits)**

Sequential. Prerequisite: 3150:263 or permission. Structure and reactions of organic compounds, mechanism of reactions.

**3150:265 Organic Chemistry Laboratory I (2 Credits)**

Sequential. Prerequisite: 3150:154; pre/corequisite: 3150:263. Laboratory experiments to develop techniques in organic chemistry and illustrate principles. Discussion.

**3150:266 Organic Chemistry Laboratory II (2 Credits)**

Sequential. Prerequisite: 3150:265. Laboratory experiments to develop techniques in organic chemistry and illustrate principles. Discussion.

**3150:305 Physical Chemistry for the Biological Sciences (4 Credits)**

Prerequisites: 3150:264, 3450:222, and [3650:262 or 3650:292]. Chemical thermodynamics, kinetics, molecular structure and spectra. Accepted for the BS degree in Biochemistry.

**3150:313 Physical Chemistry Lecture I (3 Credits)**

Prerequisites: 3150:264, 3450:223, and 3650:291. Gases, thermodynamics, thermochemistry, solutions, dilute solutions, chemical equilibrium, phase rule, chemical kinetics, electrochemistry, electrolytic equilibria.

**3150:314 Physical Chemistry Lecture II (3 Credits)**

Prerequisites: 3150:264, and 3450:335, and 3650:292. Atomic and molecular structure and spectroscopy.

**3150:370 Biochemistry Laboratory (2 Credits)**

Prerequisite: 3150:266. An integrated laboratory experience covering the isolation, characterization and analysis of enzymes and DNA, protein synthesis and purification, enzyme kinetics, biochemical databases and statistical treatment of data.

**3150:380 Advanced Chemistry Laboratory I (2 Credits)**

Prerequisite: 3150:266. A laboratory experience that focuses on the synthetic and spectroscopic techniques of modern inorganic chemistry, including bio-inorganic and organometallic compounds.

**3150:381 Advanced Chemistry Laboratory II (2 Credits)**

Prerequisite 3150:266; corequisite: 3150:314 or 3150:305 or permission. Integrated laboratory experience covering the areas of quantitative analysis, physical chemistry, and instrumental techniques.

**3150:399 Internship in Chemistry (1-3 Credits)**

Prerequisites: minimum GPA of 2.5; permission of the Department. Work experience focused on career applications of the discipline of Chemistry. (May repeat for a maximum of six credits.)

**3150:401 Biochemistry Lecture I (3 Credits)**

Prerequisite: 3150:264. Biochemistry of amino acids, carbohydrates, lipids, and nucleic acids: structure/function relations. Enzymes as catalysts: kinetics and regulation. Cofactors.

**3150:402 Biochemistry Lecture II (3 Credits)**

Prerequisite: 3150:401. Overview of metabolism; thermodynamics; carbohydrate, fatty acid, amino acid, and nucleoside anabolism and catabolism; hormonal control of metabolism. Photosynthesis.

**3150:406 Biochemistry of Gene Expression (3 Credits)**

Prerequisites: 3100:311 and 3150:401. DNA, RNA, and protein synthesis, translation and transcription. Gene function and expression, cell cycle and cancer, genetic engineering, gene silencing, gain of function studies.

**3150:410 Special Readings in Analytical Chemistry (1-3 Credits)**

Prerequisite: Junior standing or higher. Selected topics in advanced analytical chemistry for which no course exists. (May be repeated)

**3150:411 Special Readings in Inorganic Chemistry (1-3 Credits)**

Prerequisite: Junior standing or higher. Selected topics in advanced inorganic chemistry for which no course exists. (May be repeated)

**3150:412 Special Readings in Organic Chemistry (1-3 Credits)**

Prerequisite: Junior standing or higher. Selected topics in advanced organic chemistry for which no course exists. (May be repeated)

**3150:413 Special Readings in Physical Chemistry (1-3 Credits)**

Prerequisite: Junior standing or higher. Selected topics in advanced physical chemistry for which no course exists. (May be repeated)

**3150:415 Special Readings in Biochemistry (1-3 Credits)**

Prerequisite: Junior standing or higher. Selected topics in advanced biochemistry for which no course exists. (May be repeated)

**3150:423 Analytical Chemistry I (3 Credits)**

Prerequisite: 3150:154 and 3150:263. Theoretical principles of quantitative and instrumental analysis.

**3150:424 Analytical Chemistry II (3 Credits)**

Prerequisite: 3150:154 and 3150:263. Instrumental analysis with emphasis on newer analytical tools and methods.

**3150:463 Advanced Organic Chemistry (3 Credits)**

Prerequisite: 3150:264. Introduction to study of mechanisms of organic reactions.

**3150:472 Advanced Inorganic Chemistry (3 Credits)**

Prerequisites: 3150:314 or 3150:305. Concepts of atomic structure integrated in systematic classification of elements. Periodic table. Chemistry of the representative elements. Transition elements including coordination compounds, organometallics and metal carbonyls.

**3150:480 Advanced Chemistry Laboratory III (2 Credits)**

Prerequisite: 3150:381; or Corequisite: 3150:305; or permission. Integrated laboratory experience covering the areas of quantitative analysis, physical chemistry, instrumental techniques, and inorganic chemistry.

**3150:490 Workshop in Chemistry (1-3 Credits)**

(May be repeated) Group studies of special topics in chemistry. May not be used to meet undergraduate or graduate major requirements in chemistry.

**3150:497 Honors Project in Chemistry (2 Credits)**

(May be repeated for a total of eight credits) Prerequisites: Junior or senior standing in Honors College and permission of department honors preceptor. Independent research leading to completion of honors thesis under guidance of honors project adviser.

**3150:498 Special Topics in Chemistry (1-3 Credits)**

Special Topics in Chemistry.

**3150:499 Research Problems in Chemistry (1-2 Credits)**

(May be repeated for a total of eight credits) Prerequisite: Permission. Assignment of special problems to student, designed as an introduction to research problems.

## Child and Family Development (3760)

**3760:110 Foundations in Early Childhood Education (3 Credits)**

Overview of model early care and education programs, emphasizing interactions between home and school that impact children's development. Online section available. (field hours required)

**3760:147 Orientation to Child & Family Development (1 Credit)**

Introduction to academic programs, careers, and professional skills related to Child & Family Development. Open to all majors. Online sections available.

**3760:201 Intimate Relationships (3 Credits)**

Love, intimacy, relationship development, sexuality, marriage, and parenting are studied in lifespan perspective.

**3760:245 Infant/Toddler Care and Education Programs (3 Credits)**

Prerequisite: 3760:265. Survey of infant/toddler development. Principles of infant/toddler early care. Design of environment and curriculum based on child's needs. Online section available. (field hours required)

**3760:246 Multicultural Issues in Child Care (3 Credits)**

The study of cultural differences in child care and preschool settings to improve caregiving practices and enhance communication between caregivers and families.

**3760:247 Diversity in Early Childhood Literacy (3 Credits)**

Examination and analysis of children's books and materials on diversity reflecting differences and similarities of groups of people that make up our society.

**3760:250 Observing & Recording Children's Behavior (3 Credits)**

Prerequisite: 3760:265. Develops observing and recording skills, evaluates multiple methods of assessment for children's development and behavior. (field hours required)

**3760:255 Fatherhood: Parent Role (3 Credits)**

Prerequisites: 3760:201 or 3760:265. Historic evolution of the father role, its changing social definition, and father's potential effects on a child's development—birth through adolescence.

**3760:265 Child Development (3 Credits)**

Physical, cognitive, language, social, emotional, and personality development of the child from prenatal through adolescence (field hours required).

**3760:270 Theory & Guidance of Play (3 Credits)**

Prerequisite: 3760:265. The influence of play on child development, theories of child development as they relate to play, and facilitating development through play. (field hours required)

**3760:280 Early Childhood Curriculum Methods (3 Credits)**

Prerequisite: 3760:265. Planning, presenting, evaluating creative activities aligned with learning standards in art, music, movement, language arts, mathematics, and science. Adult-child interactions emphasized.(field hours required)

**3760:290 Special Topics: Child & Family Development (1-3 Credits)**

Selected topics/workshops on subject areas of interest in early childhood development. May be repeated up to 4 credits.

**3760:295 Early Childhood Practicum (5 Credits)**

Prerequisites: 2200:245, 5200:360, 5200:370, 3760:265, 3760:270, and 3760:280. Supervised practicum in an early childhood/preschool educational setting designed for Early Childhood Development students only.

**3760:297 Independent Study (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission. Selected topics and special areas of study under supervision and evaluation of selected faculty member with whom specific arrangements have been made.

**3760:300 Legal Environment of Families (3 Credits)**

Introduction to legal concepts and procedures with particular emphasis on how the legal system impacts families.

**3760:301 Consumer Education (3 Credits)**

Examines consumer needs vs. wants, short- and long-term consumer concerns, and problems experienced by individual consumers as they navigate through society. Online section available.

**3760:303 Children As Consumers (3 Credits)**

Study of the consumer role of children three through eighteen years. Emphasizes research data on children as consumers and consumer education for children.

**3760:360 Parent-Child Relations (3 Credits)**

Prerequisite: 3750:230 or 3760:265. The study of interactive parent-child relations from infancy through adulthood and the internal and environmental forces which impact family dynamics. Online section available.

**3760:362 Family Resource Management (3 Credits)**

Introduction to the application and resulting impact of resource management theories, decision-making models, processes, and principles to individual and family well-being.

**3760:365 Infant Development (3 Credits)**

Prerequisite: 3750:230 or 3760:265. In depth examination of physical, cognitive, language, social, and emotional development beginning in prenatal development and throughout infancy. (field hours required)

**3760:370 Teaching in the Early Childhood Classroom (2 Credits)**

Prerequisite: 3760:280. Corequisite: 3760:375. Assists students with the integration of research and applied skills needed as a professional working with young children.

**3760:375 Teaching in the Early Childhood Classroom Lab (2 Credits)**

Prerequisite: 3760:280. Corequisite: 3760:370. An integrated practical experience in child development centers under the direction of experienced early childhood professionals.

**3760:401 American Families in Poverty (3 Credits)**

Prerequisites: [3750:230 or 3760:201 or 3760:265], and senior standing or higher. Overview of the issues, trends and social policies affecting American families living in poverty. Online section available.  
**Gen Ed:** Tier 3 - Complex Systems

**3760:404 Middle Childhood and Adolescence (3 Credits)**

Prerequisites: 3760:201 and [3750:230 or 3760:265]. In depth examination of physical, cognitive, language, social, and emotional development in middle childhood and adolescence. Online section available.

**3760:406 Family Financial Management (3 Credits)**

Practical life skills in financial management such as budgeting strategies, how to save, invest, and plan for financial future. Online section available.

**3760:421 Special Problems in Family & Consumer Sciences (1-3 Credits)**

Additional study or apprentice experience in specialized field or preparation; group and individual experimentation.

**3760:440 Family Crisis (3 Credits)**

Prerequisite: 3760:201. Examines family stress and crisis, the influence of internal and external variables on disorganization, coping, and recovery. Includes theory, research, and application. Online section available.

**3760:441 Family Relationships in Middle and Later Years (3 Credits)**

Exploration of family and individual development of communication and education during the middle and later years of life. Emphasis on issues related to intimacy, economics, social policies, psychological and biological changes.

**3760:442 Human Sexuality (3 Credits)**

Prerequisite: 3750:230 or 3760:201. An examination of human sexuality across the lifespan.

**3760:446 Culture, Ethnicity & Family (3 Credits)**

Prerequisites: 3760:201 or 3760:265, and senior status. Study of the role of culture and ethnicity in adaptation of the family system to environment. Online section available.

**3760:447 Senior Seminar: Critical Issues in FCS Professional Develop (1 Credit)**

Prerequisites: FCS major & senior standing. Consideration of family and consumer sciences as a profession and its impact on the quality of life of individuals, families and their environments. Analysis of challenges facing the profession and all home economists.

**3760:448 Before & After School Child Care (2 Credits)**

Study of the development, implementation and evaluation of school-age child-care programs for before and after school and vacation periods.

**3760:450 Families, Individuals & Environments (3 Credits)**

Prerequisite: FCS major, senior standing or completion of 90 credits or permission of instructor. Integrative exploration of issues affecting the well-being of individuals, families, and communities in the multiple environments in which they function.

**3760:460 Organization & Supervision of Child Care Centers (3 Credits)**

Theory, principles and procedures involved in establishing and operating centers for infants, toddlers, preschool and school-age children.

**3760:461 Case Management for Children & Families I (3 Credits)**

Provides an overview of Case Management basics in a multi-systems collaborative context. Includes roles, values, principles, state and service systems, and service coordination.

**3760:462 Case Management for Children & Families II (3 Credits)**

Prerequisite: 3760:461 or 3760:561. Provides in-depth exploration of Case Management principles and practice. Emphasis on process and functions, assessment, cross-system service planning and coordination, advocacy, and cultural diversity.

**3760:463 Practicum in Cross-Systems Case Management for Children & Families (3-5 Credits)**

Prerequisites: 3760:461, 3760:462, and six hours of electives. Provides on-site opportunities to apply skills in cross-systems collaborative Case Management with children and families. Includes review of strategies, ethics, and survival skills, and supervision.

**3760:485 Seminar in Child and Family Development (1-3 Credits)**

Exploration and evaluation of current research on a selected contemporary topic. (May be repeated for a total of six credits)

**3760:490 Workshop in Child & Family Development (1-3 Credits)**

Prerequisite: Junior or higher standing or permission of instructor. Investigation of an issue or topic in a selected area. May involve off-campus activity and/or on-campus group meeting.

**3760:494 Internship: Child and Family Development (1-6 Credits)**

Prerequisite: Permission of the instructor. In depth field experience in business or community agencies relating to children and families (40 hours required per credit).

**3760:496 Parent Education (3 Credits)**

Prerequisite: 3760:265, comparable course or permission of instructor. Practical application that reviews and analyzes parent education methods with major emphasis on the evaluation of parent education programs. Online section available.

**3760:499 Senior Honors Project in Child & Family Development (1-3 Credits)**

Prerequisites: senior standing in Honors Program and approval of honors preceptor. Individual study supervised by adviser. Student and preceptor develop goals, objectives and methodology. (May be repeated for a total of six credits)

## Chinese (3502)

**3502:101 Beginning Chinese I (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing, and listening comprehension skills, with emphasis on development of self-expression in everyday situations through culturally authentic media and texts.

**3502:102 Beginning Chinese II (4 Credits)**

Sequential. Prerequisite: 3502:101 or equivalent. Acquisition of basic reading, speaking, writing, and listening comprehension skills, with emphasis on development of self-expression in everyday situations through culturally authentic media and texts.

**3502:201 Intermediate Chinese I (4 Credits)**

Sequential. Prerequisite: 3502:102 or equivalent. Continuing acquisition of speaking, listening, comprehension, reading, and writing competency through use of culturally authentic materials; emphasis on developing accuracy of self-expression. (Conducted in Chinese.)

**3502:202 Intermediate Chinese II (4 Credits)**

Sequential. Prerequisite: 3502:201 or equivalent. Continuing acquisition of speaking, listening, comprehension, reading, and writing competency through use of culturally authentic materials; emphasis on developing accuracy of self-expression. (Conducted in Chinese.)

**3502:210 Chinese Culture Through Film (3 Credits)**

Prerequisites: 32 credit hours including 3300:111 and 3300:112 or equivalent. Exploration of Chinese culture through viewing of films subtitled in English. Readings and discussions in English. Does not count toward minor in Chinese.

**Gen Ed:** Tier 2 - Humanities

**3502:301 Chinese Conversation (4 Credits)**

Prerequisite: 3502:202 or equivalent. Continuing development of oral expression, listening comprehension and conversational ability, with emphasis on expressing and supporting opinions. (Conducted in Chinese.)

**3502:302 Chinese Composition (4 Credits)**

Prerequisite: 3502:202 or equivalent. Development of writing skills through intensive practice and study of written expression in Chinese. Emphasis on composing extensive descriptive narrations and personal letters. (Conducted in Chinese.)

**3502:303 Chinese Conversation Through Media (4 Credits)**

Sequential. Prerequisite: 3502:202 or equivalent. Development of oral expression and listening comprehension, with emphasis on discussing current topics and expressing and supporting opinions based on media clips. (Conducted in Chinese.)

**3502:304 Chinese Reading and Writing (4 Credits)**

Prerequisite: 3502:202 or equivalent. Continuing development of reading ability through study of Chinese publications, and writing summaries of the texts. (Conducted in Chinese.)

**3502:311 Chinese Cultural Experience Abroad (1-8 Credits)**

Prerequisite: Residence and study abroad in a Chinese-speaking country. May be repeated once with different content. Only 8 credits allowable for minor in Chinese.

**3502:422 Special Topics in Language Skills, or Culture or Literature (1-4 Credits)**

Prerequisite: Two of the group [3502:301, 3502:302, 3502:303, 3502:304]. Development of specialized language skills or reading of significant works of literature or culture not studied in other courses. (May be repeated once under different topic for a total of 8 credits.)

**3502:497 Individual Reading in Chinese (1-4 Credits)**

Prerequisite: 3502:202. Individual study under guidance of professor who directs and coordinates student's reading and research. May be repeated once for a total of 8 credits.

## Civil Engineering (4300)

**4300:101 Introduction to Civil Engineering Fundamentals (3 Credits)**

Corequisite: 3450:149 or higher math or appropriate AP test score. Introduction to Civil Engineering. Basic concepts of civil engineering practice including communication skills, problem solving skills, professional ethics/goals, and teamwork. Introduction to professional level software including spreadsheets, database, and mathematical computation.

**4300:102 Tools for Civil Engineering (3 Credits)**

Prerequisite: 4300:101. Building on concepts of engineering practices learned in Tools I further developing communication skills, problem solving skills, professional ethics/goals, statistics and model-building, and teamwork. Advanced use of professional level software including CAD, MATLAB and Excel.

**4300:201 Statics (3 Credits)**

Corequisites: 3450:222 and 3650:291. Forces, resultants, couples; equilibrium of force systems; distributed forces; centers of gravity, analysis of simple structures; moments of inertia; kinematics.

**4300:202 Introduction to Mechanics of Solids (3 Credits)**

Prerequisite: 4300:201. Axial force, bending moment diagrams, axial stress and deformation; stress-strain diagrams; torsion; flexural stress; flexural shearing stress; compound stresses; indeterminate beams; columns.

**4300:306 Theory of Structures (3 Credits)**

Prerequisite: 4300:202. Stability and determinacy; statically determinate trusses and frames; approximate frame analysis influence lines; moving loads; virtual work analysis; moment area theorem; theorem of three moments; moment distribution for continuous beams and frames.

**4300:313 Soil Mechanics (3 Credits)**

Prerequisites: 4300:202 and admission to an engineering major within the College of Engineering and Polymer Science or permission. Physical properties of soils. Soil water and groundwater flow. Stresses, displacements, volume changes, consolidation within a soil mass. Soil strength. Compaction.

**4300:314 Geotechnical Engineering (3 Credits)**

Prerequisites: 4300:313 and admission to an engineering major within the College of Engineering and Polymer Science. Limiting equilibrium within a soil mass. Design of retaining walls, bulkheads, shallow, deep foundation systems. Slope stability.

**4300:321 Introduction to Environmental Engineering (3 Credits)**

Prerequisites: 3150:153 and 3450:222. Basic principles of ecosystems, microbiology, chemical reactions, and material flow that environmental engineers use to protect our water, air and soil.

**4300:323 Water Supply & Pollution Control (3 Credits)**

Prerequisite: 4300:321 and admission to an engineering major within the College of Engineering and Polymer Science. Pre/Corequisite: 3450:335. Water and wastewater characteristics, criteria, quantities and distribution. Water and wastewater treatment process flowsheets, design and operation. Wastewater and residue disposal.

**4300:341 Hydraulic Engineering (3 Credits)**

Prerequisites: 4600:310 and admission to an engineering major within the College of Engineering and Polymer Science. This course will focus on presentation and application of fundamental hydraulic principles in both the classroom and laboratory. Examination of flow in pipelines and pipe networks, pumps and pumping stations, hydrology, flow in open channels, groundwater hydraulics, and design of hydraulic structures will be studied. Emphasis will be placed on proper application of principles, data interpretation and analysis, problem solving, and report writing.

**4300:361 Transportation Engineering (3 Credits)**

Prerequisites: junior standing and admission to an engineering major within the College of Engineering and Polymer Science. Introductory survey of transportation topics including transportation planning requirements and techniques, introduction to design of highways, airports and railroads and introduction to traffic engineering.

**4300:380 Engineering Materials Laboratory (3 Credits)**

Prerequisites: 4300:202 and admission to an engineering major within the College of Engineering and Polymer Science. Fundamentals and applications of materials science, mechanics of solids and study of laboratory instrumentation and standard techniques in testing of engineering materials.

**4300:401 Steel Design (3 Credits)**

Prerequisites: 4300:306 and admission to an engineering major within the College of Engineering and Polymer Science. Tension, compression members; open web joists; beams; bearing plates; beam-columns; bolted, welded connections.

**4300:403 Reinforced Concrete Design (3 Credits)**

Prerequisites: 4300:306 and admission to an engineering major within the College of Engineering and Polymer Science. Ultimate strength analysis and design; compression steel; diagonal tension; stirrups; development length; one-way slab; T-beams; two-way slabs; columns; isolated and combined footings.

**4300:404 Advanced Structural Design (3 Credits)**

Prerequisites: 4300:401 and 4300:403. Composite design; plate girders; plastic design; cantilever retaining walls; torsion in R/C members; deflection of R/C members; continuous girder bridge design.

**4300:407 Advanced Structural Analysis (3 Credits)**

Prerequisite: 4300:306. Energy methods for beams and frames. Stiffness and flexibility formulations for framed structures using classical and matrix methods. Introduction to stability and plastic analysis. Warping-Torsion behavior of beams. Analysis of axisymmetric circular plates and membrane shells.

**4300:414 Design of Earth Structures (3 Credits)**

Prerequisite: 4300:314 or permission. Design of earth structures: dams, highway fills, cofferdams, etc. Embankment construction techniques, quality control, embankment analysis, instrumentation, foundation soil stabilization, seepage analysis and control. Design problem. Graduate students will perform more advanced analysis and design.

**4300:418 Soil & Rock Exploration (3 Credits)**

Prerequisite: 4300:314 or permission. Site exploration criteria and planning. Conventional boring, sampling and in situ testing methods. Theory and application of geophysics and geophysical methods including seismic, electrical resistivity, gravity, magnetic and radioactive measurements. Air photo interpretation.

**4300:423 Chemistry for Environmental Engineers (3 Credits)**

Prerequisite: One year of college chemistry. General, physical, organic biochemistry, equilibrium, and colloid chemistry concepts applied to Environmental Engineering. Concepts are used in water and wastewater laboratory.

**4300:424 Water-Wastewater Laboratory (1 Credit)**

Corequisite: 4300:323 or permission. Analysis of water and wastewater.

**4300:426 Environmental Engineering Design (3 Credits)**

Prerequisite: 4300:323. An introduction to the physical, chemical and biological processes utilized in the treatment of water and wastewater, with design parameters emphasized.

**4300:427 Water Quality Modeling & Management (3 Credits)**

Prerequisite: 4300:323. Analysis and simulation of the physical, chemical and biochemical processes affecting stream quality. Development of management strategies based upon the application of water quality modeling techniques to environmental systems.

**4300:428 Hazardous & Solid Wastes (3 Credits)**

Prerequisite: senior standing or permission of instructor. Hazardous and solid waste quantities, properties and sources are presented. Handling, processing, storage and disposal methods are discussed with non-technical constraints outlined.

**4300:441 Hydraulic Design (3 Credits)**

Prerequisite: 4300:341. Collection and critical evaluation of hydraulic data related to actual design problem selected by instructor. Development and analysis of design alternatives. Preparation of reports.

**4300:443 Applied Hydraulics (3 Credits)**

Prerequisites: 4300:341 and admission to an engineering major within the College of Engineering and Polymer Science. Review of design principles: urban hydraulics, stream channel mechanics, sedimentation, coastal engineering.

**4300:445 Hydrology (3 Credits)**

Prerequisite: 4300:341. Surface water hydrology, water cycle, precipitation, evaporation, stream flow. Principles of hydrologic systems and their analysis. Hydrologic simulation, reservoir planning and water supply studies. Analysis of rainfall and floods.

**4300:448 Hydraulics Laboratory (1 Credit)**

Prerequisite: 4300:341. Introduction to laboratory and field devices for hydraulic measurements. Reduction and presentation of hydraulic data. Individual assignments of model studies of hydraulic structures.

**4300:450 Urban Planning (2 Credits)**

Historical developments in urban planning; urban planning techniques and patterns; comprehensive master planning studies; planning regulations; design problems; class projects; class project presentation.

**4300:451 Computer Methods of Structural Analysis (3 Credits)**

Prerequisite: 4300:306. Computer methods of structural analysis. Finite element software and interactive graphics. Stiffness concepts and matrix formulation of beams; modeling of simple and complex structural systems; vibration analysis using microcomputers.

**4300:452 Structural Vibrations & Earthquakes (3 Credits)**

Prerequisite: 4300:306. Vibration and dynamic analysis of structural systems with one, two, or more degrees of freedom; beams, frames, buildings and bridges. Numerical methods of analysis. Elastic-plastic systems. Earthquake analysis of design. Earthquake codes.

**4300:453 Optimum Structural Design (3 Credits)**

Prerequisite: 4300:306. Basic concepts in structural optimization. Mathematical programming methods including unconstrained minimization, multidimensional minimization and constrained minimization.

**4300:454 Advanced Mechanics of Materials (3 Credits)**

Prerequisite: 4300:202 or equivalent. Three-dimensional state of stress and strain analysis. Unsymmetric bending of straight and curved members with shear deformation. Beams on elastic foundations. Saint Venant's torsional problems. Inelastic analysis of bending and torsional members. Introduction to energy method. Instability behavior of prismatic members.

**4300:463 Transportation Planning (3 Credits)**

Prerequisite: 4300:361. Theory and techniques for development, analysis and evaluation of transportation system plans. Emphasis on understanding and using tools and professional methods available to solve transportation planning problems, especially in urban areas.

**4300:464 Highway Design (3 Credits)**

Prerequisite: 4300:361. Study of modern design of geometrical and pavement features of highways. Design problem and computer use. Graduate students will produce a more complete design.

**4300:465 Pavement Engineering (3 Credits)**

Prerequisite: 4300:361. Theories of elasticity, of viscoelasticity and of layered systems as applied to pavements. Pavement materials characterization; pavement design, pavement restoration for rigid and flexible pavements.

**4300:466 Traffic Engineering (3 Credits)**

Prerequisite: 4300:361. Vehicle and urban travel characteristics, traffic flow theory, traffic studies, accidents and safety, traffic signs and marking, traffic signal planning, traffic control and transportation administration.

**4300:467 Advanced Highway Design (3 Credits)**

Prerequisites: 4300:464, autoCAD capability, or permission. Computer-aided geometrical design of highways including survey data input, digital terrain modeling, cross-section templates, horizontal and vertical roadway design, earthwork computations, and advanced topics.

**4300:468 Highway Materials (3 Credits)**

Prerequisites: 4300:361 and 4300:380 or permission. Properties of aggregates, manufacture and properties of portland cement concrete, properties of asphaltic materials, design and testing of hot mix asphalt pavement mixes and of surface treatments. Laboratory preparation of specimens and determination of properties. Graduate student requirement: Graduate students will be required to perform an additional eight-hour asphalt laboratory (Absorption recovery of asphalt from solution) and to prepare a paper on a highway materials topic.

**4300:471 Construction Administration (3 Credits)**

Prerequisites: senior standing and admission to an engineering major within the College of Engineering and Polymer Science or permission. Organization for construction, construction contracts, estimating, bidding, bonds and insurance. Construction financial management and supervision of construction, scheduling using critical path method.

**4300:472 Construction Engineering (3 Credits)**

Prerequisite: senior standing or permission. Construction equipment selection and management. Techniques of various engineering construction operations including blasting, tunneling, concrete framework and dewatering.

**4300:473 Construction Materials (2 Credits)**

Prerequisites: 4300:380, 4200:305. Composition, structure and mechanical behavior of structural materials such as concrete, wood, masonry, plastics and composite materials. Discussion of applications and principles of evaluating material properties.

**4300:474 Underground Construction (2 Credits)**

Prerequisite: 4300:314. Description of practices and techniques of underground construction. Selection of proper method for individual job. Design of underground openings, support systems and linings.

**4300:480 Reliability-Based Design (4 Credits)**

Prerequisite: 3470:261 and senior standing. Probability concepts in civil engineering. Risk analysis and reliability based design.

**4300:482 Special Projects: Civil Engineering (1-3 Credits)**

Prerequisites: senior standing and permission. Directed individual or group research or study in student's field of interest. Topic subject to approval by adviser.

**4300:489 Fundamental of Engineering Exam Review (0 Credits)**

Prerequisite: Senior standing. This course is intended to prepare civil engineering students for the Fundamentals of Engineering Exam, which is to be taken prior to graduation.

**4300:490 Senior Design in Civil Engineering (3 Credits)**

Prerequisites: senior standing and admission to an engineering major within the College of Engineering and Polymer Science. A civil engineering design project that emphasizes interdisciplinary teamwork to solve a substantial, currently relevant problem.

**Gen Ed:** Tier 3 - Complex Systems

**4300:497 Honors Project (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: senior standing in Honors Program. Individual creative project or design relevant to civil engineering, supervised by faculty member of the department.

## Classics (3200)

**3200:220 Introduction to the Ancient World (3 Credits)**

Prerequisite: 3400:210 or 3400:221. Introduction to the civilizations of the Near East, Greece, and Rome, their cultural influences upon each other and their legacy to Europe.

**3200:230 Sports & Society in Ancient Greece and Rome (3 Credits)**

A multimedia survey of ancient Greek and Roman sports, from the Olympics to gladiatorial games, and their connection to ancient and modern society.

**Gen Ed:** Tier 2 - Humanities

**3200:289 Mythology of Ancient Greece (3 Credits)**

Myth, legend and folktale in ancient Greece, with attention to religion and the transmission of Greek myth to Rome and the West. No foreign language necessary.

**Gen Ed:** Tier 2 - Humanities

**3200:361 The Literature of Greece (3 Credits)**

Prerequisite: 3400:210 or 3400:221. Major writers of ancient Greece and their influence on later European literature. No foreign language necessary. Required of majors.

**3200:362 The Literature of Rome (3 Credits)**

Major writers of ancient Rome and their influence on later European literature. No foreign language necessary. Required of majors.

**3200:363 Women in Ancient Greece and Rome (3 Credits)**

Examine women's lives in ancient Greece and Rome. Read their poetry, see them in ancient theatre, art, and philosophy, and in modern art and film.

**3200:480 Reading & Research in Classical Studies (1-3 Credits)**

Directed reading and research for individual and small group study in any recognized area of classical studies.

**3200:499 Honors Project in Classics (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: Senior standing in Honors Program and permission. Independent study leading to completion of a senior honors thesis under the supervision of a member of the Department of Classics.

## Communication - School of (7600)

**7600:101 Introduction to Communication (3 Credits)**

Survey of the field of communication. Topics will focus on the history, as well as the theories, constructs, and career opportunities of all sub disciplines.

**7600:105 Introduction to Public Speaking (3 Credits)**

Introduction to principles and practice of speaking by reading examples of speeches, studying techniques and methods employed and applying them in a variety of speaking situations.

**Gen Ed:** Tier 1 - Speaking

**7600:106 Effective Oral Communication (3 Credits)**

Principles of communication in speaker-audience, group and informal settings, and application of the principles in speeches, group discussions and other oral and written assignments.

**Gen Ed:** Tier 1 - Speaking

**7600:209 Principles of Social Media (3 Credits)**

This course provides students with a thorough understanding of social media as it relates to the tools, history, theories, ethics and practice of communication.

**7600:210 Multiplatform Production (3 Credits)**

A basic introduction to theory and practice of single camera, photography, graphic and web production.

**7600:219 Introduction to Public Relations (3 Credits)**

Introduction to public relations is a survey course that provides students with foundational information related to the study and practice of public relations.

**7600:226 Interviewing (3 Credits)**

Study and practical application of selected interviewing concepts associated with job interviewing, journalistic interviewing, and life review interviewing.

**7600:227 Non-Verbal Communication (3 Credits)**

Focused study of the principal aspects of nonverbal communication in public, group and interpersonal settings.

**7600:228 ZTV (1 Credit)**

Participation in the operations of the University television station. \*Total repeats not to exceed eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)

**7600:230 WZIP-FM (1 Credit)**

Participation in the operations of the University radio station. \*Total repeats not to exceed eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)

**7600:231 Forensics (1 Credit)**

Participation in the operations of the University forensics team. \*Total repeats not to exceed eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)

**7600:232 Buchtelite (1 Credit)**

Participation in the operations of the University newspaper. \*Total repeats not to exceed eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)

**7600:233 Tel-Buch (1 Credit)**

Participation in the operations of the University year book. \*Total repeats not to exceed eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)

**7600:235 Interpersonal Communication (3 Credits)**

Theory and practice in interpersonal communication concepts and principles. Special topics in communication apprehension, assertive communication, communication dyads and triads, and transactional communication.

**7600:245 Argumentation (3 Credits)**

Study of process of developing, presenting and defending inferences and arguments in oral communication setting. Includes study and practice of evidence, reasoning, case construction, refutation and rebuttal.

**Gen Ed:** Tier 3 - Critical Thinking

**7600:252 Persuasion (3 Credits)**

Emphasis on understanding persuasion theory and practice. Includes information analysis of motivational appeals and introduction to propaganda analysis.

**7600:274 Introduction to the Media Industries (3 Credits)**

An introduction to the media industries concentrating on industry structure and business models with a particular emphasis on media convergence and distribution.

**7600:284 Legal Issues in Media (3 Credits)**

Concentration on government regulations and legal requirements in production of broadcasting, film, and print media. Particular emphasis on copyright.

**7600:300 Newswriting Across the Media (3 Credits)**

Prerequisite: completion of General Education English Composition Requirement with a grade of C or better or permission. Concentration on what constitutes news, legal and ethical aspects of what to print/broadcast and writing news stories for print and broadcast media.

**7600:301 Advanced Newswriting (3 Credits)**

Prerequisite: Admitted to a four year degree granting college and 7600:300. Advanced course in writing and editing news, features and analysis for print media. Behavioral approach to communication of information and ideas.

**7600:303 Public Relations Writing (3 Credits)**

Prerequisite or Corequisite: 7600:219. Introduction of writing skills required by public relations practitioners emphasizing different approaches for specific publics and specific media.

**7600:304 Information Gathering & Editing (3 Credits)**

Prerequisite: Ability to type. Editing stories and photographs and writing headlines for print and online. Gathering information from primary and secondary sources.

**7600:305 Communication Theory (3 Credits)**

Prerequisite: 7600:101. Examination of the theoretical foundations of the communication discipline. Historical roots, major theory building perspectives and a review of contemporary theories and applications in communication contexts.

**7600:309 Public Relations Publications (3 Credits)**

Preparation of publications used as communication tools in public relations, advertising and organizations. Emphasis upon design, layout and technology.

**7600:317 Topics in Media Production (3 Credits)**

Variable topics in media production including audio, video, digital. Repeatable with a change in topic, maximum 9 credits.

**7600:325 Intercultural Communication (3 Credits)**

Study of human communication processes between individuals in culturally diverse contexts, both domestically and internationally, with an emphasis on analysis and application.

**Gen Ed:** Tier 3 - Domestic Diversity

**7600:344 Small Group Communication (3 Credits)**

Prerequisite: Junior or higher academic standing. This course explores the dynamics of small group communication. Students will learn how to become effective members of groups by practicing course concepts and theories in assignments.

**7600:345 Advanced Presentational Communication (3 Credits)**

Prerequisite: [7600:105 or 7600:106] and 7600:245. Continued development of audience analysis, research, style, and delivery to improve oral communication skills for a variety of civic and organizational purposes.

**7600:355 Freedom of Speech (3 Credits)**

Discussion and analysis of the Constitution's free speech guarantee; contemporary issues in freedom of speech; role of the media in free speech issues.

**7600:356 Rhetorical Criticism (3 Credits)**

Prerequisite: 7600:260. Identifies principal textual and contextual elements of public discourse and presents various theories and models to be applied in studying rhetorical acts.

**7600:360 Theories of Rhetoric (3 Credits)**

Prerequisite: 7600:101. Theories of Rhetoric exposes students to 2,000 years of thought on rhetoric and meaning. Students explore the relationship between knowledge, truth and rhetoric.

**Gen Ed:** Tier 3 - Critical Thinking

**7600:368 Basic Audio & Video Editing (3 Credits)**

Prerequisite: Admitted to a four year degree granting college. A basic practical introduction to audio and video editing and the Avid Editing system in the MediaNet environment.

**7600:372 Video Production (3 Credits)**

Prerequisite or corequisite: 7600:368. Theory and practice of digital video; development of professional skills in lighting, use of lenses, visual composition and sound recording for Single Camera applications.

**7600:378 Topics in Media History (3 Credits)**

Prerequisite: Admitted to a four year degree granting college. In-depth study of topics in media history and genre. Repeatable with a change in topic (9 credits maximum).

**7600:384 Communication Research (3 Credits)**

Prerequisites: 7600:101 with a grade of C or better. Fundamental concepts of communication research methods, and the analysis, application, and interpretation of data in communication and media operations.

**7600:398 Honors Project Preparatory (1 Credit)**

Prerequisite: junior standing, honors students only. This course prepares honors students to begin work on their senior honors project. Students will learn how to do background research, literature reviews, work with human subjects, and School of Communication requirements. At the end of the semester, students will have their proposal ready for submission to the Honors College.

**7600:404 Public Relations Cases (3 Credits)**

Prerequisite or corequisite: 7600:219. Application of principles of public relations profession in an actual organizational setting.

**7600:405 Media Copywriting (3 Credits)**

Prerequisite: 7600:309. Selected communication theories and research techniques used to plan, write and analyze commercial messages. Emphasis will be placed on selection of audience, medium, appeal, writing style and evaluation of efforts.

**7600:406 Advanced Public Relations Theory (3 Credits)**

Prerequisite: 7600:219. Study and practical application of communication concepts, theories and skills relevant to public relations programs in businesses and nonprofit organizations.

**7600:408 Women, Minorities & News (3 Credits)**

Prerequisites: 7600:300 and admission to a four year degree granting college. From a professional journalism perspective, this course provides historical analysis of diversity in the newsroom and the news. Students produce new content that addresses diversity.

**7600:409 Public Relations Strategic Campaigns (3 Credits)**

Prerequisite: 7600:219. This course allows students to apply knowledge of public relations practice, history, theories, ethics and strategic planning to create real-world public relations campaigns.



**7600:429 Advanced Strategic Social Media (3 Credits)**

Prerequisite: 7600:209 or 7600:219. Students will learn and apply knowledge of professional social media including theories, ethics, policy, and best practices to solve real-world social media problems.

**7600:435 Organizational Communication (3 Credits)**

Prerequisite: 7600:101. Overview of theories and approaches for understanding communication flow and practices in organizations, including interdepartmental, networks, superior-subordinate, formal and informal communication.

**7600:436 Analyzing Organizational Communication (3 Credits)**

Prerequisites: 7600:384 and 7600:435, or permission. Methodology for in-depth analysis and application of communication in organizations; team building; conflict management, communication flow. Individual and group projects; simulations.

**7600:437 Training Methods in Communication (3 Credits)**

Prerequisites: 7600:345 or permission. Principles and concepts in the design and delivery of communication training programs; integration of theory and methodology; presentation skills; matching methods and learner needs.

**7600:438 Health Communication (3 Credits)**

Prerequisite: Admitted to a four year degree granting college. The course presents an overview of health communication theory and research issues in interpersonal, small group, organizational, public relations, and mass media contexts.

**7600:439 Independent Study: Communication (1-12 Credits)**

(May be repeated for a total of 12 credits) Prerequisites: Admitted to a four year degree granting college except CAST, permission of faculty. Directed independent readings, research, projects and productions. Written proposal must be submitted before permission is granted. Appropriate documentation of work required.

**7600:444 Communication & Conflict (3 Credits)**

Prerequisite: 7600:101. Explores roles of communication & conflict in personal and work relationships. Emphasis placed on application of theories and strategies for conflict resolution from a communication perspective.

**7600:450 Special Topics in Communication (3 Credits)**

(May be repeated for a total of nine credits) Special interest topics in mass communication, journalism, or communication, supplementing courses listed in University Bulletin. See department for current listing of offerings.

**7600:457 Rhetoric in Contemporary Culture (3 Credits)**

Prerequisite: 7600:260 & 7600:356. Rhetoric in Contemporary Culture serves as an advanced course in rhetorical criticism. Students apply critical methods to contemporary issues surrounding political, popular, and vernacular discourses.

**7600:459 Leadership and Communication (3 Credits)**

Prerequisite: Admitted to a four year degree granting college except CAST. Theories of leadership and communication across public, organizational, small group, interpersonal, and political contexts. Assessments tools provided. Guest speakers.

**7600:468 Advanced Audio and Video Editing (3 Credits)**

Prerequisite: 7600:368. A study of film and video editing. It provides practical experience and exposure to the various creative approaches and techniques of film / video editing.

**7600:474 Media Theory (3 Credits)**

Prerequisites: 7600:101. A review of mass communication theories and their applications in addressing major issues relevant to media content, media audience and media effects.

**7600:475 Political Communication (3 Credits)**

Students explore the relationship between politicians, citizens, and media. Topics include media coverage, campaign technologies, advertising, debates, engagement, rhetoric, and attitudes.

**7600:480 Communication Internship (3-6 Credits)**

Prerequisites: 24 credits in Communication, 3.0 GPA in Communication and permission. Supervised experience and on-the-job training. Written permission prior to the semester enrolled is necessary. Repeatable up to a maximum 6 credits.

**7600:481 Film as Art: An Introduction to the Film Form (3 Credits)**

A study of the role and function of Cinematography, Editing, Sound, and Mise-en-scene as they shape the meaning of the film, within the context of the traditional / non-traditional narratives and the documentary structure.

**7600:485 Honors Project in Communication (3 Credits)**

Prerequisites: 7600:398, approval of honors preceptor. Independent study project leading to completion of honors research, creative or service project.

**7600:486 Media Management & Leadership (3 Credits)**

Prerequisite: 7600:384 An intensive overview of media management and leadership principles and applications of these principles in addressing issues related to entrepreneurship, ethics, globalization and media convergence.

**7600:487 Advanced Topics in Media Writing (3 Credits)**

Prerequisite: 7600:300. Advanced study in media writing. Topics include: script writing, broadcast newswriting, new media writing, etc. Repeatable with a change in topic, maximum 12 credit hours.

**7600:490 Communication Workshop (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Admitted to a four year degree granting college. Group study or group projects investigating a particular phase of media not covered by other courses in curriculum.

**7600:499 Capstone in Communication (3 Credits)**

Prerequisites: 7600:101, 7600:384, and Senior Standing. Capstone in communication integrates theories, concepts, and skills: provides interdisciplinary work, and applied focus; and culminates in a project, paper, or production. Topics vary.

## Community Services Technology (2260)

**2260:131 Introduction to Developmental Disabilities (2 Credits)**

This course provides an overview of developmental disabilities. Content includes definitions, classifications, causes, and characteristics of disabilities; legislation/regulations; service delivery models; and prevention.

**2260:150 Introduction to Gerontological Services (3 Credits)**

Basic orientation to gerontology and role of community service technician in service delivery to aged. Topics include social, biological, economical, and psychological aspects of aging; national and state legislation; services and service provider.

**2260:231 Habilitation Programming (2 Credits)**

Prerequisite: 2260:131. This course examines components of individualized plans, implementation of such plans, and legal issues. Content includes types of habilitation programming and the role of self-determination.

**2260:233 Behavior Support (2 Credits)**

Prerequisite: 2260:131. This course examines the components of behavior support. Course content includes various types of behavior support programs and techniques.

**2260:255 Effective Workplace Relationships (3 Credits)**

This course focuses on self-evaluation and development of skills for successful interaction with clients/inmates, peers, supervisors, and colleagues in other public service systems.

**2260:262 Basic Helping Skills (4 Credits)**

Teaches micro skills through the use of didactic presentation, role play and videotaping; develops ability to give and receive feedback about effectiveness of helping others.

**2260:277 Case Management in Community Services (3 Credits)**

Case by case study of Social Service delivery in six primary areas of Human Services. Emphasis on case management skills, documentation and ethics.

**2260:278 Techniques of Community Work (4 Credits)**

Prerequisite: 2020:121 or 3300:111. For those intending to work in community organizations in the United States and for others desiring an understanding of technical community service roles. Covers such topics as ethics, liability issues, communication and problem solving skills, values clarification, stress management systems theory, and assertive behavior.

**2260:279 Technical Experience in Community & Social Services (5 Credits)**

Prerequisite: 2260:278 and permission. Individual placement in selected community and social service agencies for educationally supervised experience in community and social services technician position. Does not substitute for 7750:421 or 7750:495.

**2260:297 Independent Study: Community Services (1-3 Credits)**

Prerequisite: Permission. Selected topics and special areas of study under the supervision and evaluation of a selected faculty member with whom specific arrangements have been made.

## Computer Engineering (4450)

**4450:101 Tools for Computer Engineering (3 Credits)**

Corequisite: 3450:221 or 3450:149. Orientation to degree programs and design practice in electrical and computer engineering. Introduction to computer applications and resources for engineering studies.

**4450:208 Programming for Engineers (3 Credits)**

Prerequisite: 4400:101 or permission. Introduction to programming. Environment and tools. C programming language. Machine level data forms and organization.

**4450:220 Digital Logic Design (4 Credits)**

Corequisites: 4400:101 or 4450:101 or 4800:101. Boolean algebra and simplification of logic functions. Combinational and synchronous sequential circuits. Laboratory projects include design of digital systems with hardware description language and simulation.

**4450:301 Undergraduate Research I: Computer Engineering (1 Credit)**

Prerequisites: completion of [4400:101 or 4450:101], 4400:230, 4400:231, 4400:330, 4400:332 and 4450:220 with a combined average grade of 3.0 or higher, admission to an engineering major within the College of Engineering and Polymer Science, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report.

**4450:302 Undergraduate Research II: Computer Engineering (1 Credit)**

Prerequisites: [4400:301 or 4450:301], admission to an engineering major within the College of Engineering and Polymer Science, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report.

**4450:303 Undergraduate Research III: Computer Engineering (1 Credit)**

Prerequisites: [4400:302 or 4450:302], admission to an engineering major within the College of Engineering and Polymer Science, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report to the department, and presentation of work in a research venue outside the department.

**4450:304 Undergraduate Research IV: Computer Engineering (1 Credit)**

(May be repeated. May not be applied to degree requirements.) Prerequisite: 4450:303 or 4400:303, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report.

**4450:309 Design Project Seminar - Computer Engineering (1 Credit)**

Prerequisites: Junior standing and admission to an engineering major within the College of Engineering and Polymer Science. Pre/Corequisites: [3460:426 or 4450:325], 4450:367, [4450:420 or 4450:427], 4450:422, and 4450:440. Engineering capstone project selection and proposal, including preliminary technical specifications. Professional ethics. Intellectual property. Societal impact issues in engineering design.

**4450:320 Computer Systems (3 Credits)**

Prerequisite: 3460:209 or 4450:208, 4450:220 or 3450:208. Introduces the design and architecture of modern computer systems. Data and instruction representation. Conventional computer organization. Hardware and software design processes. The hardware/software interface.

**4450:325 Operating Systems Concepts (3 Credits)**

Prerequisites: 4450:320, 3460:210. Processes and threads. Process communication and resource sharing. Deadlock resolution. Memory management. File systems. Introduction to network operating systems.

**4450:367 VLSI Design (3 Credits)**

Prerequisites: 4400:360 and admission to an engineering major within the College of Engineering and Polymer Science. Digital logic circuits. Very large scale integration (VLSI) fabrication processes and layout design. Delay and power of digital circuits. Latches and flip-flops in VLSI. Memory design. System-level design issues. Design project.

**4450:401 Senior Design Project I - Computer Engineering (3 Credits)**

Prerequisites: 4450:309, senior standing, admission to the College of Engineering, and completion of [3460:426 or 4450:325], 4450:367, [4450:420 or 4450:427], 4450:422, and 4450:440 with a combined average grade of 2.0 or higher. Design and preparation phase of an engineering team project. System specification, design, and simulations; ordering of components; subsystem implementations. Requires project presentations and report.

**Gen Ed:** Tier 3 - Critical Thinking

**4450:402 Senior Design Project II - Computer Engineering (3 Credits)**

Prerequisites: 4450:401 and admission to an engineering major within the College of Engineering and Polymer Science. Implementation and evaluation phases of an engineering design project. Requires a project presentation and report.

**Gen Ed:** Tier 3 - Complex Systems

**4450:410 Embedded Scientific Computing (3 Credits)**

Prerequisites: 4450:208 or 3460:209 and 4400:340. Fixed point, floating point representation and coding. Processor/DSP implementations. Assemblers, C language semantics. Adapting scientific library routines for embedded use. Minimizing complexity. Ill-conditioned problems.

**4450:415 System Simulation (3 Credits)**

Prerequisite: 4400:371 or 4450:440. Computer simulation of dynamic systems. Discrete system stability, linear multistep and Runge-Kutta methods, nonlinear systems, stiff systems, distributed systems and real-time computing.

**4450:420 Computer Systems Design (3 Credits)**

Prerequisite: 4450:320. Design of advanced processors at the microarchitecture level. Pipelining. Superscalar, vector and VLIW architectures. Instruction-level parallelism. Compiler support. Multiprocessor architectures.

**4450:422 Embedded Systems Interfacing (3 Credits)**

Prerequisites: [3460:209 or 4450:208] and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4400:360. Microcontroller structures and embedded peripherals. Interfaces to physical environments. Software access to peripherals including timers, ADCs and DACs. Synchronous and asynchronous communications. Interrupts. Real-time operating systems.

**4450:427 Computer Networks (3 Credits)**

Prerequisite: 4450:320; 4450:325 or 3460:426. Network architecture and protocol layering. Network design principles, communication protocols, and performance measures. Socket programming, routing, error detection and correction, access control, multimedia networking.

**4450:440 Digital Signal Processing (3 Credits)**

Prerequisites: 4400:340 and admission to an engineering major within the College of Engineering and Polymer Science. Signal sampling and reconstruction; data-converter models. Unilateral and bilateral z transforms. Discrete Fourier Transform (DFT); Fast Fourier Transform (FFT). Digital filter structures and design methods.

**4450:462 Analog Integrated Circuit Design (3 Credits)**

Prerequisite: 4400:360. CMOS processes and layout; amplifiers, current mirrors, and comparators; current, voltage, and bandgap references; switched capacitor circuits. Frequency and noise analysis techniques.

**4450:465 Programmable Logic (3 Credits)**

Prerequisite: 4450:220, 3460:209 or 4450:208. Digital design with programmable devices. PLD and FPGA architectures. Logic design and technology mapping tools.

**4450:467 VLSI Circuits & Systems (3 Credits)**

Prerequisite: 4450:367. High performance adders and multipliers for very large scale integration (VLSI) systems. Architectural synthesis. Design for high performance, low power, and testability.

**4450:498 Special Topics: Computer Engineering (1-3 Credits)**

(May be taken more than once) Prerequisite: Permission of department chair. Special topics in computer engineering.

## Computer Information Systems (2440)

**2440:105 Introduction to Computers and Application Software (3 Credits)**

Overview of basic computer concepts, electronic mail and Internet terminologies. Introductory-level instruction and hands-on experience in word processing, spreadsheet, database and presentation software.

**2440:121 Introduction of Logic/Programming (3 Credits)**

Prerequisite: 2440:105 with a grade of C or better or placement test. An introduction to business problem solving using computer-based solutions. Topics include structured design, documentation and modularity. Includes a component of hands-on programming.

**2440:125 Spreadsheet Software (2 Credits)**

Prerequisite: 2440:105 with a grade of C or better or placement test. Emphasizes mastery of spreadsheet applications using Excel.

**2440:140 Internet Tools (3 Credits)**

Prerequisite: 2440:105 with a grade of C or better or placement test. Students will learn to create web pages using HTML and enhance their documents by including hyperlinks, tables, forms, frames and images in their HTML code.

**2440:141 Web Server Administration (3 Credits)**

Prerequisite: 2440:105 with a grade of C or better or placement test. Provides Web server administration guidelines such as selecting software/hardware, domain name registration, analyzing security/legal issues, and implementing marketing strategies.

**2440:145 Introduction to Unix/Linux (3 Credits)**

Prerequisite: 2440:105 with a grade of C or better or placement test. This course explores the vital functions that an operating system performs. A multi-user operating system is studied from a functional and hands-on approach.

**2440:160 JAVA Programming (3 Credits)**

Prerequisite: 2440:121 with a grade of C or better. Course introduces the JAVA programming language. Programming techniques are demonstrated through the coding, testing and debugging of JAVA applications and applets.

**2440:170 Visual BASIC (3 Credits)**

Prerequisite: 2440:121 with a grade of C or better. Course includes hands-on experience with Visual BASIC, design of Graphical User Interface (GUI) applications, event-driven programming, linking of windows, and accessing relational databases.

**2440:180 Introduction to Database Management (3 Credits)**

Prerequisite: 2440:121 with a grade of C or better. Overview of database system models and functions. Covers introduction to database design and relational database definition and manipulation using SQL.

**2440:201 Networking Basics (3 Credits)**

Prerequisite: 2440:105 with a grade of C or better or placement exam. The introductory course in networking. It includes study of the common network protocols, structures, and models. Basic router and switch configurations are introduced.

**2440:202 Router and Routing Basics (3 Credits)**

Prerequisite: 2440:201 with a grade of C or better. The second course to networking. It covers basic router configuration as well as routed and routing protocols.

**2440:203 Switching Basics and Wireless (3 Credits)**

Prerequisites: 2440:201 and 2440:202 with a grade of C or better in both. The third of four courses leading to the CCNA certification. The course covers switching basics and basic wireless networking.

**2440:204 WAN Technologies (3 Credits)**

Prerequisites: 2440:202 and 2440:203 (each with a grade of C or better). The fourth of four courses leading to the CCNA certification. Topics covered include IP services and Wide Area Network theory and design.

**2440:210 Client/Server Programming (3 Credits)**

Prerequisite: 2440:180 with a grade of C or better. Introduces student to client/server programming. Includes hands-on experience using a Rapid Application Development (RAD) tool to show integration of database and program development.

**2440:211 Interactive Web Programming (3 Credits)**

Prerequisites: 2440:121 and 2440:140 (each with a grade of C or better). Provides students with instruction on interactive Web programming using XML and DHTML (HTML/XHTML/HTML5, CSS, and Web scripting).

**2440:212 Multimedia & Interactive Web Elements (3 Credits)**

Prerequisite: 2440:140 with a grade of C or better. Reviews and demonstrates web tools and techniques like RealAudio, Shockwave, QuickTime, video conferencing and other dynamic graphical elements to enhance Web-based communication. Multimedia software may change to reflect current technology.

**2440:240 Computer Information Systems Internship (3 Credits)**

Prerequisite: 2440:241, [2440:202 and 2440:247], or [2440:282 and 2440:247], each with a grade of C or better. Provides student experience in computing/information technology in the workplace. Students meet with instructor to discuss and examine experiences.

**2440:241 Systems Analysis & Design (3 Credits)**

Prerequisites: 2440:180 and [2440:160 or 2440:170 or 2440:256], each with a grade of C or better. Covers all phases of business systems analysis, design, development, and implementation. Such principles as system flowcharting and file and document design emphasized.

**2440:247 Hardware Support (3 Credits)**

Prerequisite: Admission to program or permission of the program director. This course introduces the student to the basic skills required to troubleshoot, maintain and repair computers.

**2440:248 Server Hardware Support (3 Credits)**

Prerequisite: 2440:247 with a grade of C or better. This course introduces the student to server hardware and expands student knowledge of client hardware.

**2440:251 CIS Projects (3 Credits)**

Prerequisite: 2440:241 with a grade of C or better or permission. Using a simulated work environment, project teams are set up and required to analyze an unstructured problem, prepare alternative designs and implement a solution.

**2440:256 C++ Programming (3 Credits)**

Prerequisite: 2440:121 with a grade of C or better. This course explores object-oriented programming through C++ program development.

**2440:282 Microsoft Networking II (3 Credits)**

Prerequisite: 2440:281 with a grade of C or better. Provides the knowledge and skills necessary to manage and maintain computers with the Windows Server 2008 Network Operating System. This course will also help prepare you to pass the MCTS Exam.

**2440:283 Microsoft Networking III (3 Credits)**

Prerequisite: 2440:282 with a grade of C or better. Provides the knowledge and skills necessary to manage and maintain an active directory service hosted by the Server 2008 Network Operating System. This course also helps prepare the student to pass the MCTS Exam.

**2440:284 Microsoft Networking IV (3 Credits)**

Prerequisite: 2440:283 with a grade of C or better or passing score on the 70-640 Microsoft Certification Exam. This course will provide you with the knowledge and skill necessary to install, configure, manage and maintain the server services provided with Server 2008.

**2440:290 Special Topics: Computer Information Systems (1-5 Credits)**

Selected topics or subject areas of interest in computer information systems.

**2440:300 Network Authentication and Security (3 Credits)**

Prerequisites: 2440:204 with a grade of C or better and junior or better standing. This course focuses on network security issues related to conducting business over the Internet, including authentication, authorization, and firewalls.

**2440:303 Voice, Data, and Video (3 Credits)**

Prerequisites: 2440:204 with a grade of C or better and junior or better standing. This course focuses on network issues related to the integration of voice, data, and video over the same network media and equipment.

**2440:306 Ethics & Law in Information Technology (3 Credits)**

Prerequisite: Junior or greater standing. This course is designed to introduce the student to the central issues concerning intellectual property, privacy, and copyright law as it pertains to the development and distribution of software systems.

**2440:310 Wireless Networking (3 Credits)**

Prerequisite: 2440:204 with a grade of C or better or permission. This course provides students with various wireless networking technologies.

**2440:311 Client/Server Programming II (3 Credits)**

Prerequisite: 2440:210 with a grade of C or better. Discusses tools for client-server programming, distributed computing, socket programming, and security implementation.

**2440:321 Server-Side Scripting (3 Credits)**

Prerequisites: 2440:121 and 2440:140, both with a grade of C or better. This course provides students with instruction on using server-side scripting languages to develop interactive client/server web-based applications.

**2440:331 Programming for Cybersecurity (3 Credits)**

Prerequisites: 2440:121 and 2440:145 with grades of C or better. This course will introduce basic programming techniques used for ethical hacking using the Linux Operating System and other tools that are commonly used in cybersecurity.

**2440:360 Java Programming II (3 Credits)**

Prerequisite: 2440:160 with a grade of C or better. This course covers advanced object-oriented programming concepts, GUI programming, web application programming, network and security programming, JavaBeans and explores aggregations.

**2440:365 E-Business Application Development (3 Credits)**

Prerequisites: 2440:211 and 2440:321, both with a grade of C or better. This course covers web programming techniques to develop Web-based e-business solution and covers e-business models and business issues.

**2440:370 Visual Basic Programming II (3 Credits)**

Prerequisite: 2440:170 with a grade of C or better. This course explores object-oriented programming through Visual Basic program development at a more advanced level, with more attention to business applications.

**2440:388 Advanced UNIX/Linux (3 Credits)**

Prerequisites: 2440:145 with a grade of C or better and junior or greater standing. This course provides students with the necessary knowledge and skills to perform basic administrative tasks on a UNIX/Linux operating system.

**2440:400 Advanced Routing (4 Credits)**

Prerequisites: 2440:201, 2440:202, 2440:203, 2440:204, 2440:300, all with a grade of C or better, and 2030:154; or possess a current CCNA certification and be able to configure a router to the CCNA standards. This course focuses on advanced routing protocols and features and complies with the content of the Cisco Academy Cisco Certified Network Profession (CCNP) Advanced Routing course.

**2440:401 Multilayer Switching (3 Credits)**

Prerequisites: Must have a current CCNA certification and be able to program a router to the CCNA standards (requires permission), or must have successfully completed all four Cisco Networking Academy CCNA courses from an accredited academy (2440:201, 2440:202, 2440:203, 2440:204, all with a grade of C or better). This course focuses on switching protocols and features. This course complies with the content of the Cisco Academy Cisco Certified Network Profession (CCNP) Switching course.

**2440:402 Troubleshooting Complex IP-based Networks (4 Credits)**

Prerequisites: 2440:400 and 2440:401 with grades of C or better or permission. This course focuses on methodologies and hands-on skills needed to maintain and troubleshoot complex IP networks.

**2440:430 Network Monitoring and Management (3 Credits)**

Prerequisite: 2440:204 with a grade of C or better, or junior or greater standing. This course provides students the basic theory and practical application of network monitoring and management skills.

**2440:431 UNIX-based Systems Security (3 Credits)**

Prerequisites: 2440:388 with a grade of C or better and junior or greater standing. This course will introduce the various methods used to secure UNIX-based operating systems (Apple iOS and Android Operating System) on a computer network.

**2440:441 Cyber Security (3 Credits)**

Prerequisites: 2030:361, 2235:441, and 2440:388 with a grades of C or better and junior or greater standing. This course will address issues involving hacking, malware, social theories, protocols, firewalls, intrusion detection, the prevention and containment of intrusion incidents, the incident response process, and computer forensic examination.

**2440:450 Applied Data Mining (3 Credits)**

Prerequisites: 2030:345 and junior or greater standing. This course is designed to introduce the student to the central issues in business data mining.

**2440:451 Senior Programming Projects (3 Credits)**

Prerequisite: Senior or greater standing. This course is the capstone course where senior students will apply learned material by simulating a realistic work environment.

**2440:452 CIS Practicum (3 Credits)**

Prerequisite: Permission. Provides students with experience in computer information systems operation and maintenance in the workplace. Practicum must be relevant to the specialization area.

**2440:456 C++ Programming II (3 Credits)**

Prerequisite: 2440:256 with a grade of C or better. This course explores object-oriented programming through C++ program development at a more advanced level. Also considers Visual programming and connection to databases.

**2440:465 Data Communications & Networking (3 Credits)**

Prerequisite: Junior or greater standing. Introduces students to business data communication and networking concepts. The OSI model, various network configuration and popular industry communication protocols are explored at an advanced level.

**2440:470 Database Management II (3 Credits)**

Prerequisite: 2440:180 with a grade of C or better. Covers advanced database design, definition, manipulation, and administration tasks with emphasis placed on the relational model, the object-oriented model, and client/server systems.

**2440:480 Current Topics in Computer Information Systems (3 Credits)**

Prerequisite: Permission. Seminar in topics of current interest in information technology or special individual topics in information technology.

**2440:490 CIS Senior Networking Projects (3 Credits)**

Prerequisites: 2440:388, 2440:400, and 2440:401 with grades of C or better or permission. The capstone course is used to research, document and implement current and advanced IT topics using knowledge and skills developed from networking courses.

**2440:491 CIS Senior Cybersecurity Project (3 Credits)**

Prerequisites: 2235:442, 2235:443, and 2440:388 with grades of C or greater or permission. This is the capstone course for the CIS Digital Forensics and Cybersecurity degree options.

## Computer Science (3460)

**3460:101 Essentials of Computer Science (3 Credits)**

Explore major topics in Computer Science - computing systems, data representation, hardware, programming topics, and important applications such as networks, robotics, databases, and gaming.

**3460:125 Descriptive Computer Science (2 Credits)**

Computer literacy: terminology; methods, media for data representation, storage; elements of a computing system; data organization.

**3460:126 Introduction to Visual Basic Programming (3 Credits)**

Windows GUI and Microsoft's Visual BASIC programming environment. Design of user interfaces, event-driven programming, basic control structures, simple variables, arrays, and sequential files.

**3460:200 Programming for Data Science (4 Credits)**

Prerequisite: 3450:145 or 3450:149. Introductory programming for data-intensive applications including data collection, pre-processing/cleansing, analysis, and visualization, using libraries for processing of large data sets. Designed as a first programming course for non-majors in the sciences.

**3460:209 Computer Science I (4 Credits)**

Prerequisite: Completion of 3450:145 or 3450:149 with a grade of C- or better or equivalent. Introduction to problem-solving methods and algorithms. Programming in a high-level language including how to design, code, debug and document programs with good programming style.

**3460:210 Computer Science II (4 Credits)**

Prerequisites: 3460:209 and 3450:208 with a grade of C- or better. Dynamic memory allocation methods, elementary data structures, internal representations, and associated algorithms. Topics include lists, stacks, queues, trees, and sorting methods.

**3460:289 Selected Topics in Computer Science (1-3 Credits)**

Prerequisite: Permission. Selected topics of interest in computer science.

**3460:306 Assembly and System Programming (4 Credits)**

Prerequisite: Completion of 3460:210 or equivalent with a grade of C- or better. Basic computer organization, digital logic, and data representation. Programming in assembly and C languages on a typical digital computer.

**3460:307 Internet Systems Programming (3 Credits)**

Prerequisite: Completion of 3460:210 or equivalent with a grade of C- or better. Overview of current programming languages, tool and scripting technologies for the Internet and World Wide Web.

**3460:316 Data Structures (3 Credits)**

Prerequisites: 3460:210 and [3450:221 or 3450:210] with grades of C- or better. A continuation of topics in 3460:210. Topics include: graphs and graph algorithms, external sorting, hashing, advanced tree and file structures.

**3460:389 Intermediate Topics in Computer Science (1-3 Credits)**

Prerequisite: Permission of instructor. Selected topics of interest in computer science at an intermediate level.

**3460:395 Internship in Computer Science (1-12 Credits)**

Prerequisites: Completion of 3460:209 and 3460:210 with grades of C- or better, and permission of a faculty supervisor. Placement in industry for experience related to computer science. (May be repeated to a maximum of 12 credit hours. No more than three credits may be applied towards a computer science major.)

**3460:406 Introduction to C & UNIX (3 Credits)**

Prerequisite: Programming experience. Syntax of C with flow structures, pointers, and command line concepts. For UNIX, shell scripts, UNIX file structure, system calls and interprocess communication protocols. (Not an approved mathematics and computer science major, minor, or certificate elective.)

**3460:408 Windows Programming (3 Credits)**

Prerequisites: Completion of 3460:208 or 3460:210 or 3460:406 with a grade of C- or better or permission. Windows operating systems, integrated development environment, event-driven programming, graphical user interface design, object libraries, component object model, object linking, embedding, client-server objects.

**3460:411 Human-Computer Interaction (3 Credits)**

Prerequisite: 3460:316. This course introduces the basic concepts and technologies of Human-Computer Interaction (HCI). Students will learn how to design and implement systems for human to interact with computers. Topics include: Categories of HCI, CLI, GUI, NUI, Design, Implementation and Evaluation of HCI, HCI Devices, Virtual Device Drive, HCI Toolkits, HCI Standards, Categories of Interactive Tasks, EDP and Multi-Threading in HCI, VR/AR/MR/XR in HCI, APP HCI, 3D Printing.

**3460:418 Introduction to Discrete Structures (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better or permission. Introduction to a number of structures in algebra of particular use to student in computer science. Topics include algorithms and flow chart language, graphs and digraphs, trees, lattices codes.

**3460:421 Object-Oriented Programming (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better. Object-oriented design, analysis, and programming using different development models. Comparison with other programming paradigms.

**3460:426 Operating Systems (3 Credits)**

Prerequisites: Completion of 3460:316 and 4450:320 or equivalents with grades of C- or better. Introduction to aspects of all modern operating systems: types; storage management; process and resource control; interacting process synchronization.

**3460:428 UNIX System Programming (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better and knowledge of C. An overview of the UNIX operating system. Shell programming. Process management, processor management, storage management, scheduling algorithms, resource protection, and system programming.

**3460:430 Theory of Programming Languages (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better. Advanced concepts underlying programming languages and their applications, formal definitions of programming languages, Backus Normal Form, semantics. Alternative programming paradigms including functional programming.

**3460:435 Algorithms (3 Credits)**

Prerequisite: Completion of 3460:316 with a grade of C- or better. Design and analysis of efficient algorithms for random access machines; derivation of pattern classification algorithms.

**3460:436 Applied Machine Learning (3 Credits)**

Prerequisite: 3460:210 with a grade of C- or higher. Machine learning studies algorithms and models that enable computers to complete task without explicit instructions. These algorithms rely on rules, associations, and patterns presented in large data sets gathered or generated through self-learning. This course will introduce students the fundamentals of machine learning, and concepts of deep learning. Topics include machine learning concepts, tasks, and workflow; supervised learning methods for classification and prediction; unsupervised learning methods for pattern recognition; concepts of advanced supervised learning methods including deep learning algorithms such as neural networks and convolutional neural networks. The main focus of the course is the application of industry-leading machine learning algorithms and the enabling techniques that make the implementation of the algorithms practical.

**3460:438 Interactive Game & Game Engine Design (3 Credits)**

Prerequisite: 3460:316. This course will introduce the basic concepts and techniques of game and game engine design. Students will learn how to design and implement interactive computer games and game engines. Topics include: Interactive Animation, Game Engines, EDP in Game Development, Procedural Animation and Physics Engine, Decision Making and AI Games, Surface & Volume Representation, VR, AR, MR, APP Games, Game Engine Development, and Voxel-Engine.

**3460:440 Compiler Design (3 Credits)**

Prerequisites: Completion of 3460:210 and (4450:320 or 3460:306), with a grade of C- or better. Techniques used in constructing compilers, including lexical and syntactic analysis, parsing techniques, object code generation and optimization. Course requires a compiler implementation project.

**3460:445 Introduction to Bioinformatics (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better or permission. Introduce major themes in bioinformatics. Topics include concepts of molecular genetics, biological databases, database searching, sequence alignments, phylogenetic trees, structure prediction, and microarray data analysis.

**3460:453 Computer Security (3 Credits)**

Prerequisites: Completion of 3460:210 with a grade of C- or better. Principles of computer security – cryptography, authentications, secure network protocols, intrusion detection and countermeasures.

**3460:455 Data Communication & Computer Networks (3 Credits)**

Prerequisites: Completion of 3460:210 with a grade of C- or better. ISO-OSI, TCP/IP, SNA data switching, protocols, flow and error control, routing, topology, Network trends, network taxonomies, and socket-based programming.

**3460:457 Computer Graphics (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better. Topics in vector and raster graphics, interactive graphics languages, scan conversion, clipping, geometric transformation, projection, shading, animation and virtual reality.

**3460:460 Artificial Intelligence & Heuristic Programming (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better. Study of various programs which have displayed some intelligent behavior. Exploration of level at which computers can display intelligence.

**3460:463 Pervasive Computing (3 Credits)**

Prerequisites: Completion of 3460:210 with a grade of C- or better. Computing from a wireless perspective. Topics include protocols, algorithms, security and sensor networks.

**3460:465 Computer Architecture (3 Credits)**

Prerequisite: Completion of 3460:210 and (4450:320 or 3460:306), with a grade of C- or better. An introduction to the hardware organization of the computer at the register, processor and systems level. In-depth study of the architecture of a particular computer system family.

**3460:468 Mobile Robotics (3 Credits)**

Prerequisites: Completion of 3460:210 with a grade of C- or better. Introduction to history, hardware and software components, and design of autonomous mobile robots. Multiple projects involving both physical robots and software emulation.

**3460:475 Database Management (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better. Fundamentals of database organization, data manipulations and representation, data integrity, privacy.

**3460:476 Introduction to NoSQL Data Management (3 Credits)**

Prerequisite: 3460:210. The widespread emergence of big data storage needs has driven the development and adoption of a new class of non-relational databases commonly referred to as NoSQL databases. This course will explore the origins of NoSQL databases and the characteristics that distinguish them from traditional relational database management systems. Core concepts of NoSQL databases will be presented, followed by an exploration of how different database technologies implement these core concepts. We will take a closer look at 1-2 databases from each of the four main NoSQL data models (key-value, column family, document, and graph), highlighting the business needs that drive the development and use of each database. Finally, we will present criteria that decision makers should consider when choosing between relational and non-relational databases and techniques for selecting the NoSQL database that best addresses specific use cases.

**3460:477 Introduction to Parallel Processing (3 Credits)**

Prerequisites: Completion of 3460:316 with a grade of C- or better and knowledge of C. Commercial processors: past and present. Parallel languages, models of parallel computation, parallel algorithm design and performance evaluation. Parallel paradigms with relation to real world applications.

**3460:480 Software Engineering (3 Credits)**

Prerequisite: Completion of 3460:210 with a grade of C- or better. Introduction to formal software specification and validation. Introduction of methodologies and tools of design, development and validation, and maintenance.

**3460:489 Topics in Computer Science (1-3 Credits)**

Prerequisite: Permission of instructor. Selected topics in computer science at an advanced level.

**3460:490 Senior Seminar in Computer Science (3 Credits)**

Prerequisites: Must have completed at least 30 hours of 3460 (computer science) courses. Corequisites: 3460:435 and [3460:426 or 4450:325]. Professional software development, surviving "Mission Impossible" projects, computer ethics, intellectual property rights (patents and copyrights), and other current topics.

**3460:497 Individual Study in Computer Science (1-3 Credits)**

(May be repeated. Can apply to degree, minor or certificate only with department approval.) Prerequisite: Permission. Directed studies designed as introduction to research problems under guidance of designated faculty member.

**3460:498 Senior Honors Project: Computer Science (1-3 Credits)**

Prerequisites: 3460:497 and Senior student in Honors Program. Directed study for senior student in the Honors Program who has completed 3460:497. An introduction to research problems in the computer science under the guidance of selected faculty.

## Construction Engineering Technology (2990)

**2990:125 Statics (3 Credits)**

Prerequisites: 2030:154 and 3650:160. This course covers forces, resultants, and couples. Equilibrium of force systems. Trusses, frames, centroid, moment of inertia, and friction.

**2990:129 Computer Applications in Construction (3 Credits)**

This course introduces students to important computing skills for construction managers including software for estimating, scheduling, presentations, general business administration and graphics.

**2990:131 Building Construction (2 Credits)**

Materials and methods used in construction. Encompasses buildings constructed with wood, steel, concrete or a combination of these materials.

**2990:150 Plan Reading (2 Credits)**

Prerequisite: 2990:131. The language of construction. Symbols, scales, plan views, elevation views, sections and details. Quantity take-off estimation.

**2990:225 Strength of Materials (3 Credits)**

Prerequisite: 2990:125. Stress, strain and stress-strain relationships. Tension, compression, torsion, beams. Shear and moment diagrams. Combines stresses.

**2990:226 Construction Supervision (3 Credits)**

Introduction to topics on construction supervision including planning, directing and coordinating onsite activities to build quality defined by drawings and specifications.

**2990:234 Elements of Structures (3 Credits)**

Prerequisites: 2990:125 and 2990:225. Principles of stress and structural analysis, concepts of steel, timber design, and reinforced concrete.

**2990:235 Construction Inspection (3 Credits)**

Prerequisite: 2990:131. Fundamentals of total quality management and construction inspection.

**2990:237 Materials Testing I (2 Credits)**

Prerequisite: 2030:154. Laboratory testing of soils with emphasis on physical properties of soil. Laboratory and field procedures used for quality control.

**2990:238 Materials Testing II (2 Credits)**

Prerequisite: 2030:154. Mix design of concrete. Laboratory testing of concrete containing ordinary Portland cement and pozzolanic admixtures. Experiments demonstrate physical properties as related to design and quality control.

**2990:239 Construction Geomechanics (3 Credits)**

Prerequisite: Admission to the Associate of Science program or permission of the program director. This course provides an understanding of the impact of the mechanical behavior and engineering properties of soils and rock related to construction processes and methods. Topics include erosion control, laboratory test methods for engineering design, flood and mass wasting behavior, soil subsidence, and sustainability of engineered coastal structures.

**2990:245 Construction Estimating (3 Credits)**

Prerequisite: 2030:154 and 2990:150. Quantity takeoffs in construction to include mass excavations, foundation systems, structural steel, residential construction, and various commercial construction methods.

**2990:246 Site Engineering (3 Credits)**

Prerequisite: 2990:131. The content includes study of the development of a site including surveying, excavation, soil treatment, heavy equipment requirements, storm water management, pavement design, and construction of roadways.

**2990:248 Construction Graphics (3 Credits)**

Introduction to terminology and drawing basics with a focus on civil/site plans, architectural and structural drawing.

**2990:254 Building Codes (3 Credits)**

Prerequisite: 2990:131. Students learn fundamental concepts for construction related to the residential building code.

**2990:310 Residential Building Construction (3 Credits)**

Introduction to building design, wood framing, and mechanical systems as commonly found in residential housing.

**2990:312 Neighborhood Revitalization Project (3 Credits)**

Residential construction and inspection knowledge used to perform field work, service projects, and written inspection reports.

**2990:320 Advanced Materials Testing (3 Credits)**

Prerequisite: 2990:241. This course investigates the usage of precision strain gage applications used by technicians in determining stresses in structural elements and mechanical parts.

**2990:351 Construction Quality Control (3 Credits)**

Prerequisites: Admission into the BCET program or permission of instructor. Overview of quality control concepts and techniques as related to the construction industry including the necessary statistical tools; exposes students to civil, mechanical and electrical inspection requirements.

**2990:352 Field Management & Scheduling (2 Credits)**

Prerequisites: 2990:245 or permission. Planning, scheduling, and controlling of field work within time and cost constraints. Manual methods and computer software packages studied.

**2990:354 Foundation Construction Methods (3 Credits)**

Prerequisites: 2990:234 and 2990:237. Soil mechanics and soils exploration as related to construction. Foundation construction methods and practice in the interest of safety and suitable economy.

**2990:356 Safety in Construction (3 Credits)**

The purpose of this course is to explain what creates hazards and why, and to suggest where to anticipate trouble in each phase of the work as it progresses.

**2990:358 Advanced Estimating (3 Credits)**

Prerequisite: 2990:245. This course focuses on estimating and bidding for public and private construction. Includes heavy/highway, residential and building construction with use of computer software to facilitate bid price.

**2990:359 Construction Cost Control (3 Credits)**

Prerequisites: 2420:211 or 6200:201. Course develops a practical understanding of the latest managerial accounting principles and practices as they apply to the construction business.

**2990:361 Construction Formwork (3 Credits)**

Prerequisite: 2990:234 or permission. Introduction to design and construction of formwork and temporary wood structures.

**2990:362 Advanced Elements of Structures (3 Credits)**

Prerequisite: 2990:234. This course examines advanced topics in structural engineering and is an extension of Elements of Structures.

**2990:371 Green & Sustainable Building Practices (3 Credits)**

This course is designed to provide an understanding of sustainable construction practices and their importance on environmental issues.

**2990:453 Legal Aspects of Construction (2 Credits)**

Prerequisite: Admission into the BCET program or permission. Study of business of contracting and subcontracting and legal problems therein such as breach, partial performance, payment, insolvency, subsurface. Review of standard contracts and construction industry rules of arbitration.

**2990:455 Computerized Precision Estimating (3 Credits)**

Prerequisite: 2990:245. Students will explore sophisticated software programs utilized by the construction industry to prepare estimates and bid packages.

**2990:462 Mechanical Service Systems (3 Credits)**

Introduction to materials and equipment used in mechanical heating, ventilating, air conditioning, water and waste systems.

**2990:463 Electrical Service Systems (3 Credits)**

Introduction to materials and equipment in electrical systems of buildings. Includes illumination, electrical sources, materials and distribution. Emphasis of fire safety.

**2990:465 Heavy Construction Estimating (3 Credits)**

Prerequisite: 2990:245. Quantity takeoffs and cost analysis to include methods, systems, and equipment relevant to heavy highway and civil infrastructure projects.



**2990:466 Hydraulics (3 Credits)**

Prerequisite: 2030:356. Introduction to hydrology. Flow in closed conduits and open channels, distribution, systems, storage requirements and basic concepts of hydraulic structures. Basic concepts of seepage and working knowledge of pumps.

**2990:468 Construction Management (3 Credits)**

Prerequisites: 2990:352 and 2990:358. Construction Management takes established construction practices, current technological advances, and latest management methods and makes them into an efficient, smooth working system.

**2990:469 Contracts and Specifications (2 Credits)**

Prerequisite: Admission to BSCET program or permission. This course studies the principles and applications of construction specifications, contracts, processes for managing professional risk and increasing economic performance of the construction process.

**2990:471 Understanding LEED Guidelines (3 Credits)**

Prerequisite: 2990:371. Provides an understanding of LEED guidelines and requirements and help prepare the student for the LEED associate exam.

**2990:479 CPC Seminar (3 Credits)**

Prerequisite: Must be of senior level status towards a B.S. Degree in Construction Engineering Technology or permission. This course prepares students for the content and format of the Certified Professional Constructor's Examination.

**2990:489 Special Topics in Construction (1-3 Credits)**

Prerequisite: Permission of instructor. (May be repeated for up to six credits.) Special lecture/laboratory courses offered once or only occasionally in areas where no formal courses exist.

**2990:490 Workshop in Construction (1-3 Credits)**

Prerequisites: Permission. Group studies of special topics in construction. May not be used to meet undergraduate major requirements in construction. May be used for elective credit only. (May be repeated for up to six credits)

**2990:497 Honors Project (1-3 Credits)**

Prerequisite: Senior standing in Honors College and permission of supervising faculty in student's degree field and pursuit of major in CET. Individual Senior Honor's Project relevant to student's major field of study. Specific projects are approved and supervised by a designated member of the faculty in the student's degree field.

**2990:498 Independent Study in Construction (1-3 Credits)**

Prerequisite: Permission. Directed study in a special field of interest chosen by student in consultation with instructor. (May be repeated for up to six credits)

## Corrosion Engineering (4250)

**4250:101 Tools for Corrosion Engineering (2 Credits)**

Corequisites: 3450:149 and 4200:110. Introduction to corrosion engineering. Basic concepts of engineering practice. Introduction to professional level software needed for later studies.

**4250:105 Corrosion Engineering Computations (2 Credits)**

Prerequisite: 4200:101 or 4250:101. Corequisite: 3150:153. Structure, processing and properties of metals, ceramics, and polymers.

**4250:194 Design Project 1 (1 Credit)**

Prerequisite: Permission. Individual design project in Corrosion Engineering that is supervised by a faculty member.

**4250:200 Material and Energy Balances for Corrosion Engineers (4 Credits)**

Prerequisites: [4200:121 or 4250:105], 3150:151 and 3450:221. Introduction to material and energy balance calculations applied to the solution of chemical processing and corrosion engineering problems.

**4250:294 Design Project 2 (1-2 Credits)**

Prerequisite: Sophomore Standing. Individual design project in Corrosion Engineering that is supervised by a faculty member.

**4250:300 Fundamentals of Aqueous Corrosion (3 Credits)**

Prerequisites: 4200:225 and [4200:305 or 4600:380] and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4250:301. Fundamentals of aqueous corrosion will cover corrosion tendencies, processes and rates at low temperature. An in-depth understanding of the aqueous corrosion mechanisms, materials performance, and the effects of stress will be covered.

**4250:301 Aqueous Corrosion Lab I (1 Credit)**

Prerequisites: 3150:154 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4250:300. Laboratory exercises will reinforce the fundamentals of aqueous corrosion.

**4250:305 Aqueous Corrosion Prevention (3 Credits)**

Prerequisites: 3150:263, 4250:300 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisites: 4250:306, 4300:202 and 4400:307. This course presents a functional approach to controlling and preventing aqueous corrosion based upon engineering methodologies to proper materials selection, organic coatings, chemical inhibitors, and electrochemical protection. Applications in specific industries will be covered.

**4250:306 Aqueous Corrosion Lab II (1 Credit)**

Prerequisites: 4250:301 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4250:305. Laboratory exercises will reinforce the fundamentals of aqueous corrosion.

**4250:310 Fundamentals of Dry Corrosion (3 Credits)**

Prerequisites: 4250:300 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4250:311. Fundamentals of dry/hot corrosion will cover corrosion tendencies, processes and rates at high temperature. An in-depth understanding of the high temperature corrosion mechanisms, materials performance, and the effects of stress will be covered.

**4250:311 High Temperature Corrosion Lab (1 Credit)**

Prerequisites: 4250:306 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4250:310. Laboratory exercises will reinforce the fundamentals of high temperature corrosion.

**4250:340 Corrosion Prevention (Dry) (3 Credits)**

Prerequisite: 4250:305. Corequisite: 4250:310, 4600:380. This course presents a functional approach to controlling and preventing dry corrosion based upon engineering methodologies to proper materials selection, inorganic coatings, and passivation. Applications in specific industries will be covered.

**4250:394 Design Project 3 (1-3 Credits)**

Prerequisite: Junior Standing. Individual design project in Corrosion Engineering that is supervised by a faculty member.

**4250:440 Corrosion Engineering Design I (3 Credits)**

Prerequisites: 4250:305 and admission to an engineering major within the College of Engineering and Polymer Science. This course applies the lessons learned in corrosion prevention and laboratory courses to corrosion case studies. Solutions to existing corrosion problems will be developed based on the analysis of test data.

**4250:441 Corrosion Engineering Design II (3 Credits)**

Prerequisites: 4250:440 and admission to an engineering major within the College of Engineering and Polymer Science. This course focuses on understanding the financial, political, social and health implications of corrosion, corrosion mitigation, and corrosion prevention. Solutions to existing corrosion problems will be developed based on economic, political, social, and health issues. The course will also cover methodologies for preserving assets and reducing operation costs.

**4250:450 Engineering Principles of Corrosion (3 Credits)**

Prerequisite: Junior level standing or permission. Engineering principles for understanding corrosion and corrosion mitigation methods. Case studies of corrosion management to reliability and reduce corrosion. Multidisciplinary engineering enrollment encouraged.

**4250:494 Design Project 4 (1-3 Credits)**

Prerequisite: Senior Standing. Individual design project in Corrosion Engineering that is supervised by a faculty member.

**4250:496 Special Topics in Corrosion Engineering (1-3 Credits)**

Prerequisite: Permission. (May be repeated for a total of six credits). Topics selected from new and developing areas of corrosion engineering.

**4250:497 Honors Project (1-3 Credits)**

Prerequisites: Senior standing in Honors College or permission. Individual research or design project in Corrosion Engineering that is supervised by a faculty member. Conducted in accordance with the Honors College requirements.

## Corrosion Engineering Technology (2850)

**2850:100 Introduction to Corrosion Technology (2 Credits)**

Prerequisite: 2030:151 or higher math. Analysis of material selection and environmental conditions on corrosion; review of corrosion types, environments and characteristics of structural materials; economic impact, control methods are explored.

**2850:120 Corrosion Engineering Technology Fundamentals I (3 Credits)**

Corequisite: 2820:111. Introduction to corrosion engineering topics including economic impacts of corrosion, types of corrosion, their recognition and prevention, parameters affecting corrosion, and methods of corrosion control.

**2850:121 Corrosion Engineering Technology Fundamentals II (4 Credits)**

Prerequisite: 2850:120. Basic understanding of steps and methods required for combating corrosion including proper design, material selection, protective coating application, inhibitors use, and cathodic and anodic protection.

**2850:200 Advanced Corrosion Technology (3 Credits)**

Prerequisite: 2850:100. Study of corrosion control methods through design, materials selection, protective coatings, cathodic and anodic protection; corrosion testing and monitoring; diagnosis of corrosion failures; selection of treatment options; corrosion data analysis.

**2850:220 Strategies for Corrosion Prevention (4 Credits)**

Prerequisite: 2850:121. Corequisite: 3650:163. This course focuses on the control of corrosion by applying coatings and cathodic protection.

**2850:221 Corrosion Engineering Technology Projects (4 Credits)**

Prerequisite: 2850:220. Course focuses on corrosion/failure analysis and corrosion mitigation, and discussion of regulatory compliance and resource acquisition and allocation.

## Counseling (5600)

**5600:401 Introduction to Suicidology (3 Credits)**

Introduction to Suicidology covers a broad range of issues related to suicide from global, U.S. national, state and local perspectives.

**5600:410 Personnel Services in School (2 Credits)**

Prerequisite: senior standing. Introduction to background, role and function, techniques, community agencies and issues in personnel field. For student considering pupil personnel fields, social work.

**5600:415 Mental Illness & Media (2 Credits)**

Mental illness is often portrayed negatively the media. This course focuses on mental illness, stigma, and how movies portray specific mental disorders.

**5600:426 Career Education (2 Credits)**

Prerequisite: junior, senior or graduate standing. Examination of current career education models and programs with emphasis on infusion of career education activities into elementary and secondary curriculum.

**5600:436 Helping Skills for Resident Assistants (2 Credits)**

Open to resident assistants in University housing. A course designed to help student personnel workers become more effective in professional role.

**5600:450 Counseling Problems Related to Life-Threatening Illness & Death (3 Credits)**

Prerequisite: Permission. Consideration of the global issues, current research, coping behavior, support systems and family and individual needs in regard to life-threatening situations.

**5600:480 Special Topics: Educational Guidance & Counseling (1-4 Credits)**

(May be repeated with a change in topic) Prerequisite: Permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

**5600:490 Workshop: Educational Guidance & Counseling (1-3 Credits)**

Special instruction designed as in-service and/or upgrading individuals on current issues and practices in counseling.

**5600:491 Workshop: Educational Guidance & Counseling (1-3 Credits)**

Special instruction designed as in-service and/or upgrading individuals on current issues and practices in counseling.

**5600:492 Workshop: Educational Guidance & Counseling (1-3 Credits)**

Special instruction designed as in-service and/or upgrading individuals on current issues and practices in counseling.

**5600:493 Workshop: Educational Guidance & Counseling (1-4 Credits)**

Special instruction designed as in-service and/or upgrading individuals on current issues and practices in counseling.

**5600:494 Counseling Institute (1-4 Credits)**

In-service programs for counselors and other helping professionals.

# Criminal Justice Studies (3800)

## **3800:100 Introduction to Criminal Justice (3 Credits)**

Overview of criminal justice system, its history, development and evolution within the United States including subsystems of police, courts, corrections. Constitutional limitations, current criminal justice practices human relations, professionalization, prevention.

## **3800:101 Introduction to Security Administration Technology (3 Credits)**

Introduces fundamentals such as equipment, technology, design theories, management practices, trends, concerns, and issues in security administration.

## **3800:102 Principles of Criminal Law (3 Credits)**

Prerequisite: 3800:100. This course examines the central principles of criminal law, including its history, philosophy, the elements of major crimes and criminal defenses.

## **3800:103 Introduction to Corrections (3 Credits)**

Prerequisite: 3800:100. Introduction to history and goals of institutional and community corrections.

## **3800:104 Evidence & Criminal Legal Process (3 Credits)**

Prerequisite: 3800:100. Study of evidence law, constitutional perspectives and law enforcement officer's relationship thereto. Court procedures from arrest to incarceration.

## **3800:105 Introduction to Police Studies (3 Credits)**

Prerequisite: 3800:100. Provides a foundation for understanding police role, structure, and function in American society at the local, state, and federal levels.

## **3800:106 Juvenile Justice Process (3 Credits)**

Prerequisite: 3800:100. Examination of juvenile justice system, functions of its various components; adolescent subculture, legislation, causative factors, prevention and treatment methodologies and programs.

## **3800:120 Crime Prevention: Theory, Practice, and Management (3 Credits)**

Examines contemporary crime prevention and security strategies used in target hardening. Central theme is the use of community resources to prevent crime.

## **3800:224 Profiling Serial Killers (3 Credits)**

Prerequisite: 3800:100. Introduction to the theories, analyses, and methodology used in profiling serial killers. Actual serial profiles and paradigms of crime scene analyses also examined.

## **3800:225 The Police Experience (3 Credits)**

Prerequisites: 3800:100 and permission. Academic refresher course of basic police academy. Completion (C or better) and 3800:100 qualifies a commissioned police officer to test out of certain courses (see adviser).

## **3800:226 Interviews, Interrogations, and Hostage Negotiations (3 Credits)**

Prerequisite: 3800:100. An overview of the legal, theoretical, and applied aspects of conducting interviews, interrogations, and hostage negotiations within the field of law enforcement.

## **3800:231 Physical Security: Systems, Design, and Control (3 Credits)**

Topics include: controlling and monitoring the access of persons and vehicles, prevention and detection of unauthorized intrusions and surveillance, and safeguarding key assets.

## **3800:232 Legal Issues in Security Administration (3 Credits)**

Survey of laws applicable to the security administration function including tort, labor, employment, unemployment, workers' compensation, contract, insurance, cyber, criminal and constitutional law.

## **3800:233 Security Investigations: Principles and Practice (3 Credits)**

Overview of investigative methods employed by the security manager. Students will examine legal and ethical duties and issues related to investigation.

## **3800:234 Computer and Information Security (3 Credits)**

Examines practical applications of effective information security measures and legal, ethical and privacy issues concerning the storage and use of information in society.

## **3800:235 School Crime and Violence Prevention (3 Credits)**

Prerequisites: 3800:101, 3800:120. Examines the nature and extent of crime and deviance in American schools. Particular focus is on the use of a systems approach to prevent crime.

## **3800:240 Vice & Organized Crime (3 Credits)**

Prerequisites: 3800:100 and permission. An overview of organizations operating nationally and internationally in a variety of criminal activities with a particular emphasis on narcotics trafficking.

## **3800:245 Homeland Security: Principles and Practice (3 Credits)**

Overview of fundamental homeland security concepts and issues such as: intelligence, critical infrastructure protection, hazards, strategy, policy, risk, organizational design and leadership.

## **3800:251 Criminal Investigation (3 Credits)**

Prerequisite: 3800:100. The course provides the student with fundamental investigative skills and the ability to manage a criminal case from initiation through conclusion.

## **3800:253 Basic Forensic Methods (3 Credits)**

Introduction to the science, technology and application of forensic methods in the investigation of crime.

## **3800:255 Introduction to Forensic Investigation (3 Credits)**

Prerequisite: 3800:100. This course is designed to introduce the student to the field of forensic science. The emphasis will be on skills and techniques of evidence evaluation.

## **3800:270 Community Corrections (3 Credits)**

Prerequisite: 3800:100. Examines the corrections component of the criminal justice system. Special focus on the development and use of probation, parole, and other alternative forms of sentencing.

## **3800:275 Legal Aspects of Corrections (3 Credits)**

Examination of the influence of the legal system on corrections, especially United States Supreme Court decisions.

## **3800:286 Courtroom Communication (3 Credits)**

Prerequisite: 3800:100. Witnessing studies the trial process, emphasizing role of witnesses. Effective communication to juries, applicable evidentiary rules and preparation techniques are taught, preparing students for direct and cross-examination.

## **3800:287 The Legal System and Psychology (3 Credits)**

Prerequisite: 3800:100. Examination of various areas where law and psychology interface, particularly in criminal cases by examining the expanding role of psychology in justice system and the courtroom.

## **3800:292 Special Topic: Criminal Justice (1-4 Credits)**

(May be repeated for a total of six credits). Prerequisite: Permission. Workshops and special programs in selected areas of criminal justice such as community relations, crime statistics, ethics, survival.

## **3800:296 Current Topics in Criminal Justice (1-3 Credits)**

Prerequisite: 3800:100. A variety of course topics on current subjects relative to law enforcement and the Criminal Justice System. May be repeated for up to 12 credits.

**3800:297 Independent Study: Criminal Justice (1-3 Credits)**

Prerequisite: 3800:100 and permission. Selected topics and special areas of study in Criminal Justice Technology under the supervision of a selected faculty member with whom specific arrangements have been made.

**3800:298 Applied Ethics in Criminal Justice (3 Credits)**

Prerequisite: 3800:100. This course deals with ethical considerations which confront justice practitioners and the legal ramifications of misconduct.

**3800:302 Theory of Criminal Law (3 Credits)**

Prerequisite: 3800:102. Criminal law is built on a number of core issues. This course examines the principles and doctrines that shape and limit criminal liability and punishment.

**3800:305 Policing Administration and Management (3 Credits)**

This course prepares students for promotion through the ranks of policing organizations, covering issues of interest to first-line supervisors and mid-level managers.

**3800:307 Foundations of Crime Analysis (3 Credits)**

Introduction to the profession of crime analysis. Provides an overview of crime analysis techniques.

**3800:325 Information Privacy (3 Credits)**

This course examines the origins, development and scope of individual control over, or government regulation of, personal information.

**3800:386 Courtroom Proceedings and Testimony (3 Credits)**

All criminal justice professionals will appear as a witness at some point in their career. This course examines the courtroom process and how to effectively prepare and present testimony before a judge or jury.

**3800:405 Policing Theory and Strategy (3 Credits)**

Students will use social science theory and methods to evaluate police officers, practices and organizations.

**3800:407 Advanced Crime Analysis (3 Credits)**

Prerequisite: 3800:307. Introduction to advanced concepts and techniques for all major types of crime analysis: tactical, strategic, operations, administrative, intelligence, and investigative.

**3800:457 Crime Analysis Applications (3 Credits)**

Prerequisites: 3800:307 and 3800:407. Students apply theories, strategies, techniques, and methods with the breadth and quality of work expected of crime analysis professionals. Students should complete all technology core requirements for the Bachelor of Science degree in Criminal Intelligence Analysis before attempting this course.

**3800:465 Crisis & Trauma: Assessments & Interventions (3 Credits)**

Introduction to the stressors and emotions of dealing with people in crisis situations. Intervention, assessment and prevention strategies to help people in traumatic situations.

**3800:480 Special Topics in Criminal Justice (1-3 Credits)**

The exact topic for this course will vary each semester. It will cover relevant topics in policing, courts, corrections, or criminology.

**3800:497 Independent Study and Research (1-3 Credits)**

Prerequisite: Permission of Department. This course allows students to explore a topic of interest in criminal justice with the guidance of a faculty member.

## Criminal Justice Technology (2220)

**2220:480 Digital and Scientific Evidence (3 Credits)**

Prerequisite: 2220:104. Examination of the role of scientific and digital evidence in the legal system. Courtroom admissibility and presentation rules are covered.

## Curricular and Instructional Studies (5500)

**5500:223 Urban Youth Mentoring (3 Credits)**

Urban youth mentoring and mentorship theory and practice in school-based settings; including the completion of 30 hours of urban mentorship field experience.

**Gen Ed:** Tier 3 - Complex Systems

**5500:230 Educational Technology (3 Credits)**

Prerequisite: 13-15 sem. hrs. with a 'C' or better in specific GenEd courses; 5100:200 (may be taken as prerequisite or corequisite); FBI/BCI background checks. Effectively identifying, locating, evaluating, designing, preparing, and efficiently using educational technology as instructional resource in the classroom to support learning and teaching.

**5500:240 Foundations of Literacy (3 Credits)**

Focus on building blocks of teaching children how to read with an emphasis on literacy development and an emphasis on research-based components of reading instruction.

**5500:241 Word Study, Phonics & Spelling (3 Credits)**

Prerequisite: 5500:240. Candidates will explore a variety of genres, types of texts, resources, and instructional strategies to maximize students' comprehension, fluency, and vocabulary growth.

**5500:245 Understanding Literacy Development & Phonics (3 Credits)**

Prerequisite: admission to Teacher Preparation Program. Children's literacy development is explored through an integrated instructional model, with emphasis on the role of comprehension, phonics, and functional spelling in language learning. (10 hours of service learning)

**5500:251 Teaching Personal Finance in the PK-12 Classroom (3 Credits)**

Teacher candidates learn best practices in planning and implementing standards-based personal finance and economic instruction.

**5500:286 Teaching Multiple Texts (3 Credits)**

Prerequisite: 5500:240. Candidates will explore a variety of genres, types of texts, resources, and instructional strategies to maximize students' comprehension, fluency, and vocabulary growth. 10 field hours.

**5500:308 Instructional Design and Assessment (6 Credits)**

Prerequisites: 5100:220 and 5610:225. Theoretical and practical foundations for standards-based instruction and assessment; including instructional design, assessment development, and classroom practice for all learners in diverse and inclusive settings. 30 Field Hours.

**5500:310 Instructional Design (3 Credits)**

Prerequisites: 5100:210, 5100:211, and admission to LBJFF School of Education. Corequisite: 5500:311. Design and teach lessons using instructional models, strategies, and resources for students with different characteristics and design appropriate assessments to measure content mastery.

**5500:311 Instructional Resources (3 Credits)**

Prerequisites: 5100:210, 5100:211; Corequisite: 5500:310. Examines existing and developing media, technological, human and environmental resources as they relate to learning. Includes identifying, locating, evaluating, using, designing, and preparing educational resources.

**5500:320 Diversity in Learners (3 Credits)**

Prerequisites: 5100:210, 5100:211. Students learn to appreciate common core culture, the diversity in the student population and the democratic ideal of equal access to educational opportunity. (10 hours of field experience included.)

**5500:330 Classroom Management (3 Credits)**

Prerequisites: 5100:210, 5100:211. Content regarding effective organization of the classroom as well as procedures and models for mediation of student behaviors will be presented.

**5500:341 Laboratory Practicum in Reading (3 Credits)**

Prerequisite: 5500:445. Laboratory experience with classroom, small groups and individual situations. A student diagnoses, implements procedures and follows prescribed reading improvement practices. (25.5 field hours)

**5500:360 Educational Planning: Instruction, Assessment and Classroom Management (3 Credits)**

Prerequisites: 5500:230, 5100:200, 5100:220; 5610:225; prerequisite or corequisite: 5100:300. Theoretical foundations for standards-based thematic units and lesson plans, classroom assessment and organization, including procedures and models for mediating student behavior and classroom management.

**5500:370 Educational Implementation: Instruction, Assessment and Classroom Management (3 Credits)**

Prerequisites: 5500:360, 5100:300. Interpretation and application of standards-based thematic units and lesson plans; classroom assessment and organization, including mediation of student behaviors and classroom management.

**5500:430 Clinical Teaching I (3 Credits)**

Prerequisite: 5500:308. Corequisite: 5300:420. Observe and apply education methodologies and theories in a school/classroom field-based environment. (50 clinical hours)

**5500:431 Clinical Teaching II (3 Credits)**

Prerequisites: 5300:420 and 5500:430. Corequisite: 5300:421. Course following Clinical Teaching I - Apply education methodologies and theories in a classroom environment in a full-time school environment. (640 clinical hours)

**5500:439 Engineering for Educators (3 Credits)**

Prerequisite: 5500:308. Engineering design concepts and their applications course for teachers/teacher candidates. Students will engage in engineering problem solving activities and design lesson plans that address science and engineering practices. (Next Generation Science Standards)

**5500:440 Literacy in the Content Areas (3 Credits)**

Prerequisite: 5500:308. Prepare candidates to understand issues and use methods and materials to promote disciplinary literacy in middle and secondary classrooms (20 hours clinical).

**5500:442 Teaching Reading to Culturally Diverse Learners (3 Credits)**

Prerequisites: 5500:245, 5500:286. The course is designed to provide students with knowledge, skills, and attitudes that will enable employment of effective methods of teaching reading to culturally different learners and/or learners whose language patterns are nonstandard.

**5500:445 Assessment and Instruction in Literacy (3 Credits)**

Prerequisites: 5500:240, 5500:241, and 5500:286. This course explores the assessment of students' progress in language literacy. Formal and informal instruments identifying progress in reading, writing, speaking, and listening are examined implemented. There are 30 hours of field experience included in this course.

**5500:450 Nature, History, and Philosophy of Science (3 Credits)**

(May be repeated with a change in topic). Provides opportunities to examine the historical and philosophical perspectives of science in an online medium and the impact of science and technology on society.

**5500:455 Literacy for Multiage Licensure (3 Credits)**

Prerequisite: Admission to Teacher Education Program. Organizing instruction, use of oral language development protocols, strategies for word skill development, comprehension and assessment as they relate to content areas.

**5500:456 Scaffolding Language and Content Learning for English Learners (3 Credits)**

Prerequisite: 3300:473. This course prepares students to use quality, research-based sheltered instruction for improving teaching effectiveness and accelerating academic achievement achievement for English learners.

**5500:458 Inclusive Field Experience (1 Credit)**

Corequisite: 5610:457. In this inclusive field experience, teacher candidates explore the challenges and best practices in providing quality educational services for all learners. (20 field hours)

**5500:475 Instructional Technology Applications (3 Credits)**

Prerequisite: 5500:230 and 5500:360. Focus on developing learner competencies in the use of instructional technologies to enhance both the instructor's personal and professional productivity.

**5500:480 Special Topics: Curriculum & Instruction (1-6 Credits)**

Group study of special topics of critical, contemporary concern in professional education. (May be repeated with a change in topic)

**5500:484 Principles of Bilingual/Multicultural Education (3 Credits)**

An introduction to the theoretic, cultural, sociolinguistic bases of bilingual/multicultural education. Legislation, court decisions, program implementation included.

**5500:485 Teaching Literacy to English Learners (3 Credits)**

Prerequisite: Admission to the LBJFF School of Education. Course applies methodologies for teaching literacy to English learners, assessment of literacy skills and development of materials. 12 field hours of field experience are required.

**5500:486 Teaching Mathematics, Social Studies & Science to Bilingual Students (3 Credits)**

Prerequisites: Completion of all age-appropriate methods courses. Course applies methodologies for teaching mathematics, science, social studies in the bilingual/multicultural classroom. The bilingual student's native language stressed.

**5500:487 Techniques of Teaching English as a Second Language (3 Credits)**

Course includes teaching language skills to Limited English Proficient students in grades K-12, administration of language assessment tests, selection and evaluation of materials. (10 field hours)

**5500:488 Practicum: Teaching English as a Second Language (2 Credits)**

Prerequisites: 5500:485 and 5500:487. A practical experience in which teacher candidates observe, participate, and practice teaching in an ESL classroom under the supervision of an experienced, certified/licensed teacher.

**5500:490 Workshop: Curriculum & Instruction (1-3 Credits)**

Emphasizes development of teaching devices and/or curriculum units, demonstration of teaching techniques.

**5500:491 Workshop: Curriculum & Instruction (1-3 Credits)**

Emphasizes development of teaching devices and/or curriculum units, demonstration of teaching techniques.

**5500:492 Workshop: Curriculum & Instruction (1-3 Credits)**

Emphasizes development of teaching devices and/or curriculum units, demonstration of teaching techniques.

**5500:497 Independent Study (1-3 Credits)**

Prerequisite: Permission of advisor and department chair. Specific area of curriculum investigation pertinent to the general curriculum and instruction area as determined by student's academic needs.

## Dance (7900)

**7900:101 Dance Somatics: Yoga (1 Credit)**

Prerequisite: 7900:120 or 7900:125, or higher levels of ballet or modern dance technique. Exploration of alternative movement disciplines aimed at increasing body-mind awareness and dancer health. Must be taken by dance majors in first two years of study.

**7900:102 Dance Somatics: Pilates (1 Credit)**

Prerequisite: 7900:219 or 7900:224, or higher levels of ballet or modern dance technique. Exploration of alternative movement disciplines aimed at increasing body-mind awareness and dancer health. Must be taken by dance majors in first two years of study.

**7900:103 Orientation for Dance (0 Credits)**

Orientation to the dance program and field. Must be taken by all dance majors in their first semester of study. Dance Orientation is a degree requirement and is offered on a credit/noncredit basis.

**7900:104 Dance Somatics: Gyrokinesis (1 Credit)**

Prerequisite: 7900:120 or 7900:125, or higher levels of ballet or modern dance technique. Exploration of alternative movement disciplines aimed at increasing body-mind awareness and dancer health. Must be taken by dance majors in first two years of study.

**7900:105 Dance Somatics: Alexander Technique (1 Credit)**

Prerequisite: 7900:120 or 7900:125, or higher levels of ballet or modern dance technique. Exploration of alternative movement disciplines aimed at increasing body-mind awareness and dancer health. Must be taken by dance majors in first two years of study.

**7900:111 Topics in World Dance (1 Credit)**

May be repeated for a total of six credits. Prerequisite: 7900:120 or 7900:125, or higher levels of ballet or modern dance technique. Exploration of various dance genres from world and historical traditions.

**7900:115 Dance As An Art Form (2 Credits)**

Survey of dance for novice observer. aesthetics, philosophies, methods of training. Lecture and discussion of readings, viewing of film, videotape and live performances.

**7900:116 Physical Analysis for Dance I (2 Credits)**

Prerequisites: 3100:200, 3100:201; 7760:133. Required for all dance majors. Recommended to be taken in the first two years. Lecture/laboratory. Skeletal and muscular analysis for dance technique.

**7900:117 Physical Analysis for Dnce II (2 Credits)**

Prerequisite: 7900:116. Support systems, conditioning injury prevention, rehabilitation, nutrition for dancers.

**7900:119 Modern I (2 Credits)**

(May be repeated for a total of four credits) Exploring the basic principles of modern dance with an emphasis on body alignment and muscular awareness.

**7900:120 Modern II (2 Credits)**

Prerequisite: permission or grade of B or better for one semester in 7900:119. (May be repeated for a total of four credits) Continuation of 119. Increasing movement vocabulary, muscular strength and coordination of modern dance.

**7900:122 Ballet V (4 Credits)**

(May be repeated for a total of 16 credits) Prerequisite: permission or a grade of B+ or better for one semester in 7900:225. Theory, vocabulary, structure, placement. Concurrent enrollment in pointe class recommended.

**7900:124 Ballet I (2 Credits)**

(May be repeated for a total of four credits) Emphasis on body placement, muscular awareness.

**7900:125 Ballet II (2 Credits)**

Prerequisite: permission or grade of B or better for one semester of 7900:124. (May be repeated for a total of four credits) Continuation of 124. Basic exercises of classical ballet.

**7900:130 Jazz Dance I (2 Credits)**

(May be repeated for a total of four credits.) Basic jazz dance technique and jazz dance origins.

**7900:141 Pointe I (2 Credits)**

(May be repeated for a total of eight credits) Prerequisite: permission or 7900:122 or above. Corequisite: 7900:122 or above. Reinforcement of selection principles for pointe shoes, proper holding of foot muscularly and control of heel while ascending and descending from pointe.

**7900:144 Tap Dance I (2 Credits)**

(May be repeated for a total of four credits.) Basic tap dance technique and terminology.

**7900:145 Tap Dance II (2 Credits)**

(May be repeated for a total of four credits.) Prerequisite: permission or a grade of B or better for one semester in 7900:144. Refinement of tap technique and stylistic range of tap dance.

**7900:150 Ballroom Dance I (1 Credit)**

(May be repeated for a total of four credits.) Introduction to the basic patterns and techniques of major ballroom dances.

**7900:200 Viewing Dance (3 Credits)**

To explore dance as an art form through experiential activities, dance literature, film and live performance for non-dance majors.

**Gen Ed:** Tier 2 - Arts

**7900:219 Modern III (2 Credits)**

(May be repeated for a total of 4 credits.) Prerequisite: permission or a grade of B or better for one semester in 7900:120. Continuation of 120. Introduction to current modern dance styles and technique.

**7900:220 Modern IV (2 Credits)**

(May be repeated for a total of 4 credits.) Prerequisite: permission or a grade of B or better for one semester in 7900:219. Continuation of 219. Application of basic modern dance theory of current modern dance styles and techniques.

**7900:222 Ballet VI (4 Credits)**

(May be repeated for a total of 16 credits) Prerequisite: permission or a grade of B+ or better for one semester in 7900:122. Continuation of 122, expanding theory on vocabulary, structure, placement. Concurrent enrollment in pointe class recommended.

**7900:224 Ballet III (3 Credits)**

(May be repeated for a total of 6 credits.) Prerequisite: permission or a grade of B or better for one semester in 7900:125. Continuation of 125. Emphasis on barre and developing strength.

**7900:225 Ballet IV (3 Credits)**

Prerequisite: Permission or grade of B or better for one semester in 7900:224. Continuation of 224. Emphasis on the increase of strength and flexibility. (May be repeated for a total of twelve credits)

**7900:228 Modern V (3 Credits)**

(May be repeated for a total of 6 credits.) Prerequisite: Permission or a grade of B or better for one semester in 7900:220. The intermediate study of modern dance styles and technique through the application of more complex movement theories, rhythmic patterns, and improvisational studies.

**7900:229 Modern VI (3 Credits)**

(May be repeated for a total of 6 credits.) Prerequisite: permission or a grade of B or better for one semester in 7920:228. Introduction to intermediate theory of current modern dance styles and techniques.

**7900:230 Jazz Dance II (2 Credits)**

(May be repeated for a total of 4 credits.) Prerequisite: permission or a grade of B or better in 7900:130. Continuation of basic jazz technique and stylistic range of jazz dance.

**7900:241 Pointe II (2 Credits)**

(May be repeated for a total of 12 credits) Prerequisite: permission or a grade of B or better for one semester in 7900:141. Corequisite: 7900:222 or above. Continuation of 141. Continued development of strength, coordination and endurance of holding foot muscularly. Further development and emphasis on principles of weight transfer.

**7900:246 Tap Dance III (2 Credits)**

(May be repeated for a total of 4 credits.) Prerequisite: permission or a grade of B or better for one semester in 7900:145. Advancement of tap dance technique through the use of complex combinations, syncopation, routines, and styles.

**7900:274 Digital Technology for Dance (3 Credits)**

Hands-on exploration of theories and methods used in electronic development of promotional and creative materials. Activities include still and motion image capture, editing, and distribution.

**7900:316 Choreography I (2 Credits)**

Prerequisite: Permission or 7900:220 or above. Theoretical and practical introduction to principles of choreography: space, time, energy.

**7900:317 Choreography II (2 Credits)**

Prerequisite: 7900:316 or permission. Continuation of 316. Emphasis on musical choices and finding movement specific to the individual choreographer.

**7900:320 Movement Fundamentals (2 Credits)**

Beginning study of Labanotation method of recording movement, and Laban's theories of effort, space, and shape.

**7900:321 Rhythmic Analysis - Dance (2 Credits)**

Prerequisites: 32 credits and 7900:120 or 7900:125, or higher levels of ballet or modern dance technique, or permission. Lecture and application of basic rhythmic structures used in dance and dance instruction.

**7900:322 Ballet VII (4 Credits)**

(May be repeated for a total of 24 credits.) Prerequisite: Permission or a grade of B+ or better for one semester in 7900:222 Ballet VI. Continuation of 222. Emphasis on technique, style, line. Concurrent enrollment in point class is recommended.

**7900:328 Modern VII (3 Credits)**

(May be repeated for a total of 12 credits.) Prerequisite: permission or a grade of B or better in 7900:229. Refinement and stylization of modern techniques for performance of modern dance.

**7900:329 Modern VIII (3 Credits)**

(May be repeated for a total of 12 credits.) Prerequisite: permission or a grade of B or better in 7920:328 Modern VII. Application of advanced modern dance techniques and styles.

**7900:333 Partnering (2 Credits)**

Prerequisite: [7900:122 or 7900:222 or 7900:322 or 7900:422] and [7900:228 or 7900:299 or 7900:328 or 7900:329] or permission. An exploration of the fundamentals of dance partnering: weight sharing, centering, safety via contact improvisation.

**7900:334 Pas De Deux I (2 Credits)**

(May be repeated for a total of eight credits) Prerequisites: Permission; concurrent enrollment in a pointe class recommended. Provides student with the beginning understanding and practice of pas de deux.

**7900:347 Tap Dance IV (2 Credits)**

(May be repeated for a total of 8 credits.) Prerequisite: Permission or a grade of B or better for one semester in 7920:246. Advanced tap combinations, styles, routines.

**7900:351 Jazz Dance III (2 Credits)**

(May be repeated for a total of 4 credits.) Prerequisite: permission or a grade of B or better for one semester in 7900:230. Intermediate jazz dance technique and the jazz eras.

**7900:361 Learning Theory for Dance (2 Credits)**

Prerequisites: 7900:115, 7900:224 (or higher levels of ballet technique); 3750:100 or 5100:220; or permission of instructor. Theories of learning and their use in teaching dance.

**7900:362 Instructional Strategies for Dance (2 Credits)**

Prerequisite: 7900:361. Practical work and development of teaching skills in dance for public and private settings.

**7900:403 Special Topics in Dance (1-4 Credits)**

(May be repeated. No more than 10 credits may be applied toward the B.F.A. or B.A.) Prerequisite: Permission. Traditional and nontraditional topics in dance.

**7900:416 Choreography III (2 Credits)**

Prerequisite: 7900:317 or permission. Continuation of 317. Emphasis on form and choreographic analysis.

**7900:417 Choreography IV (2 Credits)**

Prerequisite: 7900:416 or permission. Continuation of 416. Expanding into group choreography and longer works.

**7900:422 Ballet VIII (4 Credits)**

(May be repeated for a total of 32 credits.) Prerequisite: permission or a grade of B+ or better for one semester in 7900:322. Continuation of 322. Advanced level of technique. Concurrent enrollment in pointe class recommended.

**7900:432 History of Ballet (2 Credits)**

Prerequisite: 7900:115 or 7900:200 or permission. Development of ballet beginning with its origins in French Courts through the Romantic and Diaghilev Eras to current times.

**7900:433 Dance History: 20th Century (2 Credits)**

Prerequisite: 7900:115 or 7900:200 or permission. Development of modern dance as an art form and the further evolution of ballet and concert dance.

**7900:445 Dance Philosophy and Criticism (3 Credits)**

Prerequisites: 3400:210 or 3400:221, 3600:101, 7900:115 and 7900:432 or 7900:433. Review of historical dance philosophies, performance, attributes, choreographic and theatrical elements of dance and criticism.

**7900:451 Jazz Dance IV (2 Credits)**

(May be repeated for a total of eight credits.) Prerequisite: permission or a grade of B or better for one semester in 7920:351. Advanced jazz dance technique and styles for the professional dancer.

**7900:461 Seminar & Field Experience in Dance Education (2 Credits)**

Prerequisite: 7900:362. Corequisite: 7910:108. Supervised observation and teaching experience in dance education in the field.

**7900:462 Professional Issues in Dance Education (2 Credits)**

Prerequisite: 7900:461. An examination of current issues and goals in dance education. Concurrent enrollment in 7910:108 Choreographers' Workshop.

**7900:471 Senior Seminar (1 Credit)**

Prerequisite: 7900:274; senior standing or permission. A forum to develop professional skills to make the transition to a dance career: artistic, academic, or business.

**7900:490 Workshop in Dance (1-3 Credits)**

(May be repeated for a total of eight credits) Prerequisite: Permission. Group study/projects investigating a particular field of dance not covered by other courses.

**7900:497 Independent Study in Dance (1-3 Credits)**

(May be repeated for a total of four credits) Prerequisite: Permission and prearrangement with instructor. Individual creative project, research or readings in dance with faculty advisor.

**7900:498 Honors Research Project in Dance (1-3 Credits)**

May be repeated for a total of six credits. Prerequisite: Approval of department preceptor. Creative project or research supervised by dance preceptor.

## Dance Organizations (7910)

**7910:101 Classical Ballet Ensemble (1 Credit)**

By audition only. Participation in rehearsal and preparation for public performance of classical ballet repertoire. \*\*Course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

**7910:102 Character Ballet Ensemble (1 Credit)**

By audition only. Participation in rehearsal and preparation for public performance of character ballet repertoire. \*\*Course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

**7910:103 Contemporary Dance Ensemble (1 Credit)**

By audition only. Participation in rehearsal and preparation for public performance of contemporary dance repertoire. \*\*Course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

**7910:104 Jazz Dance Ensemble (1 Credit)**

By audition only. Participation in rehearsal and preparation for public performance of jazz dance repertoire. \*\*Course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

**7910:105 Musical Comedy Ensemble (1 Credit)**

By audition only. Participation in rehearsal and preparation for public performance of dance production numbers in a musical comedy. \*\*Course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

**7910:106 Opera Dance Ensemble (1 Credit)**

By audition only. Participation in rehearsal and preparation for public performance of dance sequences in an opera. \*\*Course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

**7910:107 Experimental Dance Ensemble (1 Credit)**

By audition only. Participation in rehearsal and preparation for public performance of avant-garde dances. \*\*Course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

**7910:108 Choreographers Workshop (1 Credit)**

By audition only. Participation in rehearsal and preparation for public performance of student dances. \*\*Course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

**7910:109 Ethnic Dance Ensemble (1 Credit)**

By audition only. Participation in rehearsal and preparation for public performance of ethnic dance repertoire. \*\*Course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

**7910:110 Period Dance Ensemble (1 Credit)**

By audition only. Participation in rehearsal and preparation for public performance of dances from specific historical periods such as the Renaissance or Baroque eras. \*\*Course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

**7910:111 Touring Ensemble (1 Credit)**

By audition only. Participation in rehearsal and preparation for public performance of any dances prepared for touring purposes. \*\*Course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

**7910:112 Dance Production Ensemble (1 Credit)**

By permission only. Participation in technical assistance, preparation and performance of student dance productions: theory and laboratory. \*\*Course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

**7910:113 Dance Organizations: Workshop (1 Credit)**

By permission only. Participation in a dance workshop as volunteer, participant and/or presenter that forwards and augments the student's dance education and networking skills.

**7910:200 BFA Audition (0 Credits)**

Prerequisite: 7910:201 or permission. Passing the BFA Audition is a requisite for becoming a BFA dance major. It is also a degree requirement. It may not be taken more than twice. Offered on a credit/noncredit basis.

**7910:201 Freshman Jury and Interview (0 Credits)**

The passing of the Freshman Jury and interview is a requisite for becoming a BA dance major. It is also a degree requirement. Students may take the Freshman Jury and Interview the following semester if failed the first time. It may not be taken more than twice. Offered on a credit/non credit basis.

## Dance Performance (7920)

**7920:403 Special Topics in Dance (1-4 Credits)**

(May be repeated. No more than 10 credits may be applied toward the B.F.A. or B.A.) Prerequisite: Permission. Traditional and nontraditional topics in dance.



## Developmental Programs (2010)

### 2010:42 Basic Writing (0 Credits)

Provides intensive practice in the process of writing, in sentence structure and punctuation, and in correct written expression. Upon successful completion of Basic Writing, the student should be prepared to enter English (2020:121), or English Composition I (3300:111). Writing Lab hours are required. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

### 2010:50 Basic Mathematics I (0 Credits)

Prerequisite: Placement. An intensive review of arithmetic and an introduction to the concepts of elementary algebra. Emphasis is placed on developing learning strategies and controlling anxieties. Upon successful completion of Basic Mathematics I, the student should be prepared to enter Basic Mathematics II. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

### 2010:52 Basic Mathematics II (0 Credits)

Prerequisite: Completion of 2010:50 (formerly 1020:50) with a grade of C or better or placement test. A brief review of arithmetic and intensive instruction in elementary algebra. Emphasis is placed on developing learning strategies and controlling anxieties. Upon successful completion of Basic Mathematics II, the student should be prepared to enter Business Mathematics (2420:170); Introduction to Technical Math (2020:130); Elements of Math I (2030:151); or Fundamentals of Math V (2010:85). \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

### 2010:54 Basic Mathematics II Supported (0 Credits)

Prerequisites: 2010:50 and approval from Developmental Programs. See Basic Mathematics II (2010:52). Double length class period allows supplemental instruction and assistance in beginning algebra. Emphasis on developing learning strategies and controlling anxieties. Upon successful completion of Basic Mathematics II Supported, the student should be prepared to enroll in 2010:85 or 2420:170 or 2030:130 2030:151 or 2030:161 or 3450:100 or 3470:250 or 3450:135. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

### 2010:56 Basic Mathematics II Extended - Part A (0 Credits)

Prerequisite: 2010:50 and approval from Office of Accessibility. First half of a slower paced two-semester version of Basic Mathematics II (2010:52). Introduces elementary algebra, linear equations, polynomials, graphing, slope. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

### 2010:57 Basic Mathematics II Extended - Part B (0 Credits)

Prerequisite: 2010:56 (Part A). Second half of a slower paced two-semester version of Basic Mathematics II (2010:52) covering factoring, rational expressions, radicals, and quadratic equations. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

### 2010:60 College Reading (0 Credits)

Prerequisite: Placement. Designed to strengthen the basic comprehension skills needed for academic work, including recognition of main points and key supporting ideas, inferencing, summarizing, and vocabulary development. Upon satisfactory completion of College Reading, the student should be prepared to enter College Reading and Study Skills (1020:062). Lab hours are required. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

### 2010:62 College Reading & Study Skills (0 Credits)

Prerequisite: College Reading (1020:60) or placement. Continued practice of comprehension strategies with emphasis on textbook reading, and implementation of effective study strategies such as note-taking, test-taking, and memory techniques. Upon successful completion of College Reading and Study Skills, the student should be prepared to apply reading and study strategies in college classes. Lab hours are required. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

### 2010:64 Applied Study Strategies (0 Credits)

Corequisite: Selected General Education Courses taken concurrently. Designed to help students apply various study strategies to a specific course, such as psychology, sociology and others. Includes lecture and textbook analysis, memory techniques, and test-taking strategies. Lab hours are required. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

### 2010:71 Developmental Chemistry (0 Credits)

Prerequisite: 2010:52 or 2010:57 or equivalent with a grade of C or better. A mathematics review applied to chemistry and intensive instruction in principles of general chemistry. Emphasis is placed on developing learning strategies and controlling anxieties. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

### 2010:81 Fundamental Mathematics I (0 Credits)

Prerequisite: Placement by Academic Advisor. An intensive review of arithmetic with an emphasis on learning strategies and controlling anxieties. Upon successful completion of Fundamental Mathematics I, the student should be prepared to enroll in Fundamental Math II. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

### 2010:82 Fundamental Mathematics II (0 Credits)

Prerequisite: Placement by academic advisor or 2010:81. Upon successful completion of Fundamental Mathematics II, the student should be prepared to enroll in Fundamental Math III. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

### 2010:83 Fundamental Mathematics III (0 Credits)

Prerequisite: Placement by academic advisor or 2010:82. Upon successful completion of Fundamental Mathematics III, the student should be prepared to enroll in Fundamental Math IV. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

**2010:84 Fundamental Mathematics IV (0 Credits)**

Prerequisite: Placement by academic advisor or 2010:83. Upon successful completion of Fundamental Mathematics IV, the student should be prepared to enroll in 2010:85 or 2420:170 or 2030:130 or 2030:151 or 2030:161 or 3470:250 or 3450:135. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

**2010:85 Fundamentals of Mathematics V (0 Credits)**

Prerequisites: Placement or successful completion of one of the following: 2010:52, 2010:54, 2010:57, 2010:84. Introduction in elementary algebra including factoring, functions, graphing, roots and radicals. Upon successful completion of Fundamental Mathematics V, the student should be prepared to enroll in Algebra for Calculus. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

**2010:99 Special Topics: Developmental Programs (0 Credits)**

Instruction in one or more of the following basic skills: writing, reading, mathematics, and study skills. A combination of these skills may be presented with an overall theme such as "writing, reading and technology." See the current Schedule of Classes for course offerings. \*\* Load hours do not carry academic credit toward a degree program and are not used in probation and dismissal decisions, but do count in computing a student's load for financial aid and student employment.

## Distinguished Studies Program (2015)

**2015:150 Distinguished Student Colloquium (2 Credits)**

See department for course description.

## Early Childhood Education (5200)

**5200:100 Orientation to Early Childhood Specialist (0 Credits)**

Corequisite: 5100:200. Orientation to the information and strategies necessary for a student to be successful in the program, including portfolio development.

**5200:200 Pre-Kindergarten Participation I (1 Credit)**

Prerequisite: 3760:265, 2200:245. Planned field experience in a pre-kindergarten infant/toddler classroom where students work with children age birth to 3 years both individually and in small groups.

**5200:215 The Child, the Family, and the School (3 Credits)**

Prerequisites: 5100:220, 5610:225. The purpose of this course is to learn about why we create reciprocal working relationships with parents, and methods of creating these types of relationships. (10 field/clinical hours).

**5200:220 Visual Arts Culture in Early Childhood (1 Credit)**

Prerequisite: admission to Teacher Education Program. Art education concepts, structures, and knowledge base to provide curricular opportunities for education majors to develop as creative problem solvers in an elementary school setting. First offered Fall 1993.

**5200:250 Developing Processes of Investigation (3 Credits)**

Prerequisites: 5100:210, 5100:211, and admission to Teacher Education Program. This course will enable students to identify and acquire those investigative and discovery processes and skills that are common in mathematics, science, and social studies.

**5200:300 Pre-Kindergarten Participation II (1 Credit)**

Prerequisites: 5200:200, 5610:450 and admission to Teacher Education Program. Planned field experience in pre-kindergarten early intervention program where student works in both small and large group settings and with individual children.

**5200:319 Integrated Expressive Arts in Primary Grades (3 Credits)**

Prerequisites: 3760:265, [7500:201 or 7100:210 or 7800:301], and admission to teacher education program. This course focuses on creative expression and play as primary activities to support the physical, intellectual, social, emotional and aesthetic development of children from birth through fifth grade. Theory and practice of play, child study, environmental planning, creativity and arts-based expression are foundational in this course. Students learn how to teach with the arts, within and across the academic content curriculum.

**5200:320 Visual Arts Application in the Elementary School (3 Credits)**

Prerequisite: 5200:220. Exploration of materials, methods, processes and visual techniques relating two and three-dimensional art experiences for the teacher of elementary children.

**5200:321 Instructional Techniques: Modern Languages K-8 (3 Credits)**

Prerequisite: admission to the LBJFF School of Education. Focus on theories of language acquisition, models of instruction suited to teaching foreign languages and cultures in the elementary school (K-8), and strategies that promote appropriate levels of language proficiency and competency for young learners.

**5200:325 Early Childhood Inclusive Practicum (3 Credits)**

Prerequisite: 5500:240. Corequisite: 5500:241. Prerequisite or Corequisite: 5500:308. This field-based course emphasizes developmental domains of preschool children. Candidates design appropriate activities for culturally and linguistically diverse population of typically and atypically developing children.

**5200:331 Kindergarten Methods & Material (4 Credits)**

Prerequisites: 5200:330 and 3760:265. Scope and sequence of kindergarten curricula, with emphasis on developmentally appropriate methods and materials. This course is not part of the new teacher licensure program.

**5200:333 Science for Primary Teachers (3 Credits)**

Prerequisite: Admission to teacher education program. Teachers of children from Pre-K through Grade 5 must be well versed in the essential science content knowledge and they should demonstrate the understanding of central concepts, academic language, and the structure of science content areas needed to provide appropriate environments that support integrated and authentic learning for ALL children. Well prepared candidates use their knowledge, appropriate Ohio New Learning Science standards, and other resources to design, implement, and evaluate meaningful, challenging standards-based curriculum for each child.

**5200:334 Teaching Art in the Elementary School (3 Credits)**

Prerequisite: Admission to Teacher Education Program, Art K-12. Visual arts in elementary schools. Art education concepts with studio orientation including history of art education, developmental stages, curriculum and organization, methods, evaluation and research, and practical participation.

**5200:338 Social Studies for Primary Teachers (3 Credits)**

Prerequisite: Admission to the School of Education. This course equips primary grade teachers with content knowledge, skills, and dispositions necessary to teach grades Pk-5 students to be informed and active citizens in classrooms, their community, country, and world. Students will learn critical content related to the guidelines of the Ohio Department of Education and the National Council for the Social Studies standards in social studies education. They will make decisions about what to teach (standards and themes), how to teach (strategies), and which materials best serve the needs of their students (resources).

**5200:340 Developmental Writing and Digital Literacies in Inclusive Early (3 Credits)**

Prerequisite: 5500:240. Prerequisite or corequisite: 5500:241, 5500:308, and 5610:448. This course focuses on theoretically grounded developmental writing and communication using digital literacy in the information age specifically for children age 3 to third grade.

**5200:342 Teaching Math to Young Children (3 Credits)**

Prerequisites: 3450:140, 3450:240. Prerequisite or corequisite: 5500:370. Trends in mathematics instruction in early childhood/middle level classrooms. Procedures for the development of mathematics concepts and skills.

**5200:352 Teaching Mathematics in Inclusive Primary Settings (3 Credits)**

Prerequisite: 5500:308. To examine and know the standards-based mathematics curriculum and the instruction appropriate for inclusive primary setting. (10 hours of Field Work)

**5200:395 Field Experience (1-3 Credits)**

Prerequisites: Permission of advisor and department head. Independent field work in area selected by student's adviser, based on student's needs.

**5200:420 Integrated Primary Curriculum (4 Credits)**

Prerequisite or corequisite: 5500:370. Course models an inquiry-based format that integrates math, science, social studies, and technology standards where students learn how to create, implement, manage, and evaluate student-centered learning environments. (25 hours field and 35 clinical hours).

**5200:425 Advanced Integrated Primary Curriculum (4 Credits)**

Prerequisites: 5200:420 and admission to teacher education program. This course further explores an inquiry-based format that integrates math, science, social studies, and technology standards by having the students implement, manage, and evaluate their own and their students' learning. (25 field and 35 clinical hours).

**5200:430 Honors Research Project: Early Childhood (1-6 Credits)**

Prerequisite: Permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry. (May be repeated for a total of six credits).

**5200:453 Building Understanding in Early Childhood Settings (3 Credits)**

Prerequisite: 5500:240. Corequisite: 5500:241 and 5610:448. Prerequisite or corequisite: 5500:308. This course prepares teachers to work in inclusive programs, able to meet the needs of children; exceptional, cultural and linguistic diverse, and typically.

**5200:454 Inquiry Learning in Primary Inclusive Settings (3 Credits)**

Prerequisites: 5500:241 and 5500:308. Corequisite: 5610:450. Pre/ Corequisites: 5200:333 and 5200:338. Anchored in the authentic work of teacher and students, this field-based capstone methods class utilizes action research strategies in primary inclusive settings. By using inquiry-based methods that focus on reflective teaching and student learning, pre-service teachers learn to analyze and resolve their own teaching / learning challenges. They learn how to ask focusing questions, define terms, collect relevant data, analyze findings and communicate process that informs their professional practice. 35 field hours.

**5200:480 Special Topics: Elementary Education (1-4 Credits)**

(May be repeated with a change in topic) Prerequisite: Permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

**5200:490 Workshop: Elementary Education (1-3 Credits)**

Elective workshop for elementary education major who would pursue further refinement of teaching skills. Emphasizes demonstrations of teaching techniques and development of suitable teaching devices.

**5200:491 Workshop: Elementary Education (1-3 Credits)**

Elective workshop for elementary education major who would pursue further refinement of teaching skills. Emphasizes demonstrations of teaching techniques and development of suitable teaching devices.

**5200:492 Workshop: Elementary Education (1-3 Credits)**

Elective workshop for elementary education major who would pursue further refinement of teaching skills. Emphasizes demonstrations of teaching techniques and development of suitable teaching devices.

**5200:493 Workshop: Elementary Education (1-3 Credits)**

Elective workshop for elementary education major who would pursue further refinement of teaching skills. Emphasizes demonstrations of teaching techniques and development of suitable teaching devices.

**5200:495 Student Teaching (Pre K through K) (5 Credits)**

Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio. Corequisite: 5200:498. Planned teaching experience in schools selected and supervised by Office of Field Experience.

**5200:496 Student Teaching (Grades 1-3) (6 Credits)**

Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio. Corequisite: 5200:498. Planned teaching experience in schools selected and supervised by Office of Field Experience.

**5200:497 Independent Study: Elementary Education (1-3 Credits)**

Prerequisites: permission of adviser and department head. Specific area of curriculum investigation pertinent to elementary education as determined by student's academic needs.

**5200:498 Student Teaching Colloquium (1 Credit)**

Prepares students for the final phase of becoming decision makers. The colloquium will explore problems encountered in classrooms, initiate reflective practice and concepts of action research, and focus on preparation of unit outlines with emphasis on applied decision making.

**5200:499 Student Teaching in Inclusive Early Childhood Settings (9 Credits)**

Prerequisite: Approval of the Student Teaching Committee, based upon approved application to student teaching, passing at least one of Ohio Assessments for Educators subject-specific tests. Co-requisite: 5610:470. Planned 16-week experience in schools selected and supervised by the Office of Field Experiences. 322 Clinical Hours.

## Economics (3250)

**3250:100 Introduction to Economics (3 Credits)**

May not be substituted for 3250:200, 3250:201, or 3250:244. Economics primarily concerned in a broad social science context. Adequate amount of basic theory introduced. Cannot be used to satisfy major or minor requirements in economics.

**Gen Ed:** Tier 2 - Social Science

**3250:200 Principles of Microeconomics (3 Credits)**

Analysis of behavior of the firm and household, and their impact on resource allocation, output and market price. No credit if 3250:244 already taken.

**Gen Ed:** Tier 2 - Social Science

**3250:201 Principles of Macroeconomics (3 Credits)**

Prerequisite: 3250:200. Study of the economic factors which affect the price level, national income, employment, economic growth. No credit if 3250:244 already taken.

**3250:226 Computer Skills for Economic Analysis (3 Credits)**

Prerequisites: 3250:100 or 3250:200 or 3250:244. Application of word processing, spreadsheets, presentation packages, SAS, the Internet, library resources, and other computer tools in communicating economic analysis.

**Gen Ed:** Tier 3 - Critical Thinking

**3250:230 Economics of Social Policy Issues (3 Credits)**

Prerequisite: 3250:100, or 3250:200 and 3250:201, or 3250:244 or permission of the instructor. Investigation of selected labor and social policy issues. Examples include health care, economic demography, anti-poverty programs, immigration, discrimination, and the impact of unemployment and inflation.

**3250:244 Introduction to Economic Analysis (3 Credits)**

Recommended for engineering and mathematical science majors. Intensive introduction to analysis of modern industrial society and formulation of economic policy. Structure of economic theory and its relation to economic reality. No credit to a student who has completed 3250:200 and 3250:201.

**Gen Ed:** Tier 2 - Social Science

**3250:310 Managerial Economics (3 Credits)**

Prerequisites: 3250:200 or 3250:244, 3470:261, 3470:262. Application of economic analysis to management problems; the organization of enterprises and the allocation of their resources; decision making under uncertainty; strategic behavior.

**3250:325 Applied Econometrics I (3 Credits)**

Prerequisites: [3470:261 and 3470:262] or 6500:304. Students learn SAS coding and the foundations of data science. Course covers multiple regression estimation and inference analysis and concludes with a team-based research paper.

**3250:326 Applied Econometrics II (3 Credits)**

Prerequisite: 3250:325. Violations of the classical assumptions of the regression model and corrections are explored along with regression analysis of time series data. Culminates with a research paper.

**3250:330 Labor Problems (3 Credits)**

Prerequisites: [3250:200, or 3250:201, or 3250:244]. Labor economics, principles and public policy. Study of structure of labor market and impact unions have on labor management relations.

**3250:333 Labor Economics (3 Credits)**

Prerequisite: 3250:200 or 3250:244. Theoretical tools used in analysis of problems of labor in any modern economic system. Emphasis given to examination of determinants of demand for and supply of labor.

**3250:350 Women and the Economy (3 Credits)**

Prerequisite: 3250:100 or 3250:200 or 3250:244 or permission of the department. An economic analysis of the role gender plays in decisions (family formation, fertility, childcare, work) and outcomes (the gender wage gap, economic development).

**3250:360 Industrial Organization & Public Policy (3 Credits)**

Prerequisites: 3250:200 or 3250:244. Role of industrial structure and firm conduct in performance of industry and way in which antitrust policy is designed to provide remedies where performance is unsatisfactory.

**3250:380 Money & Banking (3 Credits)**

Prerequisite: 3250:201. Institutions of money, banking and credit, monetary expansion and contraction, public policies affecting this process, development of our money and banking system.

**Gen Ed:** Tier 3 - Critical Thinking

**3250:385 Economics of Natural Resources & the Environment (3 Credits)**

Prerequisites: [3250:100 or 3250:200 or 3250:244] or permission. Introduction to economic analysis of use of natural resources and economics of environment. Problems of water and air pollution, natural environments, natural resource scarcity, conservation, economic growth.

**Gen Ed:** Tier 3 - Complex Systems

**3250:400 Intermediate Macroeconomics (3 Credits)**

Prerequisites: 3250:201 and [3450:145 or higher math]. Changes in national income, production, employment, price levels, long-range economic growth, short-term fluctuations of economic activity.

**Gen Ed:** Tier 3 - Critical Thinking

**3250:405 Economics of the Public Sector (3 Credits)**

Prerequisites: [3250:200 and 3250:201] or 3250:244. Considers nature and scope of government activity, rationale for government intervention, problems of public choice, taxation and revenue-raising, cost-benefit analysis, program development and evaluation.

**3250:406 State & Local Public Finance (3 Credits)**

Prerequisite: 3250:410; recommended: 3250:405. Examines economic rationale and problems for provision of goods and services by different governmental units. Considers alternative revenue sources and special topics.

**3250:410 Intermediate Microeconomics (3 Credits)**

Prerequisites: [3250:200 or 3250:244] and [3450:145 or higher math]. Advanced analysis of consumer demand, production costs, market structures, determinants of factor income.

**Gen Ed:** Tier 3 - Critical Thinking

**3250:415 Cost-Benefit Analysis (3 Credits)**

Prerequisites: [3250:200 and 3250:201] or 3250:244. Introduction to tool for public project evaluation. Includes development of analytical framework and methods of determining benefits and costs over time. Stresses application of techniques.

**3250:423 Applied Game Theory (3 Credits)**

Prerequisite: 3250:200. Application of the basic concepts of game theory (analysis of strategic behavior) to relevant economics issues including bargaining, cartels, voting, conflict resolution and non-competitive pricing.

**3250:426 Applied Econometrics (3 Credits)**

Prerequisites: 3470:261, 3470:262, and [3250:200 and 3250:201] or 3250:244. Application of regression analysis to economic and social sciences data. Discusses typical problems from applied research, including estimation technique, hypothesis testing, and modeling framework.

**Gen Ed:** Tier 3 - Critical Thinking

**3250:427 Economic Forecasting (3 Credits)**

Prerequisites: 3470:261, 3470:262, and [3250:200 and 3250:201] or 3250:244. Methods for building, identifying, fitting and checking dynamic economic models and use of these models for forecasting. Emphasis on application of available computer software systems.

**3250:430 Labor Market and Social Policy (3 Credits)**

Prerequisite: [3250:200 and 3250:201] or 3250:244 or permission of instructor. Intensive study of current labor and social policy issues (e.g., discrimination, poverty, migration, education, demographic and labor market changes, impact of international trade on employment).

**Gen Ed:** Tier 3 - Complex Systems

**3250:432 Economics & Practice of Collective Bargaining (3 Credits)**

Prerequisite: 3250:200 or 3250:244. Principles and organization of collective bargaining, collective bargaining agreements, issues presented in labor disputes and settlements, union status and security, wage scales, technological change, production standards, etc.

**3250:434 Labor Market Analysis and Evaluation (3 Credits)**

Prerequisites: 3250:410, 3250:426, 3250:430. Applied labor market research using specialized techniques. Employment, health, education, and other current policy issues and programs analyzed and evaluated. Original research project required.

**3250:436 Health Economics (3 Credits)**

Prerequisites: 3250:100 or 3250:200 or 3250:244 or permission of instructor. Economic analysis of health care. Stresses health policy issues, includes study of demand and supply of medical services and insurance, analysis of health care industries.

**3250:438 Economics of Sports (3 Credits)**

Prerequisites: 3250:100 or 3250:200 or 3250:244 or permission of instructor. Sports franchises as profit maximizing firms; costs and benefits of a franchise to a city; labor markets in professional sports; the economics of college sports.

**3250:440 Special Topics in Economics (3 Credits)**

Prerequisite: [3250:200 and 3250:201] or 3250:244 or permission of department. Opportunity to study special topics and current issues in economics.

**3250:460 Economics of Developing Countries (3 Credits)**

Prerequisites: [3250:200 and 3250:201] or 3250:244. Basic problems in economic development. Theories of economic development, issues of political economy and institutions. Topics include poverty, population, migration, employment, finance, international trade and environment.

**Gen Ed:** Tier 3 - Global Diversity

**3250:461 Principles of International Economics (3 Credits)**

Prerequisites: [3250:200 and 3250:201] or 3250:244, or permission of the Economics department. International trade and foreign exchange, policies of free and controlled trade, international monetary problems.

**3250:475 Development of Economic Thought (3 Credits)**

Prerequisites: [3250:200 and 3250:201] or 3250:244, or permission of the Economics department. Evolution of theory and method, relation of ideas of economists contemporary to conditions.

**3250:481 Monetary & Banking Policy (3 Credits)**

Prerequisites: 3250:380, 3250:400; or permission of the Economics department. Control over currency and credit, policies of control by central banks and governments, United States Treasury and Federal Reserve System.

**3250:487 Urban Economics: Theory & Policy (3 Credits)**

Prerequisites: [3250:200 and 3250:201] or 3250:244, or permission of instructor. Analysis of urban issues from an economic perspective. Emphasis on urban growth, land-use patterns, housing, income distribution, poverty and urban fiscal policy.

**Gen Ed:** Tier 3 - Domestic Diversity

**3250:490 Individual Study in Economics (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission of instructor. Independent study in economics under supervision and evaluation of selected faculty member.

**3250:491 Workshop: Economics (1-3 Credits)**

(May be repeated) Prerequisite: Permission of the Economics department. Group studies of special topics in economics. May not be used to meet undergraduate or graduate major requirements in economics. May be used for elective credit only.

**3250:495 Internship in Economics (1-3 Credits)**

Prerequisites: 3250:200, 3250:201 and at least three additional courses in economics at the 300- or 400-level. Supervised placement in appropriate position in public or private sector organizations. Reports and written assignments required.

**3250:496 Senior Project in Economics (2 Credits)**

Prerequisites: 3250:400, 3250:410, 3250:426. Corequisites: 3250:405 or 3250:423 or 3250:430 or 3250:460 or 3250:461 or 3250:475 or 3250:481 or 3250:487. Taken concurrently with or following a 400-level field Economics course. Involves independent out-of-class work on a project designed in consultation with the designated 400-level course instructor.

**3250:497 Honors Project in Economics (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Senior standing in Honors College. Individual senior honors thesis on a creative project relevant to economics, approved and supervised by faculty member of the department.

## Education: Cooperative Education (5000)

**5000:301 Cooperative Education (0 Credits)**

(May be repeated) For cooperative education students only. Work experience in business, industry or governmental agency. Comprehensive performance evaluation and written report required.

## Educational Foundations and Leadership (5100)

**5100:150 Democracy & Education (3 Credits)**

Based on an interdisciplinary inquiry, this course examines varied theories and practices of democratic education.

**5100:200 Introduction to Education (3 Credits)**

Prerequisite: 13-15 sem. hrs. of specific GenEd courses; FBI/BCI background checks. Introduction to the teaching profession designed to explore the purposes of schools in society and what is required to be an effective teacher today. This course will include 10 field hours of field observation in an urban setting.

**5100:205 Fundamental Educational Computer Skills (1 Credit)**

Elective Course: Computer skills for education majors with little or no computer experience. Includes word processing, databases, graphics and communications. Cannot substitute for any required course.

**5100:210 Characteristics of Learners (3 Credits)**

Prerequisite: Completion of all LBJFF School of Education program admission requirements; Corequisite: 5100:211. Describe cognitive, psychosocial, physical, language, and moral development of learners Pre-K through adult. Identifies learner needs, roles of teachers and schools in fostering optimal development. (10 hours of field experience included.)

**5100:211 Teaching & Learning Strategies (3 Credits)**

Prerequisite: Completion of all LBJFF School of Education admission requirements. Corequisite: 5100:210. From course content and activities, students will recognize, select, and practice various instructional models. Students will acquire and apply appropriate learning and motivational strategies. (10 hours of field experience included.)

**5100:220 Educational Psychology (3 Credits)**

Prerequisite: 13-15 sem. hrs. of specific GenEd courses; 5100:200 (may be taken as prerequisite or corequisite); FBI/BCI background checks. Focuses on the developmental influences and characteristics of learners, and psychological principles pertaining to teaching and learning processes, motivation and self-regulation in learners.

**5100:300 Educational Equity and Excellence in a Culturally Pluralistic Society (3 Credits)**

Prerequisites: 5100:200, 220, 5500:230, 5610:225. Corequisite with or prerequisite to 5500:360. Engages teacher candidates in inquiry-based seminars and service learning that facilitate their developing pedagogical competence implementing equity and excellence in education.

**5100:330 Early Adolescent Learner (3 Credits)**

Study of issues in adolescent development, particularly as it relates to educational settings. Physical, cognitive, language, emotional, social, and moral development in learners 8-14 years old.

**5100:410 Professional Issues in Education (3 Credits)**

Prerequisites: 5500:310, 5500:311, 5500:320, 5500:330, and admission to the LBJFF School of Education. Course work applies social and philosophical foundations of education to current and historical issues in education with attention to roles and responsibilities of contemporary teachers.

**5100:420 Introduction to Instructional Computing (3 Credits)**

Prepares the student in the use of instructional technologies in educational and business settings. Segments of the course are offered in an online format.

**5100:430 Senior Honors Project: Foundations (1-6 Credits)**

(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.

**5100:480 Special Topics: Educational Foundations (1-4 Credits)**

(May be repeated with a change in topic) Prerequisite: Permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

**5100:490 Workshop: Educational Foundations & Leadership (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

**5100:491 Workshop: Educational Foundations & Leadership (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

**5100:492 Workshop: Educational Foundations & Leadership (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

**5100:494 Educational Institutes in Educational Foundations & Leadership (1-4 Credits)**

Special course designed as in-service upgrading programs.

**5100:497 Independent Study (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: Permission of department head and instructor. Specific area of study determined in accordance with program and professional goals.

## Educational Foundations and Leadership (5700)

**5700:480 Special Topics: Educational Administration (1-4 Credits)**

(May be repeated with a change in topic) Prerequisite: Permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

**5700:492 Workshop: Educational Foundations & Leadership (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

**5700:493 Workshop: Educational Foundations & Leadership (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

**5700:494 Educational Institutes: Education Foundations & Leadership (1-4 Credits)**

Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.

## Electrical and Electronic Engineering Technology (2860)

**2860:120 Circuit Fundamentals (4 Credits)**

Prerequisite: 2030:152 or permission. SI units, current, voltage, resistance, Ohm's Law, circuit analysis, network theorems, computer simulation, inductor, capacitor, RLC dc analysis, transients, laboratory support of circuit concepts, ac introduction.

**2860:121 Introduction to Electronics and Computers (2 Credits)**

Prerequisite: 2030:151. Introduces students to computer simulation, Boolean algebra, circuit manufacturing, laboratory practices, and to the electronics industry.

**2860:122 AC Circuits (3 Credits)**

Prerequisite: 2860:120. Corequisite: 2030:154. Sinusoidal voltage and current, reactance and impedance, methods of AC circuit analysis, AC power, transformers, AC meters and oscilloscopes, dependent and independent sources.

**2860:123 Electronic Devices (4 Credits)**

Prerequisite: 2860:120. Physical theory, characteristics and operational parameters of solid-state devices. Analysis and design of electronic circuits incorporating these devices, utilizing characteristic curves and linear modeling.

**2860:210 Industrial Control Panel Fabrication (2 Credits)**

Prerequisite: 2030:152. This course will introduce students to shop fabricating skills involved in the creation of electrical control panels using mechanical and electrical fabricating tools.

**2860:225 Applications of Electronic Devices (4 Credits)**

Prerequisites: 2860:122 and 2860:123. Frequency response, filter concepts, electronic amplifiers, power amplifiers, multistage amplifiers, differential amplifiers, operational amplifiers, voltage regulators, feedback and oscillators, special devices, computer simulation analysis.

**2860:237 Digital Circuits (4 Credits)**

Prerequisite: 2860:121. Devices used in logic circuits, interfacing, combinational logic, arithmetic circuits, encoders, multiplexers, programmable logic devices, flip-flops, counters, shift registers, computer modeling of digital circuits.

**2860:238 Microprocessor Applications (4 Credits)**

Prerequisite: 2860:237. Programmable logic devices, computer modeling of digital circuits, memory circuits. Computer architecture, programming the microprocessor, microprocessor hardware, microprocessor applications, parallel I/O and programmable timers.

**2860:242 Machinery & Controls (3 Credits)**

Prerequisites: [2860:120 and 2860:121] or 2860:370. Study of DC and AC motors and generators and their control. Fundamentals of power transformers. Three-phase distribution and motor control. Principles of industrial electronic devices.

**2860:251 Electronic Communications (4 Credits)**

Prerequisite: 2860:225. Resonance, coupling, filters, oscillators, mixers, power amplifiers, AM, FM, receivers.

**2860:260 Electronic Project (2 Credits)**

Prerequisites: Final semester or permission and 2940:210. Design, construction, and testing of an electronic circuit of choice. Progress reports, oral, and a formal written report required. Discussion of electronic design, fabrication, and troubleshooting techniques.

**2860:290 Special Topics: Electronic Engineering Technology (1-4 Credits)**

Prerequisite: Permission of instructor. Directed study in a special field of interest chosen by the student in consultation with the instructor (may be repeated for a total of six credits).

**2860:310 National Electrical Code and Electrical System Design (3 Credits)**

Prerequisite: 2860:122 or 2860:370. This course provides students with the skills necessary to apply the National Electrical Code (NFPA 70) to the design and installation of electrical systems and circuits.

**2860:350 Advanced Circuit Theory (3 Credits)**

Prerequisite: 2860:251. Corequisite: 2030:356. Nodal, mesh, Thevenin, and dependent sources in resistive circuits. Inductor and capacitor as time domain elements. First- and second-order circuit analysis. Phasor analysis. Operational amplifier analysis.

**2860:352 Microcontrollers (4 Credits)**

Prerequisite: 2860:238. Corequisite: 2860:350. Using a typical microcontroller, study its architecture, program it, use subroutines and interrupts, use it in various applications, utilize various on-board modules including analog-to-digital, and timers.

**2860:354 Advanced Circuits Applications (3 Credits)**

Prerequisites: 2030:356 and 2860:350. Introduction to calculus based circuit analysis. Emphasizing Laplace transforms in operational circuit analysis, transfer functions, impulse function, Bode diagrams, Fourier Series.

**2860:360 Virtual Instrumentation and Data Acquisition (3 Credits)**

Prerequisites: 2860:122 and 2860:370. An introduction to instrumentation, data acquisition (DAQ) and graphical programming used in manufacturing and laboratory environments.

**2860:370 Survey of Electronics I (3 Credits)**

Prerequisite: 3650:163. Fundamentals of DC and AC electrical circuits and rotating machinery. For non-Electronic Engineering Technology majors.

**2860:371 Survey of Electronics II (3 Credits)**

Prerequisite: 2860:370. Survey of the most commonly used solid state circuit components including typical applications. Introduction into digital circuits and microprocessor applications. For non-Electronic Technology majors.

**2860:400 Computer Simulations in Technology (3 Credits)**

Prerequisites: 2030:345 and 2860:354. Introduce the use of software widely used in industry to simulate and study electrical circuits and signals. Methods of data sampling, management and presentation will be studied.

**2860:406 Communication Systems (3 Credits)**

Prerequisites: 2860:251 and 2860:354. Digital communications, transmission lines, waveguides, microwave devices and antennas.

**2860:420 Biomedical Electronic Instrumentation (3 Credits)**

Prerequisite: 2860:354. Introduction to electrical signals from the body, transducers, recording devices, telemetry, microprocessor applications, and electrical safety of medical equipment.

**2860:451 Industrial Electrical Systems (3 Credits)**

Prerequisite: 2860:354. Electric power, industrial nameplates, power factor correction, mutual inductance, linear transformers, power transformers, polyphase systems, per-phase analysis, system grounding, protective device coordination computer-aided analysis.

**2860:453 Control Systems (4 Credits)**

Prerequisites: 2860:354 and 2870:301. Modeling and responses of closed-loop systems. Laplace transforms, root-locus analysis. Stability, compensation, digital control, optimal control. Digital computer in system simulation and design.

**2860:455 Senior Project (2 Credits)**

Capstone experience consisting of Electrical or Electronic Project emphasizing creative technical analysis or design and presentation.

**2860:490 Special Topics: Electronic Engineering Technology (1-4 Credits)**

Prerequisite: Permission of instructor. Directed study in a special field of interest chosen by the student in consultation with the instructor (may be repeated for a total of six credits).

**2860:497 Senior Honors Project: Electronic Technology (1-3 Credits)**

Prerequisites: Senior standing in Honors Program, permission of department preceptor, and major in electronic technology. Independent research leading to completion of Senior Honors Thesis or other original work. (May be repeated for a total of six credits)

# Electrical Engineering (4400)

## 4400:101 Tools for Electrical Engineering (3 Credits)

Corequisite: 3450:221 or 3450:149. Orientation to degree programs and design practice in electrical and computer engineering. Introduction to computer applications and resources for engineering studies.

## 4400:230 Circuits I Laboratory (1 Credit)

Corequisite: 4400:231. Computation, computer aided circuit analysis, circuit theorem confirmation, report writing to include data analysis and reduction, introduction to electrical measurements.

## 4400:231 Circuits I (3 Credits)

Corequisite: 4400:230, 3450:223, 3650:292. DC and AC linear circuit analysis. Operational amplifier circuits. Loop and nodal analyses. Network theorems. Phasor techniques, steady-state AC power, three-phase systems.

## 4400:301 Undergraduate Research I: Electrical Engineering (1 Credit)

Prerequisites: 4400:230, 4400:231, 4400:330, 4400:332, 4450:220, [4400:101 or 4450:101] with a combined average grade of 3.0 or higher, admission to an engineering major within the College of Engineering and Polymer Science, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report.

## 4400:302 Undergraduate Research II: Electrical Engineering (1 Credit)

Prerequisites: [4400:301 or 4450:301], admission to an engineering major within the College of Engineering and Polymer Science, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report.

## 4400:303 Undergraduate Research III: Electrical Engineering (1 Credit)

Prerequisites: [4400:302 or 4450:302], admission to an engineering major within the College of Engineering and Polymer Science, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report to the department, and presentation of work in a research venue outside the department.

## 4400:304 Undergraduate Research IV: Electrical Engineering (1 Credit)

(May be repeated. May not be applied to degree requirements.)

Prerequisite: 4400:303 or 4450:303, and permission. Research project, supervised by faculty member of the department; requires oral research presentation and written report.

## 4400:307 Basic Electrical Engineering (4 Credits)

Prerequisite: 3650:292; corequisite: 3450:335. Covers fundamental aspects of electrical circuits, electronics and electrical machinery. Not open to an electrical or computer engineering major.

## 4400:309 Design Project Seminar - Electrical Engineering (1 Credit)

Prerequisites: Junior standing and admission to an engineering major within the College of Engineering and Polymer Science. Pre/Corequisites: 4400:341, 4400:354, 4400:361, 4400:371, and 4400:381. Engineering capstone project selection and proposal, including preliminary technical specifications. Professional ethics. Intellectual property. Societal impact issues in engineering design.

## 4400:330 Circuits II Laboratory (1 Credit)

Corequisite: 4400:332. Computation, computer aided circuit analysis, circuit theorem confirmation, report writing to include data analysis and reduction, intermediate electrical measurements.

## 4400:332 Circuits II (3 Credits)

Prerequisite: 4400:231 with a grade of C- or better. Corequisites: 3450:335 and 4400:330. Coupled magnetic circuits. Transient and frequency domain analyses of linear circuits. Bode plots, Laplace transforms, transfer functions, resonance, passive and active filters.

## 4400:340 Signals & Systems (4 Credits)

Prerequisites: [3460:209 or 4450:208 or 4800:220], 3450:335 with a grade of C- or better, 4400:332 with a grade of C- or better, and admission to an engineering major within the College of Engineering and Polymer Science. Linear systems theory and transform analysis techniques for continuous and discrete systems. Convolutions, Laplace transforms, continuous and discrete Fourier transforms. Difference equations and Z transforms.

## 4400:341 Introduction to Communication Systems (3 Credits)

Prerequisites: 4400:340 and admission to an engineering major within the College of Engineering and Polymer Science. Introduces analog and digital communication systems and signal processing. Time-sampling and filtering. Modulation and demodulation techniques. Noise and bandwidth requirements. System design and performance analysis.

## 4400:353 Electromagnetics I (4 Credits)

Prerequisites: 4400:231 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 3450:335. Vector analysis. Electrostatics: electrostatic field, scalar potential, dielectrics, boundary-value problems. Magnetostatics: magnetic circuits. Maxwell's equations: Faraday's law, time-harmonic fields. Introduction to plane waves.

## 4400:354 Electromagnetics II (3 Credits)

Prerequisites: 4400:353 and admission to an engineering major within the College of Engineering and Polymer Science. Theory and application of transmission lines: transient and steady-state waves. Plane EM waves: propagation, reflection, and refraction. Waveguides open and closed-boundary guiding structures.

## 4400:360 Physical Electronics (3 Credits)

Prerequisites: 4400:332, 4450:220 and admission to an engineering major within the College of Engineering and Polymer Science. PN junction, diffusion, tunneling, FET and BJT device physics, equivalent circuits for electronic devices, time and frequency analysis, biasing and logic families.

## 4400:361 Electronic Design (4 Credits)

Prerequisites: 4400:340, 4400:360 and admission to an engineering major within the College of Engineering and Polymer Science. Power amplification, feedback, oscillators, linear integrated circuits, modulation and demodulation circuits.

## 4400:371 Control Systems I (4 Credits)

Prerequisites: 4400:340 and admission to an engineering major within the College of Engineering and Polymer Science. Introduction to servomechanisms and feedback. Modeling and response of feedback control systems. Stability of linear systems. Experiments include analog simulation and basic servomechanism.

## 4400:381 Energy Conversion (4 Credits)

Prerequisites: 4400:332 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4400:353. Nonelectrical to electrical energy conversions and vice versa: thermal, chemical, solar. Fundamentals of electromechanical energy conversion. Principles of operation of transformers, commutator machines, induction and synchronous machines.



**4400:401 Senior Design Project I - Electrical Engineering (3 Credits)**

Prerequisites: 4400:309, senior standing, admission to an engineering major within the College of Engineering and Polymer Science, and 4400:341, 4400:354, 4400:361, 4400:371, and 4400:381 with a combined average grade of 2.0 or higher. Design and preparation phase of an engineering team project. System specification, design, and simulations; ordering of components; subsystem implementations. Requires project presentations and report.

**Gen Ed:** Tier 3 - Critical Thinking

**4400:402 Senior Design Project II - Electrical Engineering (3 Credits)**

Prerequisite: 4400:401 and admission to an engineering major within the College of Engineering and Polymer Science. Implementation and evaluation phases of an engineering design project. Requires a project presentation and report.

**Gen Ed:** Tier 3 - Complex Systems

**4400:434 Active Circuits (3 Credits)**

Prerequisite: 4400:340. Applications of operational amplifiers including bilinear transfer functions, scaling, cascade design, biquad circuits, lowpass, high pass, bandpass-filters, Butterworth and Chebyshev response, sensitivity, delay filters, frequency transformations, ladder design, simulated element design, leapfrog simulation and switched-capacitors.

**4400:441 Digital Communication (3 Credits)**

Prerequisite: 4400:341 or 4450:440. Introduction to digital communications theory and systems. Sampling, formatting and baseband communications. Digital modulation techniques and optimal receivers. Error performance analysis. Error control.

**4400:445 Wireless Communications (3 Credits)**

Prerequisite: 4400:341 or 4450:440. Theory and analysis of wireless communication systems, wireless propagation, multiple access, modulation, demodulation, multipath channel characterization, diversity, cellular and PCS services and standards.

**4400:447 Random Signals (3 Credits)**

Prerequisite: 4400:340. Applications of set theory, discrete and continuous sample spaces; probability, random variables, distribution functions, density functions, stochastic processes, random signals, system function, power spectrum and correlation functions.

**4400:448 Optical Communication Networks (3 Credits)**

Prerequisites: 4400:360. Optical waveguides and integrated components. Optical transmitters and receivers. Optical communications network design.

**4400:451 Electromagnetic Compatibility (3 Credits)**

Prerequisite: 4400:360. Introduction to electromagnetics, electromagnetic compatibility, crosstalk and effects on computers, communication lines and systems.

**4400:453 Antenna Theory (3 Credits)**

Prerequisite: 4400:354. Theory of EM radiation. Wire antennas, arrays, receiving antennas, reciprocity. Integral equations for induced currents, self and mutual impedances. Equivalence principle, radiation from aperture antennas.

**4400:455 Microwaves (4 Credits)**

Prerequisite: 4400:354. Dynamic fields, Maxwell's equation and wave equations. Field analysis of wave guides, microwave components, techniques and systems.

**4400:461 Optical Electronics & Photonic Devices (3 Credits)**

Prerequisites: 4400:360. Lightwave engineering, photonic principles and optical electronic device technology.

**4400:469 Introduction to Sensors and Actuators (3 Credits)**

Prerequisite: senior standing or permission. Introduction to the theory and practice of sensors and actuators; sensing and actuation technologies; performance, and interfacing.

**4400:472 Control Systems II (4 Credits)**

Prerequisite: 4400:371. Sampled-data control system analysis and design. Discrete-time representation of sampled-data systems. Cascade, feedforward and state-variable compensation techniques. Digital computer implementation.

**4400:481 Modern Power Systems (3 Credits)**

Prerequisite: 4400:381. Introduction to electricity utility load flow, faulty analysis, stability, surge protection and relaying.

**4400:483 Power Electronics I (3 Credits)**

Prerequisite: 4400:360. Steady-state analysis and design of power electronic converters: AC/DC converters (rectifiers), DC/DC converters, DC/AC PWM and resonant converters, AC/AC converters and cycloconverters.

**4400:484 Power Electronics Laboratory & Design Project (2 Credits)**

Prerequisite: 4400:483, 4400:583 or equivalent. Experiments on different types of power electronic converters: AC/DC, DC/DC, DC/AC, and AC/AC. Design project to include design, simulation, building, and testing of a power electronic circuit.

**4400:485 Electric Motor Drives (3 Credits)**

Prerequisite: 4400:381. Application of electric machines, choice of motor for particular drive. Application of power semiconductor circuits in electric machinery.

**4400:486 Dynamics of Electric Machines (3 Credits)**

See department for course description.

**4400:487 Electromagnetic Design of Electric Machines (3 Credits)**

See department for course description.

**4400:488 Control of Machines (4 Credits)**

See department for course description.

**4400:489 Electric and Hybrid Vehicles (3 Credits)**

Prerequisite: 4400:381. Basic principles of electric and hybrid vehicles. Characteristics of electric machines, internal combustion engines, transmissions, batteries, fuel cells, ultracapacitors. Vehicle control strategies, communication networks, and overall system integration.

**4400:498 Special Topics: Electrical Engineering (1-3 Credits)**

(May be taken more than once) Prerequisite: Permission of department chair. Special topics in electrical engineering.

## Emergency Management and Homeland Security (2235)

**2235:100 Introduction to Digital Forensics (3 Credits)**

An overview of digital forensics and computer-related issues facing government and businesses. Specific focus on forensic examinations and methodologies used in the field.

**2235:105 Introduction to Disaster, Hazards & Risk (3 Credits)**

Provides a research based and practitioner overview of how people perceive and react to extreme events before, during, and after disasters.

**2235:201 Police Academy: Administration & Legal (3 Credits)**

Prerequisite: Acceptance into the Police Academy. Corequisites: 2235:202, 2235:203, 2235:204 and 2235:205. Overview of the administration and legal issues of becoming an Ohio Peace Officer.

**2235:202 Police Academy: Homeland Security (3 Credits)**

Prerequisite: Acceptance into the Police Academy. Corequisites: 2235:201, 2235:203, 2235:204 and 2235:205. Overview of human relations, civil disorders, investigation, and homeland security involved in becoming an Ohio Peace Officer.

**2235:203 Police Academy: Traffic (3 Credits)**

Prerequisite: Acceptance into the Police Academy. Corequisites: 2235:201, 2235:202, 2235:204 and 2235:205. Overview of motor vehicle offenses, traffic crash investigation, speed measuring and sobriety testing required to pass the Ohio Peace Officer Training program.

**2235:204 Police Academy: Practicals I (3 Credits)**

Prerequisite: Acceptance into the Police Academy. Corequisites: 2235:201, 2235:202, 2235:203 and 2235:205. Classroom and practical skills training in firearms, patrol, and driving to satisfy all state requirements for the Ohio Peace Officer Training Program.

**2235:205 Police Academy: Practicals II (3 Credits)**

Prerequisite: Acceptance into the Police Academy. Corequisites: 2235:201, 2235:202, 2235:203 and 2235:204. Classroom and skills in defense tactics, physical fitness and First Aid/CPR/AED & WMD Awareness to satisfy requirements to become an Ohio Peace Officer.

**2235:210 Occupational Safety & Risk (3 Credits)**

Introduction to the field of health and safety as related to business and industrial operations. Emphasis is placed on hazard/risk analysis and the regulatory environment.

**2235:220 Environmental Law & Regulations (3 Credits)**

Introduction to the legal system and to the laws and regulations dealing with water, air, land, noise and other sources of pollution.

**2235:221 Environmental Law & Regulations II (3 Credits)**

Prerequisite: 2235:220 and permission. Designed to provide students the opportunity to apply common regulatory reporting mechanisms in a practical manner utilizing a variety of software programs recognized in the environmental field.

**2235:230 Water & Atmospheric Pollution (3 Credits)**

Prerequisites: 2235:105 and 3100:104. Basic concepts of aquatic and atmospheric systems and the processes which pollute them. Emphasis on control and monitoring of cultural, industrial, and agricultural pollution sources. Laboratory.

**2235:232 Environmental Sampling Laboratory (2-3 Credits)**

Corequisite: 2235:230. Field experience with a wide range of environmental sampling techniques and equipment.

**2235:280 Cybercrime (3 Credits)**

Examines crime and deviance in cyberspace. Particular focus is on the prevention of computer intrusion in the workplace.

**2235:281 Computer Forensic Methods (3 Credits)**

Prerequisite: 2235:100. Examination of computer forensic methods employed to identify, collect, recover, authenticate, preserve, analyze, and document electronic evidence for criminal or civil legal purposes.

**2235:282 Digital Forensic Imaging (3 Credits)**

This course cover the general principles of photography and practical elements and advanced concepts of forensic photography.

**2235:283 Cyber Warfare (3 Credits)**

Prerequisite: 2235:100 or 3800:100. Examines the participants, tools and techniques in digital conflicts and explores how to defend against espionage, hactivism, non-state actors and terrorists.

**2235:284 Windows Forensics (3 Credits)**

Prerequisite: 2235:281. An examination of the tools, methodology, and advanced digital forensic analysis of the Windows Registry and the Microsoft Windows operating systems.

**2235:285 Disasters in Film and Media (3 Credits)**

Examines how contemporary culture perpetuates myths of natural and technological disasters. Students deconstruct and analyze reality from the myths in various types of media.

**2235:305 Principals of Emergency Management and Homeland Security (3 Credits)**

An overview of emergency management and homeland security history, theory, terms, concepts, organization, and roles. Emphasizes natural and technological hazards, and risk assessment processes.

**2235:340 Disaster Research Methods (3 Credits)**

Introduction to scientific method and processes, research ethics, and qualitative and quantitative methods. Use of research for appropriate decision making.

**2235:350 Disaster Preparedness & Response (3 Credits)**

Prerequisite: 2235:305. Legal requirement, planning formats, and response procedures are presented. Special focus community risk assessment: hazard analysis, vulnerability assessment, and community response capability assessment.

**2235:360 Introduction to Terrorism (3 Credits)**

Corequisite: 2235:305. Examines terrorism from historical, international, transnational, and domestic perspectives. Includes political and religious terrorism along with emergency management considerations.

**2235:365 Disaster Mitigation (3 Credits)**

Prerequisite: 2235:305. Examines disaster prevention and risk reduction. Focuses on such concepts as sustainability, resiliency, non-structural and structural mitigation and various sectors' responsibilities.

**2235:367 Disaster Recovery (3 Credits)**

Prerequisite: 2235:305. Provides foundations for disaster relief and recovery planning, stages of recovery, resources used, and formation of public/private partnerships for recovery action and resource allocation.

**2235:368 Professionalism in Emergency Management and Homeland Security (3 Credits)**

Prepares students for career entry into Emergency Management and Homeland Security areas. Professionalism, resume building, interview techniques, and resource sites will be examined.

**2235:370 Hazard Science and Management (3 Credits)**

Overview of hazards theory, the science of hazard development, and various hazard types. Emphasis on emergency management and homeland security perspectives in regard to various hazard management related topics.

**2235:381 Computer Forensic Methods II (3 Credits)**

Prerequisite: 2220:281. Obtaining and analyzing digital information from computer storage media to determine details of origin and content.

**2235:382 File System Analysis (3 Credits)**

Prerequisite: 2235:281. The analysis of volumes, partitions, and data files to understand the design of file systems and data structures.

**2235:383 Ethical Hacking (3 Credits)**

Prerequisite: 2235:283. An examination of the tools, methods, and structured approaches to conducting basic security testing to protect computer networks from attacks.

**2235:384 Intelligence: Cyber and Homeland Security (3 Credits)**

This course introduces students to the role and operation of the intelligence community within the homeland security framework: History, mission, structure, capabilities, and methods.

**2235:401 Crisis Leadership (3 Credits)**

This course presents leadership research from an interdisciplinary perspective. Content is drawn the fields of business, training, simulation, organizational theory, government, and others. This course covers early leadership theory, horizontal theories, crisis training models and approaches, and crisis cognitive processing strategies. Students will examine the overall system of building better crisis leaders.

**2235:406 Disaster Management Technology (3 Credits)**

Prerequisite: 2235:305. Provides an overview of the various types of technology utilized in disasters, emergency management and homeland security. Topics include communications, watches, warnings, and operational challenges.

**2235:407 Hazardous Weather Observations (3 Credits)**

Overview of meteorological variables and weather data useful to EM including meteorological instruments, forecasts, model, radar and satellite imagery, thunderstorms, tornadoes, winter storms and hurricanes.

**2235:420 Disaster Vulnerability (3 Credits)**

Prerequisite: 2235:305. Analysis of citizen actions regarding major disasters including perspectives of individuals and emergency managers using case studies, theories, and social problems.

**2235:425 Private Sector Disaster Applications (3 Credits)**

Prerequisite: 2235:305. Examines emergency management and homeland security business components in the private and public sectors. Emphasizes business continuity plans along with case studies in hazards and disasters.

**2235:430 Contemporary Issues in Emergency Management and Homeland Security (3 Credits)**

Discussion of relevant issues impacting the field of emergency management and homeland security by analyzing various case studies.

**2235:435 Cyber Issues in Emergency Management and Homeland Security (3 Credits)**

Prerequisite: 2235:305. Discussion and analysis of cyber issues impacting the public, private, and nonprofit sectors of emergency management and homeland security.

**2235:440 Intrusion Detection (3 Credits)**

Prerequisites: 2440:340 and 2440:388, both with a grade of C or better, and junior or greater standing. This course will introduce students to the various methods used to detect external and internal intrusion of computer systems.

**2235:441 Network Forensics I (3 Credits)**

Prerequisites: 2220:281 with a grade of C or better and junior or greater standing. This course will provide the student with basic knowledge of surveillance of networking devices, identifying and preventing attacks and incident response.

**2235:442 Wireless Forensics (3 Credits)**

Prerequisite: 2235:441 with a grade of C or better and junior or greater standing. The forensic identification and tracking of attacks on wireless networks and mobile communications devices.

**2235:443 Network Forensics II (3 Credits)**

Prerequisite: 2235:441 with a grade of C or better or junior or greater standing. Deployment, building and running an NSM operation using open source software and vendor neutral tools with the Linx Operating System.

**2235:480 Emergency Management & Homeland Security Capstone (3 Credits)**

Prerequisite or Corequisite: 2235:495. Ties together relevant concepts in emergency management and homeland security to help prepare graduates for professional careers integrating theory and applications.

**2235:490 Current Topics in Emergency Management (1-4 Credits)**

Prerequisites: 2235:305 and 2235:350. A variety of course topics on current subjects related to emergency management and disaster preparedness. May be repeated for up to 12 credits.

**2235:495 Emergency Management & Homeland Security Internship (3 Credits)**

Prerequisite: 30 hours in program and permission from program director. Supervised work experience in emergency management and/or homeland security to increase student understanding by applying program education to an applied work experience.

**2235:497 Independent Study in Emergency Management (1-4 Credits)**

Prerequisites: 2235:305 and 2235:350. Selected topics, special areas of study in emergency management, disaster preparedness under the supervision of a faculty member with whom specific arrangements have been made.

## Emergency Medical Services (2240)

**2240:100 Introduction to EMT Training (3 Credits)**

Corequisites: 2240:101 and 2240:102. Overview of the EMS System, safety/well being of an EMT, medical/legal and ethical issues in providing emergency care.

**2240:101 EMT-B Fundamentals (2 Credits)**

Corequisite: 2240:100. Develop skills required of EMT-Basic for Assessment, air way management, patient evaluation for shock, trauma/ special needs patient, learn appropriate interventions for all situations.

**2240:102 EMT-B Fundamentals II (2 Credits)**

Corequisites: 2240:100 and 2240:101. Provide students with the tools to start the EMT-Basic course and will prepare students to achieve national certification as an EMT-Basic.

**2240:201 Fundamentals of EMT-Paramedic I (3 Credits)**

Corequisites: 2240:202, 2240:203, 2240:204, and 2240:205. Introduction to emergency medical care-paramedic, the well-being of the EMT-paramedic, and illness and injury prevention.

**2240:202 Fundamentals of EMT-Paramedic II (3 Credits)**

Corequisites: 2240:201, 2240:203, 2240:204, and 2240:205. Instruction in medical/legal issues, ethics, and the paramedic, and general principles of anatomy and physiology.

**2240:203 Fundamentals of EMT-Paramedic III (3 Credits)**

Corequisites: 2240:201, 2240:202, 2240:204, and 2240:205. Instruction in medical math, pharmacology, venous access, and medication administration.

**2240:204 Fundamentals of EMT-Paramedic IV (3 Credits)**

Corequisites: 2240:201, 2240:202, 2240:203, and 2240:205. Instruction includes therapeutic communications, life span development, and airway management/ventilation.

**2240:205 Fundamentals of EMT-Paramedic V (3 Credits)**

Corequisites: 2240:201, 2240:202, 2240:203, and 2240:204. Skill Session Practices, competency Testing from skills learned throughout the semester.

**2240:206 Fundamentals of EMT-Paramedic VI (3 Credits)**

Prerequisites: 2240:201, 2240:202, 2240:203, 2240:204, and 2240:205.  
Corequisites: 2240:207, 2240:208, 2240:209, and 2240:211. Instruction is respiratory emergencies and cardiovascular emergencies.

**2240:207 Fundamentals of EMT-Paramedic VII (3 Credits)**

Prerequisites: 2240:201, 2240:202, 2240:203, 2240:204, and 2240:205.  
Corequisites: 2240:206, 2240:208, 2240:209, and 2240:211. Instruction in cardiovascular emergencies, diabetic emergencies, and allergic reactions.

**2240:208 Fundamentals of EMT-Paramedic VIII (3 Credits)**

Prerequisites: 2240:201, 2240:202, 2240:203, 2240:204, and 2240:205.  
Corequisites: 2240:206, 2240:207, 2240:209, and 2240:211. Instruction in paramedic skills, practical trauma, and medical skills practical.

**2240:209 Fundamentals of EMT-Paramedic IX (3 Credits)**

Prerequisites: 2240:201, 2240:202, 2240:203, 2240:204, and 2240:205.  
Corequisites: 2240:206, 2240:207, 2240:208, and 2240:211. Medical skills practical and skills testing.

**2240:211 Fundamentals of EMT-Paramedic X (3 Credits)**

Prerequisites: 2240:201, 2240:202, 2240:203, 2240:204, and 2240:205.  
Corequisites: 2240:206, 2240:207, 2240:208, and 2240:209. Practical skills testing, client orientation, and written skills testing.

## English (3300)

**3300:110 English Composition I + Workshop (4 Credits)**

Prerequisite: Placement. Extensive and varied experience in developing writing skills, with practice in expressive, reflective, and analytic forms of writing. Includes one credit, support-intensive workshop.

**Gen Ed:** Tier 1 - Writing First Course

**3300:111 English Composition I (3 Credits)**

Extensive and varied experience in developing writing skills, with practice in expressive, reflective, and analytic forms of writing.

**Gen Ed:** Tier 1 - Writing First Course

**3300:112 English Composition II (3 Credits)**

Prerequisite: 3300:110 or 3300:111 or 3300:113 or 2020:121. Designed to develop skills in analyzing and writing persuasive arguments.

**Gen Ed:** Tier 1 - Writing Second Course

**3300:113 African American Language and Culture I: College Composition (3 Credits)**

Discussion, argumentation, and writing related to African American culture and language. An option to 3300:111 English Composition I. Open to all students.

**3300:114 African American Language and Culture II: College Composition (3 Credits)**

Prerequisites: 3300:110 or 3300:111 or 3300:113 or 2020:121.  
Composition and discussion topics focus on the structure, history, and culture of African American English. An option to 3300:112 English Composition II. Open to all students.

**3300:250 Classic & Contemporary Literature (3 Credits)**

Prerequisites: 3300:111 and 3300:112 or their equivalents, and 3400:210 or 3300:221, or permission of the instructor. Close reading and analysis of fiction, poetry, and drama from the evolving canon of American, British, and World literature. This course fulfills the General Education Humanities Requirement. It cannot be used to meet requirements in English.

**3300:252 Shakespeare & His World (3 Credits)**

Prerequisite: 3300:112 or equivalent. An introduction to the works of Shakespeare and their intellectual and social contexts. Each section "places" Shakespeare through compact readings of works by the playwright's contemporaries. This course fulfills the General Education Humanities Requirement. It cannot be used to meet requirements in English.

**Gen Ed:** Tier 2 - Humanities

**3300:275 Specialized Writing (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. (May be repeated for different topics, with permission) Principles and practice of style, structure and purpose in writing, with special applications to writing demands of a specific career area.

**3300:276 Introduction to Creative Nonfiction Writing (3 Credits)**

Prerequisites: 3300:111 and 3300:112. This course introduces the techniques of Creative Nonfiction through writing exercises that give experience with the form.

**3300:277 Introduction to Poetry Writing (3 Credits)**

Prerequisite: 3300:111 and 3300:112. Practice in writing poems. Study of techniques in poetry, using contemporary poems as models. Class discussion of student work. Individual conferences with instructor to direct student's reading and writing.

**3300:278 Introduction to Fiction Writing (3 Credits)**

Prerequisite: 3300:111 and 3300:112. Practice in writing short stories. Study of various techniques in fiction, using contemporary stories as models. Class discussion of student work. Individual conferences with instructor to direct student's reading and writing.

**3300:279 Introduction to Script Writing (3 Credits)**

Prerequisite: 3300:111 and 3300:112. Practice in writing scripts. Study of various techniques in script writing, using contemporary models for study. Class discussion of student work. Individual conferences with instructor to direct student's reading and writing.

**3300:280 Poetry Appreciation (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Close reading of a wide selection of British and American poems with emphasis on dramatic situation, description, tone, analogical language, theme and meaning.

**3300:281 Fiction Appreciation (3 Credits)**

Prerequisites: Completion of 3300:111 and 3300:112 or their equivalents. Close reading of modern masters of short story and novel. Fulfills the General Education Humanities Requirement. It cannot be used to meet requirements in English.

**Gen Ed:** Tier 2 - Humanities

**3300:283 Film Appreciation (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course. Introduction to dramatic choices made by filmmakers in scripting, directing, editing and photographing narrative films; and qualities of reliable film reviews.

**Gen Ed:** Tier 2 - Arts

**3300:300 Critical Reading & Writing (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. An introduction to English studies, focusing on critical methods for reading and writing about literature, with attention to research skills and uses of computer technology.

**Gen Ed:** Tier 3 - Critical Thinking

**3300:301 English Literature I (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Studies in English literature from Old English to 1800, with emphasis upon specific representative works and upon the cultural and intellectual background which produced them. Literature to be read will include both major and minor poetry, prose and drama.

**3300:315 Shakespeare: The Early Plays (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Introduction to early drama of Shakespeare with close reading of tragedies, histories and comedies. Includes explanatory lectures of both the plays and their backgrounds.

**3300:316 Shakespeare: The Mature Plays (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Study of Shakespeare's plays after 1598, beginning with mature comedies. Concentration on major tragedies and romances.

**3300:341 American Literature I (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor. Historical survey of major and minor American writers to 1865.

**3300:350 Black American Literature (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level course, or permission of the instructor. Survey of representative black American writers from the 19th Century to present, with particular attention to historical and social backgrounds.

**Gen Ed:** Tier 3 - Domestic Diversity

**3300:360 Old Testament As Literature (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300-, or 3300:400-] level course. History of Hebrews to 586 B.C., as revealed through epic, fiction, saga and poetry, viewed against background of the Asian World.

**3300:361 The New Testament and Apocrypha as Literature (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300-, or 3300:400-] level course. These two bodies of literature read with emphasis on form of gospel and epistle, and concept of apocalypse. Both are viewed against their historical and social backgrounds.

**3300:362 World Literatures (3 Credits)**

The course is a study of short fiction, poems, plays, and novels of the non-Western world from early antiquity to the present.

**Gen Ed:** Tier 3 - Global Diversity

**3300:364 Women Writers (3 Credits)**

Prerequisite: 3300:112 or equivalent, or permission of instructor. A study of the diverse voices of female experiences through literature written by women.

**3300:366 European Background of English Literature (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300-, or 3300:400-] level course. Representative continental texts from Homer to Cervantes, selected both for their excellence and for their important influence on English and American literature.

**3300:367 The Rhetoric of God (3 Credits)**

Addresses the nature of language and the purpose of rhetoric as applied to the possibility/impossibility of transcendence. Fulfills General Education Global Diversity requirement.

**Gen Ed:** Tier 3 - Global Diversity

**3300:371 Introduction to Linguistics (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level English course or permission. Scientific introduction to the study of written and spoken linguistic behavior in English. History of English, varieties of English, and acquisition of English also introduced.

**3300:376 Legal Writing (3 Credits)**

Prerequisite: Completion of 3300:112 or any [3300:200-, or 3300:300-, or 3300:400-] level course. Intensive practice in writing for prelaw students through assignments based on actual legal situations and real cases. Particular attention to stating legal issues, writing persuasively, applying rules of law, and other topics that will help those preparing for law school and the profession.

**3300:377 Advanced Poetry Writing (3 Credits)**

Prerequisites: 3300:277, 3300:111 and 3300:112. Advanced practice in writing poems, emphasis on shaping publishable works. Survey of market. Class discussion of student poems; individual conference with instructor.

**3300:378 Advanced Fiction Writing (3 Credits)**

Prerequisites: 3300:278, 3300:111 and 3300:112. Advanced practice in writing short stories, emphasis on shaping publishable works. Survey of market. Class discussion of student stories; individual conference with instructor.

**3300:379 Advanced Script Writing (3 Credits)**

Prerequisites: 3300:112 and 3300:279. This course focuses on writing for the screen and developing the visual imagination.

**3300:380 Film Criticism (3 Credits)**

Prerequisite: 3300:112 or any 200-, 300- or 400-level English course. Application of literary critical theory to the study of film.

**3300:381 Advanced Creative Nonfiction Writing (3 Credits)**

Prerequisite: 3300:276. This course advances student practice in the craft of Creative Nonfiction through writing exercises and workshop sessions.

**3300:389 Special Topics: Literature & Language (3 Credits)**

Prerequisite: Completion of 3300:112 or any [3300:200-, or 3300:300- or, 3300:400-] level course. (May be repeated for credit as different topics are offered). Traditional and nontraditional topics in English literature and language, supplementing course listed in this General Bulletin, generally constructed around theme, genre and language study.

**3300:390 Professional Writing I (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [330:200-, or 3300:300-, or 3300:400-] level English course, or permission of the instructor. Designed to help prepare student for a career as professional business writer. Stresses theory and practice of written and oral communication in business organization. Individual and group performance, relating to communication theories, concepts of semantics. Functional writing as well as special needs of business are illustrated by actual cases. Adapting style and organization is practiced.

**3300:391 Professional Writing II (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [330:200-, or 3300:300-, or 3300:400-] level English course, or permission of the instructor. Designed to help prepare student for a career as professional technical writer. Covers principles and practices concerning editing company technical communications, such as specifications, annual reports, promotional brochures for technical products, services, scientific abstracts, proposals. Also treats problems of adapting materials to formats, graphic display of technical information, adaptation of technical material to nontechnical reader.

**3300:392 Internship in English (1-3 Credits)**

Prerequisite: Minimum GPA of 2.5, permission of the instructor. (May be repeated for a maximum of six credits.) Critical reading and writing focused on career applications of the discipline of English. May count up to three credit hours toward the English major.

**3300:399 The Gothic Imagination (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course. A loosely chronological study of major British, American, and European authors in the Gothic tradition. Focus on the literary conventions of Gothic fiction, to the "popular" nature of the literature and to its major themes/motifs.

**3300:400 Anglo Saxon (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level English course, and a minimum of Junior standing or higher, or permission of the instructor. Studies in Old English language and Old English prose and poetry, including Beowulf.

**3300:403 Development of the Arthurian Legend (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Traces evolution of Arthurian materials from 540 to 1500 and beyond, with emphasis on characters, themes, events and treatments.

**3300:406 Chaucer (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Close study of Chaucer's major works *The Canterbury Tales* and *Troilus and Criseyde* in Middle English.

**3300:407 Middle English Literature (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112, 64 credits or permission. Study of genres, topics, styles and writers of the Middle English literary works from 12th to 15th Centuries. Readings in Middle English.

**3300:424 Early English Fiction (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112, 64 credits or permission. Development of English novel before 1830. Focus on works of Defoe, Richardson, Fielding, Smollett, Sterne, Austen and Scott.

**3300:425 Studies in Romanticism (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Literary, philosophical, psychological and social revolutions of romantic period as reflected in works of such major writers as Wordsworth, Byron and Keats.

**3300:430 Victorian Poetry & Prose (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Poetry, prose of the late 19th Century, excluding fiction, with attention to Tennyson, Browning, Arnold, Carlyle, Ruskin and other major writers.

**3300:431 Victorian Fiction (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Reading of at least five major novels of Victorian era, of varying length, by Emily Bronte, Dickens, Eliot, Thackeray and Hardy. Characterization, theme and attitude toward life emphasized.

**3300:435 20th Century British Poetry (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. Concentrated study of major poems of Yeats, Eliot and Auden, with attention also to Hardy, Housman, Spender, C. Day Lewis, Dylan Thomas and others.

**3300:436 British Fiction: 1900-1925 (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. Study of Conrad, Joyce, D. H. Lawrence and Virginia Woolf, with attention to their innovations in narrative and style, their psychological realism and symbolism. Brief consideration of other important fiction writers of the period, including Wells, Bennett and Mansfield.

**3300:437 British Fiction Since 1925 (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. Study of important British novelists since 1925, excluding Lawrence, Joyce and Woolf. Attention to development of British short story from 1925 to present.

**3300:440 Women and Film (3 Credits)**

Prerequisites: [3300:111 and 3300:112] or any 200-, 300- or 400-level English course. Junior standing. This course explores representations of the feminine and treatments of gender issues in mainstream Hollywood films within a critical framework of feminist film theory.

**3300:448 American Romantic Fiction (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Examination of early American fiction, tracing its genesis, romantic period and germinal movements toward realism. Writers discussed include Cooper, Poe, Hawthorne and Melville.

**3300:449 American Fiction: Realism & Naturalism (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Examination of American writers of realistic and naturalistic fiction (e.g., Howells, James, Crane, Dreiser), tracing developments in American fiction against background of cultural and historical change.

**3300:450 Modern American Fiction (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. Study of significant American short and long fiction from World War I to the present.

**3300:451 American Poetry to 1900 (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Survey of American poetry of the 17th, 18th and 19th Centuries.

**3300:452 Modern American Poetry (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. Survey of 20th Century American poetry beginning with Edwin Arlington Robinson and ending with contemporary poets.

**3300:453 American Women Poets (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. Study of modern poets' uses and revisions of tradition, women's relationships, conceptions of art and of the artist-as-woman, and the debate between "public" and "private" poetry.

**3300:454 20th Century American Drama (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. Examination of major, established playwrights (including O'Neill, Miller and Williams) and sampling of new and rising ones.

**3300:455 The American Short Story (3 Credits)**

Prerequisite: 3300:112 or equivalent, or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. A study of the development of the short story as a particularly American genre, from Washington Irving to the present.

**3300:456 Thoreau, Emerson, and Their Circle (3 Credits)**

Prerequisite: A minimum of Junior academic standing or higher, or permission. A study of work and life of Henry David Thoreau, Ralph Waldo Emerson, and other key figures of the American Renaissance.

**3300:457 Writers on Writing (3 Credits)**

Prerequisite: 3300:111 and 3300:112 and Junior standing. A close look at what established writers have to say about the process of writing. Students write response essays and take exams on readings.

**3300:460 Film and Literature (3 Credits)**

Prerequisites: 3300:111 and 3300:112 or their equivalents, 64 credits or permission of instructor. Analysis of literary texts and their film adaptations. Emphasis on genre, structure, and visual elements as counterparts to written texts.

**3300:466 Linguistics and Language Arts (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level course, and a minimum of Junior standing or higher, or permission of the instructor. Foundation course in linguistics with pedagogical implications for second language learners. Fundamental topics (morphology, syntax, semantics, phonetics, pragmatics) and related topics (sociolinguistics, contrastive analysis) covered.

**3300:467 Modern European Fiction (3 Credits)**

Prerequisite: Completion of [3300:112 or equivalent], or any [200- or 300- or 400-level] English course, minimum Junior standing, or permission. Representative European writers from about 1850 to present, in translation. Focus on fiction of such writers as Dostoyevsky, Gide, Camus, Mann, Kafka and Kundera.

**3300:468 International Poetry (3 Credits)**

Prerequisite: 3300:112 or equivalent, 64 credits or permission of instructor. Junior standing. This survey of world poetry focuses on the stylistic concerns and social consequences of literature from Latin America, Africa, Asia, Europe, and beyond.

**3300:469 Eros & Love in Early Western Literature (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. An analysis of the use of sex and love in the literature of the Western World from Greco-Roman times to 1800, with special emphasis on how sexuality and "romantic" love are used as allegorical, satiric, fantastic or realistic devices.

**3300:470 History of English Language (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level English course, and a minimum of Junior standing or higher, or permission of the instructor. Development of English language, from its beginnings: sources of its vocabulary, its sounds, its rules; semantic change; political and social influences on changes; dialect origins; correctness.

**3300:471 U.S. Dialects: Black & White (3 Credits)**

Prerequisite: Completion of 3300:112 or any [3300:200-, or 3300:300- or, 3300:400-] level course or equivalent, and a minimum of Junior standing or higher, or permission of the instructor. Study of differences in pronunciation, vocabulary and grammar among U.S. language varieties. Origins, regional and social dimensions are explored. Correctness, focusing on black English and Appalachian speech, explored.

**3300:472 Syntax (3 Credits)**

Prerequisite: [3300:371 and 3300:112] or any [3300:200-, or 3300:300-, or 3300:400-] level English course or their equivalents, minimum of Junior standing or higher, or permission of the instructor. Principles of syntactic description. Sentence structures are investigated from a variety of languages, with emphasis on English.

**3300:473 Theoretical Foundations and Principles of ESL (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level course and a minimum of Junior standing or higher, or permission. Second language acquisition theories and teaching methodologies surveyed. Second language teaching principles from research in linguistics, psycholinguistics, and second language pedagogy explored.

**3300:474 African American English (3 Credits)**

Prerequisite: 64 credits or permission. Junior standing. African American English grammatical structure, pronunciations, origins, and cultural role. Comparisons with academic English. Discussion of language correctness, legal status, and role in education.

**3300:475 Theory of Rhetoric (3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. Ancient and modern theories of rhetoric, with attention to classical oration, "topics" of rhetoric and their application to teaching of English.

**3300:477 Sociolinguistics (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level course, or permission of the instructor. Major sociolinguistic concepts and methodology examined, as well as relationships between language, socio-cultural factors, and education. Issues of Standard English, power, and gender also examined.

**3300:478 Grammatical Structures of Modern English (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level course, and a minimum of Junior standing or higher, or permission of the instructor. Contemporary understanding of Modern English sentence structure: parts of speech, sentence types, phrase types, modification, coordination and subordination, parentheticals. Traditional grammar and sentence rhetoric discussed.

**3300:479 Management Reports (3 Credits)**

Prerequisites: Completion of 3300:112 or any [3300:200-, or 3300:300- or, 3300:400-] level course or equivalent, and a minimum of Junior standing or higher, or permission. Study of principles and writing practice in effective business style, specialized structure, and purpose for business reports.

**3300:482 Senior Honors Project in English (1-3 Credits)**

(May be repeated for a total of six credits). Prerequisites: Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor, senior standing in Honors College and approval of honors preceptor; open only to English majors enrolled in Honors College. Independent study leading to completion of senior honors thesis or other original work.

**3300:484 Fantasy (3 Credits)**

Prerequisite: [3300:111 and 3300:112] or any or any 200-, 300- or 400-level English course, 64 credits or permission. Junior standing. A study of forms of literature, primarily fiction, based on and controlled by an overt violation of what is generally considered as possibility.

**3300:485 Science Fiction (3 Credits)**

Prerequisite: 64 credits or permission. Junior standing. A study of twentieth-century British and American science fiction, featuring primary forms of the science fiction story and the work of major authors.

**3300:486 Learner English (3 Credits)**

Prerequisite: Completion of 3300:112 or equivalent, or any [3300:200-, or 3300:300- or, 3300:400-] level course, or permission of the instructor. Introduction to tools for and practice in analyzing second language learners' production of English. Theory and practice of teaching oral and written English also covered.

**3300:487 Field Experience: Teaching Second Language Learners (3 Credits)**

Prerequisite: Permission of instructor. Practical experience in which second language teachers-in-training observe, participate in, and practice teaching under the supervision of the instructor and/or an experienced, certified teacher.

**3300:489 Seminar in English (2-3 Credits)**

Prerequisite: 3300:112 or any [3300:200-, or 3300:300- or, 3300:400-] level course or equivalent, and a minimum of Junior standing or higher, or permission. (May be repeated with different topics.) Special studies, and methods of literary research, in selected areas of English and American literature and language.

**3300:490 Workshop in English (1-3 Credits)**

Prerequisite: Completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission of the instructor. (May be repeated with different topics) Group studies of special topics in English. Cannot be used to meet undergraduate or graduate major requirements in English; for elective credit only.

**3300:492 Senior Seminar (3 Credits)**

Discussion of select literary topic and reflection on student development in the major. Requires independent research and reflection papers. Limited to senior English majors.

**3300:498 Independent Study in English (1-3 Credits)**

Prerequisite: completion of 3300:111 and 3300:112 or their equivalents, 64 credits or permission. Directed study in a special field of interest chosen by student in consultation with instructor.

## English - Associate Studies (2020)

**2020:120 Writing and Editing (1 Credit)**

Examination of the editing process of writing. Focuses on developing a clear, effective, and correct professional writing style appropriate for academic and business documents.

**2020:121 English (3 Credits)**

English composition focused on inventive writing, essay structure, process, consideration of strength, source of evidence, and citation; and development options leading to persuasion and argument.

**Gen Ed:** Tier 1 - Writing First Course

**2020:123 Writing for Presentations (1 Credit)**

A writing intensive course that focuses on the rhetorical and theoretical challenges and considerations of effective presentations.

**2020:216 Collaborative Writing (1 Credit)**

Prerequisite: 3300:111 or 2020:121 or equivalent. A writing course that focuses on strategies and techniques for successful collaborative writing in the workplace.

**2020:220 Writing and Research (1 Credit)**

Prerequisite: 2020:121 or 3300:111 or equivalent. Practical examination of writing effectively and professionally about primary and secondary research sources in the student's choice of several citation methods.

**2020:222 Technical Report Writing (3 Credits)**

Prerequisite: 2020:121 or 3300:110 or 3300:111 or equivalent. Prepares students to write the types of reports most often required of technicians, engineers, and scientists. Includes types of reports, memoranda, and letters; techniques of research, documentation and oral presentations.

**Gen Ed:** Tier 1 - Writing Second Course

**2020:224 Writing for Advertising (3 Credits)**

Prerequisite: 2020:121 or 3300:111 or equivalent. Introduction to the copywriter's role in print, broadcast, and Web advertising. Study of advertising language; practice in writing advertisements and producing collateral copywriting materials.

**2020:226 Electronic Reference Resources in the Computer Age (3 Credits)**

Prerequisite: 2020:121 or 3300:111. Designed for individuals to broaden their scope and understanding of various electronic research techniques. Study, evaluation, and use of current and emerging technologies will be examined.

**2020:227 Writing for the World Wide Web (3 Credits)**

Prerequisite: 2020:121 or 3300:111 or equivalent, and familiarity with Internet (or attend Computer Center training seminar) knowledge of word processing software. Introductory course examines spoken and written contexts merging into one "writing space"; provides writing theory and practice for effective e-mail, newsgroup, chat, and web site writing.

**2020:290 Special Topics: Associate Studies (1-4 Credits)**

(May be repeated with a change in topic) Prerequisite: permission. Selected topics on subject areas of interest in associate studies.

**2020:325 Signs of Professional Writing (1 Credit)**

Prerequisite: 2020:121 or 3300:111 or equivalent. Practical examination of concrete and abstract indicators that lead readers to judge the professional quality of a written text beyond its meaning and correctness.

## English Language Institute (3030)

**3030:31 ELI Written Expression (0 Credits)**

Prerequisite: Permission of instructor. Intensive course in English as a second language writing skills, designed to help students develop effective strategies for expressing ideas clearly and correctly in writing. May be repeated an unlimited number of times as course is noncredit.

**3030:32 ELI Reading Comprehension (0 Credits)**

Prerequisite: Permission of instructor. Intensive course in English as a second language reading skills, designed to help students develop efficient reading strategies and build vocabulary. May be repeated an unlimited number of times as course is noncredit.

**3030:33 ELI Grammar and Oral Communication (0 Credits)**

Prerequisite: Permission of instructor. Intensive course in English as a second language grammar with an emphasis on oral skills, designed to help students speak fluently and correctly. May be repeated an unlimited number of times as course is noncredit.

**3030:34 ELI Listening Comprehension (0 Credits)**

Prerequisite: Permission of instructor. Intensive course in English as a second language listening skills, designed to help students develop strategies to understand spoken English and take academic lecture notes. May be repeated an unlimited number of times as course is noncredit.

**3030:41 ESL Writing: Developing Writing Proficiency (0 Credits)**

Prerequisite: Permission of instructor. Provides intensive instruction in English as a second language writing. Students develop effective composing strategies while learning to write for a variety of academic purposes. May be repeated an unlimited number of times as course is noncredit.



**3030:42 ESL Reading: Developing Reading Proficiency (0 Credits)**

Prerequisite: Permission of instructor. Provides intensive instruction in English as a second language reading. Students acquire effective reading and vocabulary development strategies for a range of academic purposes. May be repeated an unlimited number of times as course is noncredit.

**3030:43 ESL Grammar: Developing Oral Proficiency (0 Credits)**

Prerequisite: Permission of instructor. Provides intensive instruction in English as a second language grammar for speaking purposes. Students review grammar basics and expand their knowledge and usage of patterns. May be repeated an unlimited number of times as course is noncredit.

**3030:44 ESL Listening: Developing Aural Proficiency (0 Credits)**

Prerequisite: Permission of instructor. Provides intensive instruction in English as a second language listening for academic purposes. Students acquire effective listening strategies for a range of contexts. May be repeated an unlimited number of times as course is noncredit.

**3030:45 ESL Speaking: Developing Speaking Proficiency (0 Credits)**

Prerequisite: Permission of instructor. Provides intensive instruction in English as a second language speaking for academic purposes. Students acquire effective speaking strategies for a range of contexts. May be repeated an unlimited number of times as course is noncredit.

**3030:51 ESL Writing and Study Skills (0 Credits)**

Prerequisite: Permission of instructor. Intensive course in English as a second language writing and study skills. Students learn and extensively practice techniques for writing, revising, and editing academic texts. May be repeated an unlimited number of times as course is noncredit.

**3030:52 ESL Reading and Study Skills (0 Credits)**

Prerequisite: Permission of instructor. Intensive course in English as a second language reading and study skills. Students learn and extensively practice techniques for comprehending a variety of academic texts. May be repeated an unlimited number of times as course is noncredit.

**3030:53 ESL Grammar and Speaking Skills (0 Credits)**

Prerequisite: Permission of instructor. Intensive course in English as a second language grammar. Students learn and extensively practice a range of grammatical forms and functions in spoken contexts. May be repeated an unlimited number of times as course is noncredit.

**3030:54 ESL Listening and Study Skills (0 Credits)**

Prerequisite: Permission of instructor. Intensive course in English as a second language listening and study skills. Students learn and practice techniques for comprehending spoken English in an academic setting. May be repeated an unlimited number of times as course is noncredit.

**3030:96 ELI Workshop (0 Credits)**

Prerequisite: Permission of instructor. Provides instruction in English language and related topics for speakers of languages other than English. May be repeated an unlimited number of times as course is noncredit.

**3030:99 ELI Independent Study (0 Credits)**

Prerequisite: Permission of instructor. Independent study in English as a Second Language under the supervision and evaluation of selected faculty member. May be repeated an unlimited number of times as course is noncredit.

## Entrepreneurship (6300)

**6300:201 Introduction to Entrepreneurship (3 Credits)**

Students are exposed to career options in entrepreneurship where they learn skills related to starting or buying a small business, working for a fast growth business or corporation, family business, and franchising. Open to all university students. 3 credits.

**6300:301 New Venture Creation (3 Credits)**

Prerequisite: 6300:201 or by permission of instructor. Students work on the development of a business plan based on their chosen career path in the field of entrepreneurship (starting or buying a small business, working for a fast growth business or corporation, new product, family business, or franchising). Open to all university students.

**6300:360 Entrepreneurial Field Project (3 Credits)**

Prerequisites: 6300:201 or permission of the instructor. A practical field experience where students work in a consulting role on an actual entrepreneurial project involving a small business development center, a small business incubator, or an existing small business.

**6300:450 Business Plan Development (3 Credits)**

Prerequisite: 6300:301. Students will work independently, with mentoring from the instructor, on an entrepreneurial project. Students will gain hands-on experience in developing a business plan for starting, acquiring, or expanding a business.

## Exercise Science Technology (2670)

**2670:250 Exercise Science Technology Internship (3 Credits)**

Prerequisites: Completion of 32 credits, including 5550:201, 2670:220, 2670:330, and permission. Corequisite: 5550:352. Supervised observation and work experience in a fitness organization or environment in which students apply theories, concepts and skills to practical situations.

**2670:290 Special Topics in Exercise Science Technology (1-3 Credits)**

Prerequisite: Permission. Special topics in subject area of interest for Exercise Science Technology.

## Family and Consumer Sciences (7400)

**7400:241 Introduction to Family and Consumer Sciences Education (3 Credits)**

Introduction to the teaching of Family and Consumer Sciences in the secondary schools. Emphasis on state standards, current trends and societal factors affecting career-technical programs.

**7400:407 FCB Occupational Employment Experience (4 Credits)**

Provides student with knowledge of current business and industrial practices at level minimally commensurate with employment expectations of graduates of vocational job training programs in Family and Consumer Sciences.

**7400:421 Special Problems in Family & Consumer Sciences (1-3 Credits)**

Additional study or apprentice experience in specialized field or preparation; group and individual experimentation.

**7400:431 Professional Presentation Skills in Family and Consumer Sciences (3 Credits)**

Prerequisites: 7760:141 or 7760:250. Emphasis on development of abilities and strengths in coordination of equipment, materials, motion, speech, and presentation delivery relating to education and industry in Family and Consumer Sciences.

**7400:447 Senior Seminar: Critical Issues in FCS Professional Develop (1 Credit)**

Prerequisites: FCS major & senior standing. Consideration of family and consumer sciences as a profession and its impact on the quality of life of individuals, families and their environments. Analysis of challenges facing the profession and all home economists.

**7400:450 Families, Individuals & Environments (3 Credits)**

Prerequisites: Family Consumer Sciences major and senior standing or completion of 90 credits. Integrative exploration of issues affecting the well-being of individuals, families, and communities in the multiple environments in which they function.

**7400:485 Seminar in Family & Consumer Sciences (1-3 Credits)**

Exploration and evaluation of current developments in selected areas.

**7400:491 Career-Technical FCS Instructional Strategies (3 Credits)**

Prerequisites: 7400:241, 5100:200, and 5100:220. Organization of Career-Technical Family and Consumer Sciences programs in schools grades 4-12. Emphasis on strategies, compliance with state career-technical directives, student organizations, program planning, workplace replication and classroom observations.

**7400:494 Internship: Family and Consumer Sciences (1-6 Credits)**

Prerequisite: Permission of the instructor. In depth field experience in business, industry, or community agencies relating to the student's area of specialization.

**7400:497 Internship: Family & Consumer Sciences (2-6 Credits)**

Prerequisite: Permission of instructor. In-depth field experience in business, industry or community agencies related to student's area of specialization.

**7400:498 Student Teaching Seminar (1 Credit)**

Corequisite: 5300:495. Seminar for students currently enrolled in Family and Consumer Sciences student teaching. Emphasis on block and lesson plan development, licensure, portfolio development, Praxis III, professional development, and student teaching reflections.

**7400:499 Senior Honors Project in Family & Consumer Sciences (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and approval of honors preceptor. Individual study supervised by adviser. Student and preceptor develop goals, objectives and methodology.

## Fashion Merchandising (7350)

**7350:123 Fundamentals of Construction (3 Credits)**

Basic theory and application of construction fundamentals, including experiences with patterns and specialty fabrics.

**7350:125 Principles of Apparel Design (3 Credits)**

The study of contemporary apparel design and the relationship of design elements and principles to personal characteristics and social/professional orientation.

**7350:139 The Fashion & Furnishings Industries (3 Credits)**

Overview of fashion and furnishings industries including production, distribution, promotion, and the impact of cultural influences. Discussion of career opportunities.

**7350:219 Dress and Culture (3 Credits)**

Study of cultural, social, psychological and economic aspects of clothing. Emphasis on expression and use of clothing in relation to self, society and culture. Lecture/discussion.

**7350:225 Textiles (3 Credits)**

Basic study of natural and manufactured fibers. Emphasis on physical properties, selection and care. Attention given to design and manufacture of textiles. Lecture/Laboratory.

**7350:226 Textile Evaluation (3 Credits)**

Prerequisite: 7300:225 or 7350:225. Evaluating method, quality, and necessity of dyes, finishes, other coloration techniques and designs.

**7350:305 Advanced Construction & Tailoring (3 Credits)**

Prerequisite: 7350:123. Advanced theory and principles in construction of couture garment. Construction of coat or suit jacket utilizing custom tailoring techniques. Two hours lecture, four hours laboratory.

**7350:311 Seminar in Fiber Arts (3 Credits)**

Exploration of a specific fiber arts technique such as needle arts, weaving, surface design, wearable art, or machine stitchery. (May be repeated for a total of nine credits).

**7350:352 Strategic Merchandise Planning (3 Credits)**

Prerequisite: General Math Requirement. The fashion buyer's role in merchandise management and decision making with spreadsheets and merchandise mathematics incorporated into computer simulations.

**7350:402 Advanced Fiber Arts (3 Credits)**

Prerequisite: 7350:311 or permission of the instructor. An advanced course that builds on the skills learned in 7350:311, with the intention of reaching a caliber suitable for one of the many professions in this field, including business aspects such as market analysis and product development.

**7350:418 History of Interior Design I (4 Credits)**

The study of furnishings, interiors, and architecture from antiquity through the eighteenth century, with emphasis on the social-cultural influences shaping their development.

**7350:419 History of Interior Design II (4 Credits)**

The study of nineteenth- and twentieth-century furnishings, interiors, and architecture, with emphasis on the social-cultural influences shaping their development.

**7350:421 Special Problems in Family & Consumer Sciences (1-3 Credits)**

Additional study or apprentice experience in specialized field or preparation; group and individual experimentation.

**7350:422 Textiles for Interiors (3 Credits)**

Prerequisite: 7300:225 or 7350:225. Evaluation of physical, aesthetic, comfort, care and durability properties of textile products and testing procedures to determine suitability for interiors.

**7350:425 Textiles for Apparel (3 Credits)**

Prerequisites: [7300:225 or 7350:225] and 7350:226. Evaluation of physical, aesthetic, comfort, care, and durability properties of textile products and testing procedures to determine suitability for desired end uses.

**7350:427 Global Issues in Textiles & Apparel (3 Credits)**

Prerequisite: 7350:139. Examines the global structure and scope of the textile and apparel industries emphasizing an economic perspective.

**7350:436 Textile Conservation (3 Credits)**

Prerequisites: 7350:123 and [7300:225 or 7350:225]. Principles and practices of textile conservation with emphasis on procedures appropriate for collectors and small historical agencies.

**7350:437 Historic Costume (3 Credits)**

Study of costume and textiles from antiquity through the 18th century, with emphasis on social/cultural influences.

**7350:438 History of Fashion (3 Credits)**

Study of western fashions, textiles, and designers with emphasis on social-cultural influences.

**7350:439 Fashion Analysis (3 Credits)**

Prerequisites: 7350:125, 7350:139 and senior status. In-depth study of resources and processes for the analysis and forecasting of fashion trends. Emphasis on current designers and environmental forces that influence fashion.

**7350:447 Senior Seminar: Critical Issues in FCS Professional Develop (1 Credit)**

Prerequisites: FCS major & senior standing. Consideration of family and consumer sciences as a profession and its impact on the quality of life of individuals, families and their environments. Analysis of challenges facing the profession and all home economists.

**7350:449 Flat Pattern Design (3 Credits)**

Prerequisite: 7350:123. Theory and experience in clothing design using flat pattern techniques.

**7350:450 Families, Individuals & Environments (3 Credits)**

Prerequisites: Family Consumer Sciences major and senior standing or completion of 90 credits. Integrative exploration of issues affecting the well-being of individuals, families, and communities in the multiple environments in which they function.

**7350:485 Seminar in Family & Consumer Sciences (1-3 Credits)**

Exploration and evaluation of current developments in selected areas.

**7350:494 Internship: Family and Consumer Sciences (1-6 Credits)**

Prerequisite: Permission of the instructor. In depth field experience in business, industry, or community agencies relating to the student's area of specialization.

**7350:497 Internship: Family & Consumer Sciences (2-6 Credits)**

Prerequisite: Permission of instructor. In-depth field experience in business, industry or community agencies related to student's area of specialization.

**7350:499 Senior Honors Project in Family & Consumer Sciences (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and approval of honors preceptor. Individual study supervised by adviser. Student and preceptor develop goals, objectives and methodology.

## Finance (6400)

**6400:200 Foundations of Personal Finance (3 Credits)**

Explores application of finance concepts in personal finance with emphasis on the personal financial planning process.

**Gen Ed:** Tier 3 - Critical Thinking

**6400:220 Legal & Social Environment of Business (3 Credits)**

Prerequisite: A minimum academic standing of a Sophomore or greater. Explores the legal and social environment in which modern business must function. The legal system, public and private law, and contemporary social and ethical issues are addressed.

**6400:300 Introduction to Finance (3 Credits)**

Prerequisites: 3450:145 and [3250:200 or 3250:244]. Studies the sources and uses of funds for business. Students cannot get credit for this class and 6400:301. (For non-College of Business Administration students).

**6400:301 Principles of Finance (3 Credits)**

Prerequisites: [3250:200 or 3250:244], [3450:145 with a grade of C- or better or higher math], 6200:201, and completion of one of the following: 6200:250, admittance to the College of Engineering with 48 credit hours completed, or admittance to the Actuarial Sciences program with 48 credit hours completed. An overview of the financial system and the major decision areas of the financial manager such as capital budgeting, financing, and working capital management.

**6400:302 Intermediate Corporate Finance (3 Credits)**

Prerequisite: 6400:301 with a grade of C or better. This second course in corporate finance builds upon 6400:301 to provide students with an analytic foundation for careers in business.

**6400:321 Business Law I (3 Credits)**

Prerequisite: completion of 64 credits. Discussions designed to develop legal reasoning within substantive areas of contractual obligation, agency relationships, partnerships, corporations, accountant's legal responsibility, federal securities regulation and antitrust law.

**6400:322 Business Law II (3 Credits)**

Prerequisite: 6400:321 and completion of 60 credits. Applications of Uniform Commercial Code in sales, commercial paper and secured transactions. Additional discussions include property, wills, estates, trusts, bailments, insurance, suretyship, bankruptcy, and labor law.

**6400:323 International Business Law (3 Credits)**

The law and international commercial transactions. Among the subjects covered are sovereignty; treaties; agreements; antitrust practices; property rights; international arbitration.

**6400:332 Foundations of Financial Planning (3 Credits)**

Prerequisite: [6400:300 or 6400:301] with a grade of C or better. Introduction to financial planning, including goal setting, cash management, credit, housing, education planning, and selected professional issues.

**6400:338 Financial Markets & Institutions (3 Credits)**

Prerequisite: 6400:300 or 6400:301 with a grade of C- or better. Studies the flows of funds. Analyzes major financial intermediaries. Money and capital markets reviewed with emphasis on interest rates and their impact upon administration of specific financial intermediaries.

**6400:341 Contemporary Investments (3 Credits)**

Prerequisite: 6400:300 or 6400:301. Fundamentals of investing for the individual investor. Students cannot get credit for this class and 6400:343. (For non-College of Business Administration students.)

**6400:343 Investments (3 Credits)**

Prerequisites: [6400:300 or 6400:301 with a grade of C- or better] and [3470:262, 3470:461, or 6500:304]. Range of security investment media explored, alternative investment programs considered and role of securities markets through which goals can be achieved studied.

**6400:390 Real Estate Principles: Value Approach (3 Credits)**

A study of real estate: the profession, the process, and the product. Emphasis is on real estate as a product and the valuation process. The measurement of value requires tool abilities in accounting, statistics and finance.

**6400:402 Income Property Appraisal (3 Credits)**

Prerequisites: at a minimum must have been admitted to a major in a four-year degree granting college; 6400:301 or 6140:300; or permission of instructor. Advanced course in real property appraisal and valuation. Techniques and concepts will be covered along with the theory underlying such techniques.

**6400:403 Real Estate Finance (3 Credits)**

Prerequisites: at a minimum must have been admitted to a major in a four-year degree granting college, [6400:301 or 6140:300]. Advanced course in real estate covering financing of and investment in real property. Included are investment techniques, methods, institutions, instruments, valuation, appraisal and policy issues.

**6400:411 Estate and Financial Planning (3 Credits)**

Prerequisites: Admission to a major in a four-year degree granting college, [6400:300 or 6400:301] with a minimum grade of C- or better, or permission of Finance Department Chair. Application of estate planning methodologies and policies to financial planning.

**6400:414 Risk Management: Property and Casualty (3 Credits)**

Prerequisites: Admission to a major in a four-year degree granting college, [6400:300 or 6400:301] with a grade of C- or better, or permission of instructor. Addresses tools for managing risk, legal concepts of insurance contracts, personal insurance and commercial property and casualty insurance policies as well as other risk issues.

**6400:415 Risk Management: Life and Health Insurance (3 Credits)**

Prerequisites: Admission to a major in a four-year degree granting college, and [6400:300 or 6400:301] with a grade of C- or better. Concepts of life and health insurance and risk management are addressed.

**6400:417 Retirement Planning (3 Credits)**

Prerequisites: Admission to a major in a four-year degree granting college, and [6400:300 or 6400:301] with a grade of C- or better, or permission of the instructor. An in-depth examination of retirement and estate planning objectives, methods, and strategies including the study of employee benefits plans, public and private pension funds, and lifetime strategies for maximization of estate assets.

**6400:418 Insurance Operations (3 Credits)**

Prerequisites: 6400:414 or 6400:415 or permission. This course provides a detailed examination of the composition, financial structure, and operation of the property-casualty insurance industry.

**6400:424 Legal Concepts of Real Estate (3 Credits)**

Prerequisite: at a minimum must have been admitted to a major in a four-year degree granting college. Study of concepts of law governing the many interests in real estate including acquisition, encumbrance, transfer, rights and obligations of parties, and the various state and federal regulations. The legal concepts of the business of real estate are likewise examined. Emphasis is on a managerial approach utilizing the case method.

**6400:432 Seminar in Financial Planning (3 Credits)**

Prerequisites: Must have been admitted to a major in a four-year degree granting college, 6200:330, 6200:410, 6400:417, [6400:332 with a grade of C or better], and [6400:341 or 6400:343]. Pre/Corequisite: 6400:415. Explores financial planning function, including contact, data acquisition, plan development and implementation; addressing planning techniques and financial planning ethical issues.

**6400:436 Commercial Bank Management (3 Credits)**

Prerequisites: Admission to a major in a four-year degree granting college, 6200:250, [6400:300 or 6400:301], and 6400:338. Study of administrative policy determination and decision making within the commercial bank. Analysis of policy making in areas of liquidity, loan and security investment and sources of funds.

**6400:437 International Business Finance (3 Credits)**

Prerequisites: Admission to a major in a four-year degree granting college, and [6400:300 or 6400:301] with a grade of C- or better. Theory and practice of financial wealth maximization in the international business enterprise.

**6400:438 International Banking (3 Credits)**

Prerequisites: admission to a major in a four-year degree granting college and [3250:461 or 6400:437]. Examination of recent trends in the expansion of international banking activities and associated revenue maximizing strategies.

**6400:448 Advanced Portfolio Management (3 Credits)**

Prerequisites: 6400:343 and [3250:325 or 6500:305]. Advanced Portfolio Management is a semester long case course. The case is the management of the UA Student-Managed Investment Fund. This course's primary activity will be the active management of the Fund. Current and selected topics relating to investments and financial markets will be discussed as needed in the rapidly changing world economy. The course will give the student practical experience in portfolio construction, management and evaluation by managing real money on a real time basis.

**6400:461 Enterprise Risk Management (3 Credits)**

Prerequisites: admission to a major in a four-year degree granting college, 6400:414, 6400:415, and 6400:418. Explores risk issues at the firm level with emphasis upon identification and management of risk to enhance firm value.

**6400:473 Financial Statement Analysis (3 Credits)**

Prerequisites: Admitted to a major in a four-year degree granting college, [6400:301 with a grade of C- or better and 6200:321], or 6400:302. Analysis and interpretation of the financial position and performance of the business firm from the perspective of the credit and financial analyst. Emphasizes mechanics and art of financial analysis.

**6400:485 Financial Strategy (3 Credits)**

Prerequisites: 6400:302 with grade of C or better and admission to a major in a four-year degree granting college. Pre/Corequisite: 6400:473. Case study based course with applications of financial management theories and tools to make decisions in capital budgeting, capital structure, and working capital management.

**6400:489 Advanced Financial Analytics (3 Credits)**

Prerequisites: Admitted to a major in a four-year degree granting college, senior standing, [6400:302 with a grade of C or better], 6400:338, 6400:343 and [6500:305 or 3250:325]. Capstone course with analysis of financial models using advanced spreadsheet techniques. Models from personal finance, corporate finance and investments are incorporated, with applications in financial planning, forecasting, portfolio theory and security valuation, option valuation, capital investment and cost of capital.

**6400:490 Selected Topics in Finance (1-3 Credits)**

Prerequisites: admitted to a major in a four-year degree granting college, 6200:250, and 6400:301. Provides opportunity for study of special topics not covered in current finance courses.

**6400:492 Internship in Financial Management (3 Credits)**

Prerequisite: Permission of designated faculty member. On the job experience with public or private sector organizations in the financial services field. Individual assignments are approved and supervised by the designated member of the faculty in the student's major field. Periodic reports and term papers required.

**6400:493 Internship in Financial Planning (3 Credits)**

Prerequisite: Permission of designated faculty member. On the job experience with public or private sector organizations in the financial services field. Individual assignments are approved and supervised by the designated member of the faculty in the student's major field. Periodic reports and term papers required.

**6400:494 Internship in Risk Management and Insurance (3 Credits)**

Prerequisite: Permission of designated faculty member. On the job experience with public or private sector organizations in the financial services field. Individual assignments are approved and supervised by the designated member of the faculty in the student's major field. Periodic reports and term papers required.

**6400:495 Research Project in Finance (1-3 Credits)**

Prerequisites: 6400:302, 6400:338, 6400:343 and admission to a major in a 4-year degree granting college. Pre/Corequisite: 6400:411 or 6400:414 or 6400:415 or 6400:417 or 6400:418 or 6400:432 or 6400:436 or 6400:437 or 6400:438 or 6400:448 or 6400:461 or 6400:473 or 6400:485 or 6400:489. Taken concurrently with or following a 400-level field Finance course. Involves independent out-of-class work on a project designed in consultation with the designated 400-level course instructor.

**6400:499 Independent Study: Finance (1-3 Credits)**

Prerequisite: Permission of department head. Provides means for individualized in-depth study of finance problem or problems from which student can derive significant benefit.

## Fire Protection Technology (2230)

**2230:100 Introduction to Fire Protection (4 Credits)**

History and philosophy of fire protection; introduction to agencies involved; current legislative developments; discussion of current related problems, expanding future of fire protection and career orientation.

**2230:102 Fire Safety in Building Design & Construction (3 Credits)**

Exploration of building construction and design with emphasis on fire protection concerns; review of related statutory and suggested guidelines local, state and national scope.

**2230:104 Fire Investigation Methods (4 Credits)**

History of fire investigation; gathering of evidence and development of technical reports; fundamentals of arson investigation; processing of criminal evidence and procedures related to local and state statutes.

**2230:202 Incident Management for Emergency Responders (4 Credits)**

Efficient and effective use of human resources, equipment and systems. Emphasis on preplanning, incident management, problem solving related to emergency preparation and response.

**2230:204 Fire and Life Safety Education (3 Credits)**

Application and analysis necessary for the implementation of the Life Safety Code Handbook.

**2230:205 Fire Detection & Suppression Systems (3 Credits)**

Design, installation, maintenance and utilization of portable fire extinguishing appliances and pre-engineered automatic systems; fire detection and alarm signaling systems operational capabilities, requirements.

**2230:206 Fire Sprinkler System Design (3 Credits)**

Design, installation and operation of automatic fire suppression systems. Includes sprinkler, foam, carbon dioxide, dry chemical, halogenated agent systems.

**2230:250 Hazardous Materials (4 Credits)**

Prerequisite: 2230:100. Study of chemical characteristics and reactions related to storage, transportation and handling of hazardous materials. Emphasis on emergency situations, firefighting and control.

**2230:254 Fire Prevention (3 Credits)**

Prerequisite: 2230:100. Fire codes and standards relative to fire prevention, inspection, and code enforcement.

**2230:257 Fire & Safety Issues for Business & Industry (3 Credits)**

Industrial fire and safety issues related to specialized hazards, federal and state regulations. Emphasis on emergency response team preparedness, confined space entry, and rescue.

**2230:260 Fundamentals of Firefighting (3 Credits)**

Prerequisites: Must be accepted into the Fire Academy, possess a valid driver's license, and permission of the department. Corequisites: 2230:261, 2230:262, and 2230:263. Course 1 of 4: Minimum training level to function as a firefighter in the State of Ohio, identified in the National Fire Protection Association standards, NFPA 1001.

**2230:261 Firefighter I (4 Credits)**

Prerequisites: Must be accepted into the Fire Academy, possess a valid driver's license, and permission of the department. Corequisites: 2230:260, 2230:262, and 2230:263. Course 2 of 4: Minimum training level to function as a firefighter in the State of Ohio, identified in the National Fire Protection Association standards, NFPA 1001.

**2230:262 Firefighter II (4 Credits)**

Prerequisites: Must be accepted into the Fire Academy, possess a valid driver's license, and permission of the department. Corequisites: 2230:260, 2230:261, and 2230:263. Course 3 of 4: Minimum training level to function as a firefighter in the State of Ohio, identified in the National Fire Protection Association standards, NFPA 1001.

**2230:263 Emergency Vehicle Operations (1 Credit)**

Prerequisites: Must be accepted into the Fire Academy, possess a valid driver's license, and permission of the department. Corequisites: 2230:260, 2230:261, and 2230:262. Course 4 of 4: Proper operation of an emergency vehicle is critical for fire service providers. The Ohio Emergency Vehicle Operations Course (EVOC) is designed to enhance safe vehicle operation by stressing theory and principles of defensive driving in both emergency and non-emergency situations. Students will learn safe driving practices, defensive driving principles, the responsibilities of an emergency vehicle driver, how to safely operate emergency vehicles during emergent responses, and the difficulties of driving fire apparatus. The course include hands-on driving exercises that will enhance the ability of a student to operate a vehicle during an emergency situation by teaching personal and vehicle control limitations. The course is a requirement to qualify for Ohio Firefighter I and Firefighter II certification.

**2230:280 Fire Service Administration (4 Credits)**

Prerequisite: 2230:100. Fire officer professional qualifications; federal, state regulations governing department operations-OSHA, EPA; emergency and non-emergency operations procedures-ICS, IMS, Emergency Operations Center are presented.

**2230:290 Special Topics: Fire Science Technology (1-4 Credits)**

(May be repeated for a total of four credits) Prerequisite: Permission. Selected topics or subject areas of interest in fire protection technology.

**2230:294 Advanced Fire Investigation Methods (3 Credits)**

Prerequisites: 2230:100, 2230:104, 2230:205, and 2230:206. Designed to meet student and in service fire investigators need to understand new/ updated technology and methodology in managing fire investigations.

**2230:295 Field Experience I (2 Credits)**

Prerequisites: 30 credit hours of successfully completed course work in the Fire Protection Technology program which includes 2230:100, 2230:102, 2230:104, 2230:204, 2230:205, and 2230:280 and permission. Course designed to measure the knowledge, skills and abilities required to become a graduate of The University of Akron, Fire Protection Program.

**2230:296 Field Experience II (2 Credits)**

Prerequisites: 30 credit hours of successfully completed course work in the Fire Protection Technology program which includes 2230:100, 2230:102, 2230:104, 2230:204, 2230:205, and 2230:280. If not currently an active fire fighter, you must take 2230:295 first. Course designed to measure the knowledge, skills and abilities required to become a front line supervisor, work in hazmat bureau or beginning arson investigator.

**2230:297 Independent Study: Fire Protection (1-3 Credits)**

Prerequisite: 2230:100 and permission. Selected topics and special areas of study in fire protection technology under the supervision and evaluation of a selected faculty who assigns specific arrangements.

## French (3520)

**3520:101 Beginning French I (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3520:102 Beginning French II (4 Credits)**

Sequential. Prerequisite: 3520:101 or placement test. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3520:201 Intermediate French I (3 Credits)**

Sequential. Prerequisite: 3520:102 or placement test. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3520:202 Intermediate French II (3 Credits)**

Sequential. Prerequisite: 3520:201 or placement test. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3520:210 French and Francophone Cultures Through Film (3 Credits)**

Prerequisites: Sophomore or higher standing (30 credit hours including English 3300:111 and 3300:112) or equivalent. Exploration of French and Francophone cultures through viewing of films subtitled in English. Readings and discussions in English.

**Gen Ed:** Tier 3 - Global Diversity

**3520:300 Contemporary French and Francophone Cultures (3 Credits)**

Prerequisite: 3520: 202. Introduction to contemporary lives and cultures in France and other Francophone countries as portrayed in recent documents, literary works and films.

**3520:301 French Conversation (3 Credits)**

Sequential. Prerequisite: 3520:202 or placement test. Development of speaking skills beyond the intermediate level. Practice of listening comprehension, correct pronunciation, extended and grammatically sound discourse. May be repeated for a total of six credits.

**3520:302 French Composition (3 Credits)**

Sequential. Prerequisite: 3520:202. Development of writing skills beyond intermediate level.

**3520:303 French Culture & Civilization I (3 Credits)**

Prerequisite: 3520:202 or equivalent. History of France and French cultural heritage from its origins to mid-20th century.

**3520:304 French Culture & Civilization II (3 Credits)**

Prerequisite: 3520:202 or equivalent. Modern history of France. Focus on political and social trends since 1960.

**3520:305 Introduction to French Literature I (3 Credits)**

Prerequisite: 3520:202. Survey of French literature from its origins to present, with lectures, reading and class discussion of representative works.

**3520:306 Introduction to French Literature II (3 Credits)**

Prerequisite: 3520:202. Survey of French literature from its origins to present, with lectures, reading and class discussion of representative works.

**3520:308 Internship in France (1-3 Credits)**

Permission of the French section advisor. (May be taken for a total of six credits. No more than three credits may be applied toward a 3520 major.) Student's internship which results in portfolio on career applications of the discipline of French.

**3520:311 Contemporary French Society (3 Credits)**

Prerequisite: 3520:202. A study of contemporary French society, including customs and political and social issues. Conducted in France. Counts toward Culture and Civilization requirement for major.

**3520:312 French/Francophone Cultural Experience Abroad (1-3 Credits)**

Prerequisite: Permission of the French section advisor. May be taken for a total of six credits. No more than three credits may be applied toward a 3520 major. Student's residence and independent study/project in French-speaking country which results in demonstrable understanding of the country's culture.

**3520:315 French Phonetics (3 Credits)**

Prerequisite or corequisite: 3520:202 or equivalent. Intensive drill in pronunciation with correction and improvement of student's accent, emphasis on articulation, intonation and rhythm.

**3520:350 Themes in French Literature in Translation (3 Credits)**

Prerequisite: 3400:210 or 3400:221. (May not be taken for credit toward the French major) Readings, discussion of novels and plays relating to selected themes of French literature. Texts and discussion in English.

**3520:351 Translation: French (3 Credits)**

Prerequisite: 3520:202. Study of translation techniques, both French to English and English to French. Emphasis on stylistics and interpretation of idioms.

**3520:352 Translation: Business French (3 Credits)**

Prerequisite: 3520:351 or equivalent. Application of translation techniques with particular stress on business styles, formats, and vocabulary. Especially recommended for students interested in international business.

**3520:402 Advanced French Grammar (3 Credits)**

Prerequisite: 3520:302. Advanced study of normative French grammar with emphasis on syntax, morphology, grammatical structure and phonetic principles.

**3520:403 Advanced French: Written and Oral Communication (3 Credits)**

Prerequisite: [3520:301 & 3520:302] or permission. Development of writing and speaking skills beyond that achieved in 301 and 302 through intensive practice and grammar review.

**3520:407 French Literature of the Middle Ages & the Renaissance (4 Credits)**

Prerequisite: 3520:305 or 3520:306. Reading and discussion of selected Medieval and Renaissance literary works. Conducted in French.

**3520:413 French Cinema (3 Credits)**

Prerequisites: 3520:301 or 3520:302 or permission from instructor. Study and discussion of various aspects of French culture and civilization as characterized in movies.

**3520:419 19th Century French Literature (4 Credits)**

Prerequisite: 3520:305 or 3520:306. Reading and discussion of selected works pertaining to romantic, realistic and naturalistic movements.

Conducted in French.

**3520:422 French: Special Topics in Advanced Language Skills, Culture or Literature (1-4 Credits)**

Prerequisite: 3520:202. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

**3520:427 20th Century French Literature (4 Credits)**

Prerequisite: 3520:305 or 3520:306 or equivalent. Reading and discussion of the most representative works of period. Conducted in French.

**3520:430 Contemporary Quebec (3 Credits)**

Prerequisite: 3520:301 or 3520:302 or permission. Historical, political, sociological and cultural overviews of Québec, offering an in-depth examination of questions of identity through the study of literature and popular culture.

**3520:431 Francophone Literature (3 Credits)**

Prerequisite: 3520:300 or 3520:301 or 3520:302 or permission. The problematics of identity (race, class) in postcolonial context, studied through literary texts by authors from Africa, Caribbean, and Québec.

**3520:460 Selected Themes in French Literature (3 Credits)**

(May be repeated.) Conducted in French. Prerequisite: 3520:305 and 3520:306. Reading and discussion of literary works selected according to an important theme.

**3520:497 Individual Reading in French (1-3 Credits)**

Prerequisite: 3520:202 and permission of department chair.

**3520:498 Individual Reading in French (1-3 Credits)**

Prerequisite: 3520:202 and permission of department chair.

## General Engineering (4100)

**4100:101 Tools for Engineering (3 Credits)**

Corequisite: 3450:221. Introduction to engineering. Free hand, engineering, and CAD drawing. Introduction to computer programming, computer applications including word processing, spreadsheets, data base. Introduction to engineering economics. Required for Chemical, Civil, and Electrical Engineering majors.

**4100:110 Women in Engineering Seminar & Peer Group (1 Credit)**

Beginning women students may elect this one-credit course that provides an overview of the career opportunities for women in engineering. The course utilizes dynamic speakers to reinforce the student's educational and career choices. Small groups meet weekly, led by an upper-class engineering student. This interactive peer environment fosters personal development for first-year students.

**4100:120 IDEA Engineering Seminar (1 Credit)**

Explore career opportunities/personal development in all fields of engineering, assist with transition from high school to engineering studies. Of particular interest to underrepresented groups.

**4100:180 Engineering Design (1 Credit)**

See department for course description.

**4100:200 Freshman Internship (0 Credits)**

Elective for cooperative education student who has completed freshman year. Mandatory for students in the Aerospace Systems Engineering Program, with possibility of waiver if transferring into Program after first year or if student needed to begin mathematics sequence with Precalculus Mathematics in freshman year. Practice in industry and comprehensive written reports of this experience.

**4100:201 Energy & Environment (2 Credits)**

Interactions between energy production, consumption and environment. Case studies. Not for engineering, chemistry or physics major.

**4100:202 Atmospheric Pollution (2 Credits)**

Causes of atmospheric pollution and technical economic and social problems. Technical solutions. Case studies. Not for engineering, chemistry or physics majors.

**4100:203 Environmental Science & Engineering (3 Credits)**

Science and engineering fundamentals required to understand environmental issues and alternative solutions. Not for engineering, chemistry, or physics majors.

**4100:300 Cooperative Education Work Period (0 Credits)**

Prerequisite: Admission to an engineering major within the College of Engineering and Polymer Science and completion of sophomore year. Elective for cooperative education student who has completed sophomore year. Practice in industry and comprehensive written reports of this experience.

**4100:301 Cooperative Education Work Period (0 Credits)**

Prerequisite: Admission to an engineering major within the College of Engineering and Polymer Science. Required for cooperative education student only. Practice in industry and comprehensive written reports of this experience. Offered spring semester of third year.

**4100:302 Cooperative Education Work Period (0 Credits)**

Prerequisite: Admission to an engineering major within the College of Engineering and Polymer Science. Required for cooperative education student only. Practice in industry and comprehensive written reports of this experience. Offered fall semester of fourth year.

**4100:400 Engineering Management and Leadership (3 Credits)**

This is a case and discussion oriented course that examines the role of the engineering manager as a leader, problem solver, strategic planner, and a well-rounded business minded individual.

**4100:403 Cooperative Education Work Period (0 Credits)**

Prerequisite: Admission to an engineering major within the College of Engineering and Polymer Science. Required for cooperative education student only. Practice in industry and comprehensive written reports of this experience. Offered summer after fourth year.

## General Studies - Physical Education (5540)

**5540:120 Archery (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:121 Badminton (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:122 Basketball (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:123 Bowling (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:126 Fitness and Wellness (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:127 Golf (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:128 Gymnastics (Apparatus) (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:129 Gymnastics (Tumbling) (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:130 Handball (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:131 Indoor Soccer (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:132 Karate (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:133 Lifeguard Training (2 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:134 Modern Dance (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:135 Racquetball (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:136 Rugby (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:138 Scuba (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:139 Self Defense (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:140 Skiing (Cross-Country) (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:141 Skiing (Downhill) (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:142 Soccer (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:143 Social Dance (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:145 Squash Rackets (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:146 Swimming (Beginning) (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:147 Swimming (Intermediate) (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:149 Team Handball (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:150 Tennis (Beginning) (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:151 Volleyball (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:152 Water Polo (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:153 Water Safety (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:154 Wrestling (0.5 Credits)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.



**5540:155 Basic Kayaking (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life.

**5540:170 Varsity Baseball (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. Permission of coach necessary for enrollment in varsity sports (170-181). Varsity sports are one credit each.

**5540:171 Varsity Basketball (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. Permission of coach necessary for enrollment in varsity sports (170-181). Varsity sports are one credit each.

**5540:172 Varsity Cross Country (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. Permission of coach necessary for enrollment in varsity sports (170-181). Varsity sports are one credit each.

**5540:173 Varsity Football (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. Permission of coach necessary for enrollment in varsity sports (170-181). Varsity sports are one credit each.

**5540:174 Varsity Golf (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. Permission of coach necessary for enrollment in varsity sports (170-181). Varsity sports are one credit each.

**5540:175 Varsity Soccer (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. Permission of coach necessary for enrollment in varsity sports (170-181). Varsity sports are one credit each.

**5540:176 Varsity Softball (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. Permission of coach necessary for enrollment in varsity sports (170-181). Varsity sports are one credit each.

**5540:177 Varsity Swimming (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. Permission of coach necessary for enrollment in varsity sports (170-181). Varsity sports are one credit each.

**5540:178 Varsity Tennis (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. Permission of coach necessary for enrollment in varsity sports (170-181). Varsity sports are one credit each.

**5540:179 Varsity Track (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. Permission of coach necessary for enrollment in varsity sports (170-181). Varsity sports are one credit each.

**5540:180 Varsity Wrestling (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. Permission of coach necessary for enrollment in varsity sports(170-181).\*\* Varsity sports are one credit each.

**5540:181 Varsity Volleyball (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. Permission of coach necessary for enrollment in varsity sports (170-181). Varsity sports are one credit each.

**5540:182 Varsity Riflery (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. Permission of coach necessary for enrollment in varsity sports (170-181). Varsity sports are one credit each.

**5540:183 Varsity Cheerleading (1 Credit)**

Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. Permission of coach necessary for enrollment in varsity sports (170-181). Varsity sports are one credit each.

**5540:190 Special Topics: General Studies Physical Education (0.5-2 Credits)**

Weight training, self-defense for the blind, water safety instruction, beginning yoga, tai chi, billiards, intermediate and advanced bowling, intermediate and advanced golf, advanced self-defense.

**5540:199 Special Topics: General Studies Physical Education (0.5-2 Credits)**

See department for course description.

**5540:200 Lifeguard Instructor (2 Credits)**

This course is designed to train students to teach the American Red Cross lifeguard training courses.

**5540:201 Water Safety Instructor (2 Credits)**

This course is designed to train students to teach swimming and water safety courses from Pre-K to adult.

**5540:207 Introduction to Rock Climbing (1 Credit)**

This course teaches basic rock-climbing skills. No previous experience in necessary.

## General Technology (2820)

**2820:100 Introduction to Engineering Technology (2 Credits)**

This introductory course stresses skills needed for academic success. Discussion of fields in engineering technology, job searches, calculators, and data measurement and analysis are included.

**2820:105 Basic Chemistry (3 Credits)**

Prerequisite: 2010:052 with a grade of C or better or math placement test. Elementary treatment of facts and principles of chemistry emphasizing biological application. Elements and compounds important in everyday life, biological processes and medicine. Introduction to laboratory techniques. Primarily for medical assistant, criminal justice and allied health students. Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**2820:110 Physical Science for Technicians (3 Credits)**

Elementary presentation of theory and facts of general chemistry and physics (excluding electricity). Includes atomic structure, chemical reactions, energy, electromagnetic radiation, sound and mechanics.

**2820:111 Introductory Chemistry (3 Credits)**

Corequisite: 2030:152. Facts and theories of general chemistry. Elements and compounds and their uses. Elementary treatment of atomic structure, gaseous state, periodic table, water, solutions. Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**2820:112 Introductory & Analytical Chemistry (3 Credits)**

Prerequisite: 2820:111 or permission. Chemical equilibria, ionization, radioactivity. Properties of selected metals and nonmetals. Introduction to organic chemistry. Basic concepts of qualitative analysis. Identifications of cations and anions. Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**2820:131 Software Applications for Technology (1 Credit)**

Prerequisite: 2030:153. Word processing and spreadsheets used within technical applications. This course focuses on using software for technical reports and data analysis. Laboratory.

**2820:290 Special Topics: General Technology (1-4 Credits)**

Prerequisite: Permission. Selected topics of subject areas of interest in General Technology. (May be repeated for a total of eight credits.)

**2820:310 Programming for Technologists (2 Credits)**

Prerequisites: 2820:131 and 2030:255. A study of a technical programming language with applications in engineering technology. Limited to students in Engineering & Science Technology Department programs.

## Geographic and Land Information System (2985)

**2985:101 Introduction to Geographic & Land Information Systems (3 Credits)**

Introduction to the principles and concepts of Geographic and Land Information Systems used in surveying and mapping applications. Laboratory.

**2985:151 GIS Essential Skills (3 Credits)**

Prerequisite: 2985:101. Continued instruction and hands-on emphasis on common skills used in the GIS industry. Skills: Creating reference maps, geocoding, digitizing, reports and mapbooks. Laboratory.

**2985:201 Intermediate Geographic and Land Information Systems (3 Credits)**

Prerequisite: 2985:101. Continued instruction in the hands-on technical applications of Geographic and Land Information Systems. Laboratory.

**2985:205 Building Geodatabases (3 Credits)**

Prerequisite: 2985:101. Introduction and application of spatial geodatabases. The student will create, use, and manage geodatabases. Geodatabases are used for storing spatial and attribute data. Laboratory.

**2985:210 Geographic and Land Information Systems Project (3 Credits)**

Prerequisites: 2985:101. Practical application and presentation techniques using the principles and concepts of cartography and geographic information systems. Laboratory.

**2985:280 Topics in Professional Practice (2 Credits)**

Topics in applicational areas of Geographic and Land Information Systems (GIS/LIS) from the point of view of the practitioner and the consumer.

**2985:290 Special Topics in Geographic and Land Information Systems (1-3 Credits)**

Special lecture/laboratory courses offered once or only occasionally in areas where no formal course exists.

**2985:291 Geographic and Land Information Systems Internship (3 Credits)**

Prerequisite: Permission. Supervised professional experience in GIS/LIS agencies or related setting.

**2985:295 Workshop in Geographic and Land Information Systems (1-3 Credits)**

Group studies of special topics in GIS/LIS. May be used for elective credit only to a maximum of three credits.

**2985:299 Independent Study (1-3 Credits)**

Directed study in a special field of interest chosen by the student in consultation with the instructor.

**2985:301 Exploring ArcGIS Extensions (3 Credits)**

Prerequisite: 2985:101. Specialized instruction and laboratory exercises in working with the ArcGIS extensions, Spatial Analyst, 3-D Analyst and Network Analysis. Laboratory.

## Geography and Planning (3350)

**3350:100 Introduction to Geography (3 Credits)**

Analysis of world patterns of population characteristics, economic activities, settlement features, landforms, climate as interrelated factors.

**Gen Ed:** Tier 2 - Social Science

**3350:250 World Regional Geography (3 Credits)**

Survey of world regions with focus on both physical and human landscapes; emphasis on world patterns and issues from a regional perspective.

**3350:275 Geography of Cultural Diversity (2 Credits)**

Prerequisites: 32 credit hours including English Composition I and II (3300:111, 112) or equivalent. Evaluation of cultural elements unique to various geographical regions to explain why different people utilize resources differently, and how cultural diversity affects regional conflicts.

**Gen Ed:** Tier 3 - Global Diversity

**3350:305 Maps & Map Reading (3 Credits)**

Introduction to use and interpretation of maps. Study of basic map types, elements, symbolism, and historical and cultural context of maps. (Laboratory.)

**3350:310 Physical & Environmental Geography (3 Credits)**

Landforms, weather and climate, soils and vegetation and natural hazards. Nature and distribution of these environmental elements and their significance to society. Laboratory.

**3350:314 Climatology (3 Credits)**

Prerequisite: 3350:310 or permission. Analysis and classification of climates, with emphasis on regional distribution. Basic techniques in handling climate data.

**3350:320 Economic Geography (3 Credits)**

Geographical basis for production, exchange, consumption of goods. Effect of economic patterns on culture and politics.

**3350:350 Geography of the United States & Canada (3 Credits)**

Regional and topical study of United States and Canada, with emphasis on environmental, economic and cultural patterns and their interrelationships.

**Gen Ed:** Tier 3 - Domestic Diversity

**3350:351 Ohio: Environment & Society (3 Credits)**

Regional and topical analysis of cultural, economic and environmental patterns; also in comparison with other states.

**3350:353 Latin America (3 Credits)**

Analysis of relationship of cultural and economic patterns to physical environment in Mexico, Central America, the Caribbean and South America.

**3350:356 Europe (3 Credits)**

Regional and topical analysis of cultural, economic and environmental patterns.

**3350:360 Asia (3 Credits)**

Environmental, cultural and economic geography of East, Southeast, South Asia and Middle East with emphasis on the contemporary.

**3350:363 Africa South of the Sahara (3 Credits)**

Environmental and human bases of regional contrasts. Emphasis on tropical environmental systems and changing patterns of resource utilization.

**3350:397 Special Problems in Geography and Planning (1-3 Credits)**

(May be repeated for a total of five credits) Prerequisite: Permission of instructor. Directed reading and research in special field of interest.

**3350:405 Geographic Information Systems (3 Credits)**

Prerequisites: 3350:305. Introduction to the principles and concepts underlying geographic information systems (GIS) and their application in professional practice and academic research. Laboratory.

**3350:407 Advanced Geographic Information Systems (3 Credits)**

Prerequisite: 3350:405. Advanced instruction in the theory and application of geographic information systems (GIS) including hands-on experience with both raster and vector GIS. Laboratory.

**3350:409 Archaeogeophysical Survey (3 Credits)**

Prerequisites: 3240:250 or 3370:101 or 3350:310. Advanced instruction in subsurface geophysical survey techniques in archaeology. Emphasis on magnetic gradiometry and electrical resistivity techniques, image processing and geological and archaeological interpretation.

**3350:415 Environmental Planning (3 Credits)**

Scientific and technical principles for decision-making in planning, with emphasis on soils, land use, and water quality issues. Data sources and methods of site evaluation.

**3350:420 Urban Geography (3 Credits)**

Spatial structure of urban systems; interaction between cities; internal structure of cities. Perspectives on urban change; contemporary urban geographic problems; urban and regional planning issues.

**3350:422 Transportation Systems Planning (3 Credits)**

Study and analysis of transportation systems from a geographic perspective. Emphasis on transportation problems and issues, elements of transportation planning.

**3350:424 Military Geography (3 Credits)**

Influence of physical and human geography on military operations and military history. Role played by geography in international conflicts.

**3350:432 Land Use Planning Law (3 Credits)**

Acquaint student with past and present approaches to land use control in the United States and examine the political, economic, social and legal forces that have shaped existing land-use legislation.

**3350:433 Practical Approaches to Planning (3 Credits)**

Introduction to the history, theories and forms of urban planning.

**3350:437 Planning Analysis & Projection Methods (3 Credits)**

Introduction to the primary analytic techniques for small-area demographic and economic analysis and projection.

**3350:438 Land Use Planning Methods (3 Credits)**

Application of GIS and other computer-based tools to the preparation, implementation and evaluation of comprehensive land use plans.

**3350:439 History of Urban Design & Planning (3 Credits)**

Origins of human settlements and planning from the perspective of urban design and related societal trends. Comparison of world regional and historical urban forms. Experience in "reading" settlements as visual landscapes.

**3350:440 Cartography (3 Credits)**

Use of graphic/cartographic principles and techniques as a means of presenting geographical information on maps and producing maps. Laboratory.

**3350:441 Global Positioning Systems (GPS) (1 Credit)**

Fundamentals of Global Positioning System (GPS), with emphasis on geographic and planning activities. Includes hands-on exercises.

**3350:442 Cartographic Theory and Design (3 Credits)**

Prerequisite: 3350:440 or permission of instructor. Principles and techniques of thematic mapping. Stresses maps as communications tools. Examines principle thematic mapping techniques and means of presenting qualitative and quantitative data. Laboratory.

**3350:443 Urban Applications in GIS (3 Credits)**

Prerequisite: 3350:405 or permission of instructor. Applications of GIS in the urban context, including methods used for analysis of population density gradients, migration, and accessibility.

**Gen Ed:** Tier 3 - Domestic Diversity

**3350:444 Applications In Cartography & Geographic Information Systems (3 Credits)**

Prerequisite: 3350:340 and 3350:405. Application of analytic and presentation techniques from cartography and geographic information systems to practical problems in geography and planning. Laboratory.

**3350:445 GIS Database Design (3 Credits)**

Prerequisite: 3350:405. Introduction to theory and concepts of geographic data modeling, geodatabase design, and topology. Emphasis on current practices and methodologies in geography and planning.

**3350:446 GIS Programming and Customization (3 Credits)**

Prerequisite: 3350:405. Introduction to use of scripting languages for customizing the interface and extending the functionality of desktop GIS software.

**3350:447 Remote Sensing (3 Credits)**

Prerequisite: 3350:305. Concepts, systems, and methods of applying aerial photography, satellite imagery, and other remote-sensing data for analyzing geographic, geological, and other earth phenomena.

**3350:449 Advanced Remote Sensing (3 Credits)**

Prerequisite: 3350:447. Current research in remote sensing. Applications in study of human cultural and biophysical environment. Practice in planning, design, execution and interpretation of remote sensing studies. (Laboratory.)

**3350:450 Development Planning (3 Credits)**

A study of planning concepts and techniques for developing countries, including growth and development, planning agencies, regional inequities and alternative approaches.

**3350:460 Political Geography (3 Credits)**

Principles and theory in contemporary domestic and international political geographies. Emphasis on the changing local and global patterns of electoral politics, security, and diplomacy.

**3350:481 Research Methods in Geography & Planning (3 Credits)**

Prerequisites: Completed a minimum of 12 credits in Geography and Planning. Investigation of library and archive resources. Emphasis on development of professional writing skills.

**3350:483 Spatial Analysis (3 Credits)**

Prerequisite: Completed a minimum of 12 credits in Geography and Planning. Analysis of mapped statistical surfaces. Principles for use of map as model for statistical evidence, prediction, hypothesis testing.

**3350:485 Internship in Geography & Planning (1-3 Credits)**

Prerequisite: Permission. (May be repeated for a total of six credits.) Supervised professional experience in planning agencies or related settings. Only three credits can be used toward a degree in Geography and Planning.

**3350:489 Special Topics in Geography (1-3 Credits)**

(May be repeated) Selected topics of interest in geography.

**3350:490 Workshop in Geography (1-3 Credits)**

(May be repeated for a total of six credits) Group studies of special topics in geography.

**3350:495 Soil & Water Field Studies (3 Credits)**

Properties, origins and uses of major soil and water regime landscapes. Stresses relationships between soil and the hydrological cycle, urbanization, suburbanization and agriculture. Field trips required.

**3350:496 Field Research Methods (3 Credits)**

Prerequisite: Completed a minimum of 12 credits in Geography and Planning. Field work enabling student to become competent in collecting, organizing and analysis of data while carrying out field research projects.

**3350:497 Regional Field Studies (1-3 Credits)**

Off-campus intensive study of geographic features of a region or regions through direct observations and travel using appropriate field study methods. (repeatable up to 6 credits)

**3350:498 Honors Research in Geography (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: permission of department honors preceptor, honors student only. Exploration of research topics and issues in contemporary geography. Selection of research topic and writing of research paper in proper scholarly form under direction of faculty member.

**3350:499 Career Assessment Seminar (2 Credits)**

Prerequisites: 24 credits in department or permission. Students demonstrate knowledge and skills acquired as geography majors through assessment testing and semester project, evaluate career options, and prepare resume and portfolio.

## Geology (3370)

**3370:100 Earth Science (3 Credits)**

Introduction to earth science for non-science majors. Survey of earth in relation to its physical composition, structure, history, atmosphere, oceans; and relation to solar system and universe.

**Gen Ed:** Tier 2 - Natural Science

**3370:101 Introductory Physical Geology (4 Credits)**

A study of the nature of earth, its materials, and the processes which continue to change it. Laboratory, field trips.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3370:102 Introductory Historical Geology (4 Credits)**

Prerequisite: 3370:101 or [3370:104 and 3370:211] or permission. Geologic history of earth, succession of major groups of plants and animals interpreted from rocks, fossils. Laboratory, field trips.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3370:103 Natural Science: Geology (3 Credits)**

Study of basic principles and investigative techniques in various fields of geology with emphasis on relationship of geologic processes to society.

**3370:104 Exercises in Physical Geology (1 Credit)**

Prerequisite: 3370:100 or 3370:103 or 3370:200 or 3370:211 or permission of geology adviser. Laboratory exercises on the identification of earth materials and the utilization and interpretation of geologic data and maps.

**3370:105 Geology for Engineers (3 Credits)**

Introduction of physical geology to engineers, including mechanics, hydraulics and case studies that illustrate interactions between geology and engineering. Laboratory, field trips.

**3370:121 Dinosaurs (1 Credit)**

Introductory course exploring the geological occurrence, mode of fossilization, evolutionary development, habits, and sudden extinction of the largest known land vertebrates.

**Gen Ed:** Tier 2 - Natural Science

**3370:122 Mass Extinctions & Geology (1 Credit)**

Catastrophic changes in plants and animals have occurred throughout earth history. The causes of these extinctions have sparked debate which has enlivened the scientific world.

**Gen Ed:** Tier 2 - Natural Science

**3370:125 Earthquakes: Why, Where, When? (1 Credit)**

Causes and effects of earthquakes, geological settings for earthquakes, seismic measurements, mechanical response of rock to stress, earthquake prediction and precautionary measures.

**3370:126 Natural Disasters & Geology (1 Credit)**

A study of the earth's natural hazards including earthquakes, landslides, meteorites and tsunamis.

**3370:127 The Ice Age & Ohio (1 Credit)**

Introductory course covering the effects of the ice age on the geology, vegetation, fauna and economy of Ohio.

**3370:128 Geology of Ohio (1 Credit)**

Survey of Ohio's geologic setting and history, natural resources, landforms, and their significance in terms of human activity, from early settlement to future economy.

**3370:129 Medical Geology (1 Credit)**

Abundance and distribution of trace elements in surface and groundwater, soils and rocks. The effects of trace elements to health through dose-response relationships.

**3370:130 Geologic Record of Climate Change (1 Credit)**

Examines evidence for natural climate changes in geologic past and evaluates the role of modern society in influencing future climate.

**Gen Ed:** Tier 2 - Natural Science

**3370:132 Gemstones & Precious Metals (1 Credit)**

Introduction to minerals which form gemstones and precious metals. Topics to be covered include physical properties, geologic occurrences, and geographic locations of major deposits.

**3370:133 Caves (1 Credit)**

Topics include: karst processes and the origin of caverns; carbonate depositional environments and the origin of limestones; environmental problems associated with karst landscapes.

**Gen Ed:** Tier 2 - Natural Science

**3370:134 Hazardous & Nuclear Waste Disposal (1 Credit)**

Disposition of hazardous waste in secured landfill site. Geologic factors which determine the selection of low-level and high-level radioactive waste sites.

**3370:135 Geology of Energy Resources (1 Credit)**

Topics include the origin of hydrocarbon and coal deposits, global distribution of energy resources, environmental impact of energy consumption.

**Gen Ed:** Tier 2 - Natural Science

**3370:137 Earth's Atmosphere & Weather (1 Credit)**

Structure and composition of the atmosphere; earth's radiation budget; atmospheric moisture, clouds and precipitation; weather systems and storms, severe weather, Ohio weather.

**Gen Ed:** Tier 2 - Natural Science

**3370:139 Current Topics in Geology (1 Credit)**

(May be repeated for up to 2 credits.) Special topics offered once or only occasionally in areas where no formal course exists.

**3370:140 Rocky Mountain National Parks (1 Credit)**

Badlands, Yellowstone, Grand Canyon and other Rocky Mountain National Parks will be used to illustrate basic principles of geology.

**3370:141 Natural Environment of China (1 Credit)**

Introduction to geographical and geological environments of China. Geography and geology of geoparks will be presented and discussed as examples.

**3370:171 Introduction to the Oceans (3 Credits)**

Provides a basic introduction to the oceans. Topics include formation of the oceans, ocean circulation, waves and tides, marine animals, marine communities, and climate change.

**Gen Ed:** Tier 2 - Natural Science

**3370:200 Environmental Geology (3 Credits)**

Analysis of geologic aspects of the human environment with emphasis on geologic hazards and environmental impact of society's demand for water, minerals and energy.

**Gen Ed:** Tier 2 - Natural Science

**3370:201 Exercises in Environmental Geology I (1 Credit)**

Prerequisite or corequisite: 3370:200. Recognition, and evaluation of environmental problems related to geology through laboratory exercises and demonstrations which apply concepts discussed in introductory geoscience courses. Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3370:203 Exercises in Environmental Geology II (1 Credit)**

Prerequisite: 3370:201. Prerequisite or Corequisite: 3370:200. Recognition and evaluation of environmental problems related to geology. (Continuation of 201) Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3370:211 Introduction to Environmental Science (3 Credits)**

Interdisciplinary analysis of our relationship with nature and dependence upon the environment, with emphasis on evaluation of current environmental problems and rational solutions.

**Gen Ed:** Tier 2 - Natural Science

**3370:230 Mineral Science (4 Credits)**

Prerequisite: 3370:101 or [3370:104 and 3370:211]. Corequisites: 3150:151 and 3150:152. Crystallography and chemistry of minerals. Topics also covered include physical, chemical and optical properties, occurrences and uses of the common non silicate minerals. Laboratory, field trips.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3370:231 Silicate Mineralogy and Petrology (4 Credits)**

Prerequisites: [3370:101 and 3370:230] or appropriate test score. Corequisites: 3150:151 and 3150:152. Physical and chemical properties, occurrence, and uses of common silicate minerals, followed by megascopic and microscopic identification, classification, and petrogenesis of rocks. Laboratory.

**Gen Ed:** Tier 3 - Critical Thinking

**3370:301 Engineering Geology (3 Credits)**

Prerequisite: 3370:101 or [3370:100 and 3370:104] or [3370:104 and 3370:211] or permission of instructor. Presents quantitative analysis of geologic features and processes and is supported by the study of case histories. Lecture, lab, field study, field trips.

**3370:310 Geomorphology (3 Credits)**

Prerequisite: 3370:101 or [3370:100 and 3370:104] or [3370:104 and 3370:221]. Study of landforms as a function of structure, process, and time. Laboratory, field trips.

**3370:324 Sedimentation & Stratigraphy (4 Credits)**

Prerequisite: 3370:102. Introduction to sedimentary processes and environments; stratigraphic principles and techniques. Hand specimens, thin sections, and sedimentary sequences studied. Laboratory, field trips.

**3370:350 Structural Geology (4 Credits)**

Prerequisite: 3370:101 or [3370:100 and 3370:104] or [3370:104 and 3370:211]. Origins and characteristics of folds, faults, joints and rock cleavage. Structural features of sedimentary, igneous and metamorphic rocks. Laboratory, field trips.

**Gen Ed:** Tier 3 - Critical Thinking

**3370:355 Contemporary Issues in Environmental Science (3 Credits)**

Prerequisite: 3370:100, 3370:101, or 3370:211. Advanced interdisciplinary analysis of our relationship with nature and dependence upon the environment, with emphasis on evaluation of current environmental problems and rational solutions.

**3370:360 Paleobiology (4 Credits)**

Prerequisite: 3370:101 or 3100:111. Introductory course emphasizing morphology and evolution of major invertebrate groups with consideration of practical applications of paleontology. Laboratory, field trips.

**3370:371 Oceanography (4 Credits)**

Prerequisite: 3370:101. Study of the dominant feature of our planet, the oceans, emphasizing ocean basins evolution, and physical, chemical and biological processes in the various marine environments. Field trips.

**3370:405 Archaeological Geology (3 Credits)**

Prerequisite: 3370:101. Provides background in geologic principles and techniques relevant to archaeologists. Topics include stratigraphy, absolute dating, locality assessment, zooarchaeology, taphonomy, and remote sensing. Laboratory, field trips.

**3370:407 Archaeogeophysical Survey (3 Credits)**

Prerequisites: 3240:250 or 3370:101 or 3350:310. Advanced instruction in subsurface geophysical survey techniques in archaeology. Emphasis on magnetic gradiometry and electrical resistivity techniques, image processing and geological and archaeological interpretation.

**3370:410 Regional Geology of North America (3 Credits)**

Prerequisites: 3370:101 and 3370:102. Examination of physiographic provinces of North America emphasizing structure, tectonic setting, stratigraphy and processes responsible for landforms in each province. Laboratory, field trips.

**3370:411 Glacial Geology (3 Credits)**

Causes and effects of Pleistocene expansion of polar ice masses with emphasis on glacial deposits and world climatic changes. Laboratory, field trips.

**3370:421 Coastal Geology (3 Credits)**

Prerequisites: 3370:101, 3370:324 or permission of instructor. Study of the origins and evolution of coasts and coastal deposits with particular attention paid to the interaction of waves and currents with sediment, and the development of associated sedimentary features. Field trips.

**Gen Ed:** Tier 3 - Complex Systems

**3370:425 Principles of Sedimentary Basin Analysis (3 Credits)**

Prerequisites: 3370:324 and 3370:360 or permission. Primarily the study of depositional systems, regional and global stratigraphic cycles, and sedimentation and plate tectonics.

**3370:432 Optical Mineralogy - Introductory Petrology (3 Credits)**

Prerequisites: 3370:230 and 3370:231. Optical techniques for identification, characterization, and classification of minerals and rocks using the petrographic microscope. Laboratory.

**3370:433 Advanced Petrology (3 Credits)**

Prerequisite: 3370:432. Petrogenesis of igneous, metamorphic and sedimentary rocks as determined by microscopic studies of textures and mineral assemblages using thin sections. Laboratory.

**3370:435 Petroleum Geology (3 Credits)**

Prerequisite: 3370:350. Natural occurrences of petroleum. Characteristics, origin, entrapment and exploration methods. Laboratory, field trips.

**3370:436 Coal Geology (3 Credits)**

Prerequisites: 3370:101 and 3370:102. Origin, composition and occurrence of coal with emphasis on depositional environments, coalification processes, exploration, evaluation and exploitation. Laboratory, field trips.

**3370:437 Economic Geology (3 Credits)**

Prerequisites: 3370:231 and 3370:350. Study of metallic and nonmetallic mineral deposits emphasizing paragenesis and exploration. Laboratory, field trips.

**3370:441 Fundamentals of Geophysics (3 Credits)**

Prerequisites: 3450:223 or permission and 3650:292. Fundamental concepts in solid earth geophysics, planetary physics, geodesy, and geomagnetism. Contributions of geophysics to recent major developments in geoscience.

**3370:443 Rivers (3 Credits)**

Prerequisite: Permission of department. Study of the geologic and environmental aspects of river systems and related human impacts. Includes mandatory, 0 credit weekend field work.

**Gen Ed:** Tier 3 - Complex Systems

**3370:444 Environmental Magnetism (3 Credits)**

Prerequisite: 3370:101 or permission. Introduction to the theory and methods of environmental magnetism and the application of environmental magnetism to interpreting sedimentary deposits.

**Gen Ed:** Tier 3 - Critical Thinking

**3370:445 Environmental and Engineering Geophysics (3 Credits)**

Prerequisite: 3650:261 or 3650:291 or permission of instructor. Corequisite: 3650:262 or 3650:292 or permission of instructor. Basic subsurface exploration using ground penetrating radar and multi-channel electrical resistivity. Applications in environmental assessment, civil engineering and geotechnical engineering. Field trips.

**3370:446 Exploration Geophysics (3 Credits)**

Prerequisites: 3450:223 and 3650:292. Basic principles and techniques of geophysical exploration with emphasis on gravimetric, magnetic, seismic and electrical methods and application to geological problems. Laboratory, field trips.

**3370:449 Borehole Geophysics (3 Credits)**

Basic principles and techniques of geophysical well logging with emphasis on electrical, radioactive, and sonic measures and their quantitative evaluation. Applications in oil, gas, and groundwater exploration. Laboratory.

**3370:450 Advanced Structural Geology (3 Credits)**

Prerequisite: 3370:350. Fundamental and advanced concepts of structural geology with emphasis on current and developing concepts. Laboratory, field trips.

**3370:451 Field/Lab Studies in Environmental Science (3 Credits)**

Field/Laboratory inquiry into a specific interdisciplinary, environmental science topic. Students complete a research project involving collecting, analyzing and interpreting real world data. (May be repeated once.)

**3370:452 Geology and Environmental Science Service Learning (1-3 Credits)**

Prerequisite: Permission of instructor. Team service-learning project that involves collection, organization, analysis, and presentation of data. Field trips. (May be repeated for a maximum of four credits.)

**Gen Ed:** Tier 3 - Complex Systems

**3370:453 Geology Field Camp I (3 Credits)**

Prerequisite: 3370:101, 3370:102, and permission of instructor. Introduction to collection and interpretation of field data and construction of geologic maps. Student will bear trip expenses.

**3370:454 Geology Field Camp II (3 Credits)**

Prerequisites: 3370:231, 3370:350, 3370:453, and permission of instructor. Advanced techniques and methods of field geology necessary for detailed geological maps and interpretation. Student will bear trip expenses.

**3370:455 Field Studies in Geology (1-3 Credits)**

Field trip course emphasizing aspects of geology not readily studied in Ohio. Includes pre-trip preparation and post-trip examination. Student will bear trip expenses. (May be repeated for a total of four credits.)

**3370:462 Macroevolution (3 Credits)**

Prerequisites: 3370:360 or 3100:111. Provides a comprehensive treatment of macroevolutionary theory, focusing on evidence from the fossil record. Topics include genetics, speciation, development, and fossil lineages. Laboratory.

**3370:463 Environmental Micropaleontology (3 Credits)**

Prerequisite: 3370:360. Introduction to techniques of micropaleontology as proxy indicators for environmental and climate change. Laboratory. Field trips.

**3370:465 Geomicrobiology (3 Credits)**

Prerequisites: 3150:151 and 3150:153. A course addressing the physiology, ecology, and activities of microorganisms that mediate important biogeochemical processes, and the interdisciplinary approaches to studying them.

**3370:470 Geochemistry (3 Credits)**

Prerequisites: 3370:101, 3370:230, 3150:151, and 3150:152. Application of chemical principles to the study of geologic processes. Laboratory, field trips.

**3370:472 Stable Isotope Geochemistry (3 Credits)**

Prerequisite: 3370:101 and 3370:102; 3150:151, 3150:152 and 3150:153; 3450:221. Application of stable isotope geochemistry to the study of hydrologic and carbon cycles, modern sedimentary environments, and the interpretation of sedimentary rocks.

**3370:474 Groundwater Hydrology (3 Credits)**

Prerequisite: 3370:101 or [3370:104 and 3370:211]. Origin, occurrence, regimen and utilization of groundwater. Qualitative and quantitative presentation of geological and geochemical aspects of groundwater hydrology. Laboratory, field trips.

**3370:480 Seminar in Environmental Studies (2 Credits)**

Discussion of specific environmental topic(s) from an interdisciplinary viewpoint; resource persons are drawn from the University and surrounding community.

**3370:481 Analytical Methods in Geology (2 Credits)**

Prerequisite: 3370:230, 3370:231. A survey of analytical methods used to solve geologic problems with emphasis on method selection, proper sample collection, analysis of data quality and data presentation.

**3370:484 Geoscience Research & Consulting Methods (2 Credits)**

Prerequisite: Must be a Geology Department graduate student or senior major in Geology, or have permission of instructor. Methods for finding, gathering, managing, and evaluating geoscience information. Emphasis on finding data sources (including electronic), creating valid data sets, visualizing data.

**3370:485 Individual Readings in Geology and Environmental Science (1-3 Credits)**

Prerequisite: Permission of instructor. (May be repeated for a total of 4 credits) Independent study and directed readings on a selected topic to fit an individual student's program.

**3370:490 Workshop in Geology and Environmental Science (1-4 Credits)**

Group studies of special topics in geology and environmental science. May not be used to meet undergraduate major requirements in the Department. May be used for elective credit only. (May be repeated for up to 4 credits.)

**3370:491 Internship in Geology and Environmental Science (1-3 Credits)**

Prerequisite: Permission of Department Chair. Supervised professional experience in geology or environmental science. Only three credits may be applied toward a degree in geology. (May be repeated for a total of six credits.)

**3370:497 Honors Project in Geology (1-3 Credits)**

(May be repeated for a total of six credits.) Prerequisite: permission of department honors preceptor, Honors student only. Exploration of research topics and issues in geology. Selection of research topic and writing of research paper in proper scholarly form under direction of faculty member.

**3370:498 Special Topics in Geology (1-3 Credits)**

Prerequisite: Permission of instructor. Special lecture courses offered once or only occasionally in areas where no formal course exists.

**3370:499 Research Problems in Geology (1-3 Credits)**

(May be repeated for a total of four credits) Prerequisite: Permission. Independent research leading to the completion of a written paper or presentation at a professional meeting.

## German (3530)

**3530:101 Beginning German I (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3530:102 Beginning German II (4 Credits)**

Sequential. Prerequisite: 3530:101 or equivalent. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3530:201 Intermediate German I (3 Credits)**

Sequential. Prerequisite: 3530:102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3530:202 Intermediate German II (3 Credits)**

Sequential. Prerequisite: 3530:201 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3530:301 German Conversation & Composition (3 Credits)**

Prerequisite: 3530:202 or equivalent. Advanced composition using German models, special attention to words and idioms, development of oral expression and conversational ability.

**3530:302 Special Topics in German Conversation & Composition (3 Credits)**

Prerequisite: 3530:202 or equivalent or permission of instructor. May be repeated for credit. Special attention to development of oral expression and conversational ability.

**3530:310 Sex, Violence, & Terror in German Fairy Tales (3 Credits)**

Exploration of historical context of German fairy tales and interpretation plus modern significance of texts according to Jungian archetypal psychology. Readings and discussions in English.

**3530:403 Advanced German Conversation & Composition (3 Credits)**

Prerequisite: 3530:302 or equivalent. Thorough analysis of syntax, morphology, phonetic principles and grammatical structure.

**3530:404 Advanced German Conversation & Composition (3 Credits)**

Prerequisite: 3530:302 or equivalent. Thorough analysis of syntax, morphology, phonetic principles and grammatical structure.

**3530:406 German Culture & Civilization (3 Credits)**

Prerequisite: 3530:302 or 3530:306 or equivalent. Particular emphasis on customs, traditions, literary trends and artistic tendencies that constitute German's contribution to Western civilization.

**3530:407 German Culture & Civilization (3 Credits)**

Prerequisite: 3530:302 or 3530:306 or equivalent. Particular emphasis on customs, traditions, literary trends and artistic tendencies that constitute German's contribution to Western civilization.

**3530:422 German: Special Topics in Advanced Language Skills or Culture or Literature (1-4 Credits)**

Prerequisite: 3530:202 or equivalent. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

**3530:497 Individual Reading in German (1-3 Credits)**

Prerequisite: 3530:202 and permission of department chair.

**3530:498 Individual Reading in German (1-3 Credits)**

Prerequisite: 3530:202 and permission of department chair.

## Health Care Office Management (2530)

**2530:230 Medical Coding/Billing Internship (3 Credits)**

Prerequisites: 2530:240, 2530:243, and 2530:258. Internship with focus on medical coding/billing. Familiarity with the revenue cycle in health care organization including any of the following processes: patient scheduling and registration, insurance eligibility verification, collection of co-pays, documentation and coding, charge processing, claim submission, payment processing, secondary billing/appeals, accounts receivable follow-up and/or collections.

**2530:240 Medical Coding - Diagnostic (3 Credits)**

Corequisite: 2750:120. Designed to instill the fundamental knowledge and practice needed to understand ICD-10-CM coding classification, the course helps develop essential basic-level diagnostic coding skills.

**2530:241 Health Information Management (3 Credits)**

This course provides a general understanding of health information management including the effective collection, analysis, and dissemination of quality data to support individual, organization, and social decisions related to disease prevention and patient care.

**2530:242 Medical Office Administration (3 Credits)**

Prerequisite: 2750:120. This course focuses on the health care workplace and emphasizes tools (including a computer-simulated office management program) to perform all front office responsibilities.

**2530:243 Medical Coding II - Procedural (3 Credits)**

Prerequisites: 2530:240 and 2750:120. This course will cover the statistical classification systems used to describe medical procedures in the health care field including Current Procedural Terminology (CPT), Health Care Procedure Coding System (HCPCS), and International Classification of Disease (ICD).

**2530:244 Medical Insurance Billing (3 Credits)**

Prerequisite: 2530:243. Third-party reimbursement and the completion of the standard health insurance claim form. Credit and collection policies and procedures related to the medical facility. Designed primarily to teach billing from an outpatient setting; however, basic hospital (inpatient) billing will also be covered.

**2530:255 Health Care Office Management & Medicolegal Issues (3 Credits)**

Prerequisites: Completion of 32 credit hours. This course will assist the student in developing knowledge and skills to manage a medical office practice including the fundamentals of personnel management, revenue management, practice enhancement, health information management, and medical law and ethics.

**2530:257 Health Care Office Finance (3 Credits)**

Prerequisites: 2420:211 and 2440:125. The purpose of the course is to help the student attain a sufficient level of understanding of the financial aspects of medical practice management. It will cover basic accounting practices including comparative income statements and balance sheets, revenue cycle management, relative value units, budgeting, ratio analysis, and financial management and reporting.

**2530:258 Internship Orientation and Career Development (3 Credits)**

For students planning their first internship in the Health Care office Management or Medical Billing program. Students will complete a self-assessment; demonstrate workplace competencies; develop a resume, letter of introduction, and professional portfolio; and practice job search strategies. Successful completion of the course culminates in a confirmed internship for the following semester.

**2530:259 Internship Orientation (1 Credit)**

Prerequisite: Permission. Prepares student for internship in Health Care Office Management and Health Care Administrative Assistant programs. Students will complete a self-assessment, demonstrate workplace competencies, and practice job search strategies.

**2530:260 Health Care Office Management Internship (3 Credits)**

Prerequisite: Permission. Health Care Office Management training within an appropriate health care facility for actual work experience and observation.

**2530:282 Medical Transcription and Editing (3 Credits)**

Prerequisites: 2540:119, 2540:144, and 2750:120. Corequisites: 2750:121 and 2750:230. Instruction on interpreting and transcribing medical language and healthcare documentation. Emphasis on medical terminology, pronunciation, punctuation, spelling, word usage, and English grammar skills.

**2530:284 Medical Office Techniques (3 Credits)**

Prerequisite: 2750:120. This course provides the students with an understanding of the clinical aspects of a medical practice to ensure safety for both the employee and the patient.

**2530:290 Special Topics in Health Care Office Management (1-4 Credits)**

Prerequisite: Permission. Selected topics or subject areas of interest in health care office management.

## Health Education (5570)

**5570:101 Personal Health (2 Credits)**

This course applies the current principles and facts pertaining to healthful, effective living, personal health problems, and needs of the student. Two hours lecture.

**5570:201 Foundations in Health Education (3 Credits)**

Prerequisite: 5570:101. History and philosophy of health education as a discipline; professionalism and administration in health education are considered.

**5570:202 Stress Management (3 Credits)**

Prerequisite: Sophomore standing. Course provides knowledge about the relationship between stress, physiological, psychological illness and disease, also how to manage stress in life activities.

**5570:322 Current Topics in Health Education (3 Credits)**

Prerequisites: 5570:101, 5570:201, and 5570:420. Skills needed to do research, teach, and present current health education topics in a factual and comfortable manner in schools and community. Three hours lecture. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5570:375 Program Planning and Evaluation (2 Credits)**

Prerequisites: 5570:101 and 5570:201. This course addresses the process of planning and evaluating health education programs within the school and community.



**5570:395 Field Experience: Health Education (1-3 Credits)**

Prerequisite: Permission of the advisor. On-site field experience will be conducted in an area related to pre-K-12 health education under the supervision of a faculty member. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5570:400 Environmental Aspects of Health Education (3 Credits)**

Prerequisite: Major or minor in health education and admission to the Sport Science and Wellness Program. A study of the interrelationships of ecosystems and a healthful environment. This course investigates many aspects of the environment and their influences upon the quality of human life. Students must be in the College of Education to take 300/400 level courses.

**5570:420 Community and Personal Health (3 Credits)**

Introduction of current public and personal health issues. Organizations and their roles in public and personal health programs. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5570:421 Comprehensive School Health (3 Credits)**

Prerequisites: 5570:101, 5570:201, and 5570:320. This course explains and presents comprehensive school health curricula for pre-k to 12. The three components of a comprehensive school health program are presented.

**5570:423 Methods & Materials Teaching Health Education (3 Credits)**

Prerequisites: 5570:101, 5570:201, 5570:420, 5100:210, 5100:211, 5500:310, 5500:311. Planning, organization, use of instructional resources and delivery of health education content and teaching process (pre K-12). Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5570:430 Senior Honors Project: Health Education (1-6 Credits)**

(May be repeated for a total of six credits) Prerequisites: Senior standing in Honors Program. Carefully defined individual study demonstrating originality and sustained inquiry. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5570:460 Practicum in Health Education (2-6 Credits)**

Prerequisite: Permission of the advisor. The practicum in Health Education is an on-site participation in a community health organization, agency or resource. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5570:497 Independent Study: Health Education (1-2 Credits)**

Prerequisite: Permission of the advisor. Analysis of a specific topic related to a current problem in health education. May include investigative procedure, research or concentrated practical experience.

## History (3400)

**3400:200 Empires of the Ancient World (3 Credits)**

Comparative study of the formation of ancient empires of the Afro-Eurasian world up to the rise of Islam.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Global Diversity

**3400:210 Humanities in the Western Tradition from Ancient Times to 1500 (3 Credits)**

Prerequisites: [3300:112 or 3300:114 or 2020:222] and sophomore or greater standing. Introduction to the human condition as manifested in ideas, religions, visual arts and music of Western civilization from ancient Mesopotamia and Egypt through the Italian Renaissance. Can be used to meet major requirements in History.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Critical Thinking

**3400:211 Humanities in the Western Tradition II (3 Credits)**

Prerequisite: 3400:210. Introduction to the human condition in the past as manifested in the ideas, religions, visual arts and music of Western civilization from the Protestant Reformation to the Present. Cannot be used to meet major requirements in History.

**3400:221 Humanities in the World since 1300 (3 Credits)**

Prerequisites: 3300:112 or 3300:114 or 2020:222 and sophomore standing. Introduction to the human condition as expressed in the ideas, religions, visual arts, and music of the world since 1300. Cannot be used to meet major requirements in History.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Global Diversity

**3400:250 U.S. History to 1877 (3 Credits)**

Historical survey from the Age of Discovery and North American colonization through the creation of the United States to the Civil War and Reconstruction.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

**3400:251 U.S. History since 1877 (3 Credits)**

Survey of United States history from the end of Federal Reconstruction to the present.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

**3400:285 World Civilizations: China (2 Credits)**

Prerequisite: Completion of [3300:112, or 3300:114, or 2020:222] or equivalent and a minimum of Sophomore standing or higher. Courses 285 through 291 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses cannot be used to meet major requirements in History.

**3400:286 World Civilizations: Japan (2 Credits)**

Prerequisite: Completion of [3300:112, or 3300:114, or 2020:222] or equivalent and a minimum of Sophomore standing or higher. Courses 285 through 291 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses cannot be used to meet major requirements in History.

**3400:287 World Civilizations: Southeast Asia (2 Credits)**

Prerequisite: Completion of [3300:112, or 3300:114, or 2020:222] or equivalent and a minimum of Sophomore standing or higher. Courses 285 through 291 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses cannot be used to meet major requirements in History.

**3400:288 World Civilizations: India (2 Credits)**

Prerequisite: Completion of [3300:112, or 3300:114, or 2020:222] or equivalent and a minimum of Sophomore standing or higher. Courses 285 through 291 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses cannot be used to meet major requirements in History.

**3400:289 World Civilizations: Middle East (2 Credits)**

Prerequisite: Completion of [3300:112, or 3300:114, or 2020:222] or equivalent and a minimum of Sophomore standing or higher. Courses 285 through 291 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses cannot be used to meet major requirements in History.

**3400:290 World Civilizations: Africa (2 Credits)**

Prerequisite: Completion of [3300:112, or 3300:114, or 2020:222] or equivalent and a minimum of Sophomore standing or higher. Courses 285 through 291 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses cannot be used to meet major requirements in History.

**3400:291 World Civilizations: Latin America (2 Credits)**

Prerequisite: A minimum of Sophomore standing or higher and [3300:112, or 3300:114, or 2020:222 or equivalent]. Courses 285 through 291 are designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses cannot be used to meet major requirements in History.

**3400:292 Global Societies: Africa (3 Credits)**

Prerequisites: Sophomore standing and no credit in both World Civ: Africa and Global Societies: Africa. This course surveys the major social, economic, political, and cultural transformations in Africa, and explores interconnected global histories in on regional context.

**Gen Ed:** Tier 3 - Global Diversity

**3400:294 Global Societies: India (3 Credits)**

Prerequisites: Sophomore standing and no credit in World Civilization and Global Societies. This course surveys the major social, economic, political, and cultural transformations in India, and explores interconnected global histories in one regional context.

**Gen Ed:** Tier 3 - Global Diversity

**3400:295 Global Societies: Japan (3 Credits)**

Prerequisites: Sophomore standing and no credit in World Civilization: Japan and Global Societies: Japan. This course surveys the major social, economic, political and cultural transformations in Japan, and explores interconnected global histories in one regional context.

**Gen Ed:** Tier 3 - Global Diversity

**3400:296 Global Societies: Latin America (3 Credits)**

Prerequisites: Sophomore standing and no credit in both World Civilizations: Latin America and Global Societies: Latin America. This course surveys the major social, economic, political, and cultural transformations in Latin America since 1492, and explores interconnected global histories in a regional context.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Global Diversity

**3400:297 Global Societies: Middle East (3 Credits)**

Prerequisites: Sophomore standing and no credit in both World Civilizations: Middle East and Global Societies: Middle East. This course surveys the major social, economic, political, and cultural transformations in the Middle East, and explores interconnected global histories in a regional context.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Global Diversity

**3400:300 Imperial China (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. Selective study of institutional, intellectual, political and artistic developments in Chinese civilization from antiquity to 18th century. Emphasis on general features of traditional Chinese culture.

**3400:301 Modern China (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. This course examines the domestic and global roots of China's 20th century modernization and their relationship to the challenges China now faces.

**3400:303 Modern East Asia (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. Exploration of domestic and global factors that shaped modern East Asia (Japan, China, Korea and Vietnam).

**3400:307 The Ancient Near East (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. Mesopotamia, Egypt; Israel, and neighbors to Persian Empire.

**3400:308 Greece (3 Credits)**

Prerequisite: Minimum of 32 credits or permission of the instructor. Minoans and Mycenaeans; classical Greece to triumph of Macedon.

**3400:310 Historical Methods (3 Credits)**

Introduction to historical research and writing. Required for history major.

**3400:313 Eastern Roman Empire (324-1453) (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Byzantine culture and history from 324 to the fall of 1453.

**3400:317 Roman Republic (3 Credits)**

Prerequisite: Minimum academic standing of a Sophomore or greater. An intensive survey of the Roman Republic. Attention will be given to the nature of the source material, ancient historiography, text criticism and the like.

**3400:318 Roman Empire (3 Credits)**

Prerequisite: Minimum of 32 credits or permission of the instructor. An intensive survey of the Roman Empire. Attention will be given to the nature of the source material, ancient historiography, text criticism and the like.

**3400:319 Medieval Europe, 500-1200 (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Migration of peoples, Carolingian revival, renewed invasions; social, economic and intellectual stirrings lead to birth of Europe.

**3400:320 Medieval Europe, 1200-1500 (3 Credits)**

Prerequisite: A minimum academic standing of Sophomore or higher. Middle Ages and the middle class; economic and political change, international wars, social unrest and religious crosscurrents.

**3400:321 Europe: Renaissance to Religious Wars, 1350-1610 (3 Credits)**

Prerequisite: A minimum academic standing of Sophomore or higher. Survey of the social, political, economic, religious, and intellectual history of Early Modern Europe from the Italian Renaissance to the early 17th century.

**3400:322 Europe: Absolutism to Revolution, 1610-1789 (3 Credits)**

Prerequisite: A minimum academic standing of Sophomore or higher. Survey of the social, political, economic, religious, and intellectual history of Early Modern Europe from the Thirty Years War to the French Revolution.

**3400:323 Europe from Revolution to World War, 1789-1914 (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Surveys the political, economic, social, and cultural history of modern Europe from the French Revolution to the First World War.

**Gen Ed:** Tier 3 - Critical Thinking

**3400:324 Europe from World War I to the Present (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. A survey of European political and social history from World War I to the present.

**Gen Ed:** Tier 3 - Global Diversity

**3400:325 Women in Modern Europe (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. A survey of the history of women in Europe since 1500, with emphasis on their roles and the changes attendant on modernization.

**3400:330 Modern Africa (3 Credits)**

This course will introduce major themes in modern African history, from the trans-Atlantic, slave trade, through the colonial and post-independence periods.

**3400:335 Russia to 1801 (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Survey of Russian history from Kievan period to death of Paul I, emphasizing development of autocratic government, Russian culture, reigns of Peter and Catherine.

**3400:336 Russia Since 1801 (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Survey of 19th and 20th centuries. Special emphasis on problems of modernization, the revolution and development of communism.

**3400:337 France from Napoleon to DeGaulle (3 Credits)**

Prerequisite: A minimum of Sophomore standing or permission of the instructor. Combines a study of Napoleon and DeGaulle with a survey of the political, economic, social, and cultural/artistic trends of modern French history.

**Gen Ed:** Tier 3 - Global Diversity

**3400:338 England to 1688 (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Survey of English history from the Anglo-Saxon conquest to the Revolution of 1688. Medieval and early modern institutions, social and cultural life.

**3400:339 England Since 1688 (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Survey of English history from 1688 to the present. The reform of English institutions and life, modernization of the economy, the welfare state, society and war.

**3400:340 Selected Topics in History (3 Credits)**

Prerequisite: A minimum academic standing of Sophomore or higher. Includes experimental offerings such as those crossing subject of chronological lines, and subjects not listed in this General Bulletin. See departmental office for current subject.

**3400:341 Islamic Fundamentalism & Revolution (3 Credits)**

Prerequisite: A minimum academic standing of Sophomore or higher. The political and socio-economic roots of Islamic reformism and militancy in the Middle East and North Africa since the 1960s.

**3400:342 The Crusades through Arab Eyes (3 Credits)**

Prerequisite: A minimum academic standing of Sophomore or higher. Political and military struggles, diplomatic practices and intellectual traditions of the Medieval Islamic/Arab world and the Western crusaders.

**3400:345 Native North American History (3 Credits)**

Prerequisite: minimum of 32 credits. The histories of Native Americans from Columbus to the present, emphasizing a half-millennium of adaptive responses to the presence of Europeans in North America.

**3400:350 U.S. Women's History (3 Credits)**

Prerequisite: a minimum of 32 credits History of American women's experiences and exploration of gender as a changing structure shaping American life from the colonial period through the 20th century.

**Gen Ed:** Tier 3 - Domestic Diversity

**3400:351 Global History: Encounters and Conflicts (4 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. This course explores historical encounters between societies to explain the development of the integrated economic, political, and cultural systems presently characterizing the modern world.

**3400:352 The American West (3 Credits)**

Prerequisite: a minimum of 32 credits. Examination of westward movement from revolution to closing of frontier; types of frontiers; impact of west on nation's development.

**3400:354 American Immigration (3 Credits)**

Prerequisite: a minimum of 32 credits. Examination of European migrants to American colonies and United States, their reasons for leaving Europe and coming to America, and their experience after arrival.

**3400:355 American Religious History (3 Credits)**

Prerequisite: a minimum of 32 credits. Addresses critical issues and figures in American religious history from the colonial era to present, including ways ideas have influenced political and judicial discourse.

**3400:356 Sports in American History Since 1865 (3 Credits)**

Prerequisite: a minimum of 32 credits. An examination of the reciprocal relationship between sports and various institutions of society: culture, religion, politics, education, economics, race, ethnicity, diplomacy and gender.

**3400:358 Urban America (3 Credits)**

Prerequisite: a minimum of 32 credits. This course looks at the significance of cities and urban development in shaping American society.

**3400:360 United States Military History (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Survey of United States military history from the colonial era to the present.

**3400:361 African American History, 1492-1877 (3 Credits)**

Prerequisite: Sophomore standing. This course focuses on African American history, culture and heritage from 1492 to 1877.

**3400:362 African American History, 1877 to Present (3 Credits)**

Prerequisite: Sophomore standing. This course focuses on African American history, culture and heritage from 1877 to present.

**3400:363 African American Men's History and Studies (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. This course will examine the experiences of African American Men from historical, socio-economic, philosophical, religious/spiritual, and psychological standpoints.

**3400:371 Selected Topics: North American History (3 Credits)**

Prerequisite: A minimum academic standing of Sophomore or higher. Selected topics addressing the history of North America (from the Rio Grande to the Arctic). Contact the department office concerning specific topics.

**3400:372 Selected Topics: European History (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. Selected topics addressing European history from the collapse of the Roman Empire to the present. Contact the department office concerning specific topics.

**3400:373 Selected Topics: Other (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. Selected historical topics on Africa, Asia, Latin America, the ancient world and world history. Contact the department office concerning specific topics.

**3400:377 History of Women in Latin America (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. Survey of changes and continuities in the lives of Latin American women since the colonial period; emphasis on gender, race, class in shaping women's experiences.

**Gen Ed:** Tier 3 - Global Diversity

**3400:378 Spanish Conquest and Colonization of the Americas (3 Credits)**

Prerequisites: A minimum of Sophomore standing or higher, or permission of the instructor. Course examines the conquest, colonization, and three-centuries-long Spanish rule in Latin America since 1492. Emphasis on culture, power inequalities, issues of identity, and memory.

**3400:379 Modern Latin America (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. This course examines the history of Latin America during the national period, ca. 1820s to the present. Focus on politics, economic systems, and nation-state formation.

**3400:381 History of Canada (3 Credits)**

Prerequisite: a minimum of Sophomore standing or permission of the instructor. Survey of Canadian history from the age of the explorers to the present. Special emphasis will be placed on the history of French-Canadians, on economic development and on Canadian-American relations.

**3400:382 The Vietnam War (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. An examination and evaluation of all aspects of the war in Vietnam, political, military, diplomatic and economic, including its impact domestically then and later.

**3400:392 Internship in History (1-3 Credits)**

Prerequisites: 64 credits, History major or minor, prior completion of 16 credits in History (not including Humanities in the Western Tradition or World Civilizations), minimum 2.5 history GPA, and permission of instructor. Individual field experience in applied history. May be repeated up to 6 credits; 4 credits to apply to the 32 credit minimum for a history major.

**3400:395 Modern Iran (3 Credits)**

Prerequisite: A minimum of 32 credits or permission of the instructor. This course on modern Iran explores the country's history of nationalism, identity, gender, and religion, and its place in world history.

**Gen Ed:** Tier 3 - Global Diversity

**3400:396 Iraq in Historical Perspective (3 Credits)**

Prerequisite: a minimum of 32 credits or permission of the instructor. This course will offer a complex and nuanced look into the history of Iraq and will situate current events firmly in their historical context.

**3400:397 Individual Study in History (1-3 Credits)**

(May be repeated for a total of four credits) Prerequisite: Permission. For individual study or research in history, including special projects, summer study tours or specialized training.

**3400:400 Gender and Culture in China (3 Credits)**

Prerequisite: A minimum of Sophomore standing or higher, or permission of the instructor. This course examines the dynamic between gender and culture from late imperial to post-socialist China, with connections drawn to public policies in different periods.

**3400:401 Japan & the Pacific War, 1895-1945 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. The rise of Japanese militarism, Japan's drive to create an empire in East and Southeast Asia, 1895-1945, and its role in the Pacific War, 1937-45.

**3400:404 Studies in Roman History (3 Credits)**

Prerequisite: Minimum of 48 credits or permission of the instructor. Concentrated investigation of selected topics, such as imperialism in middle and late Republic, the age of Augustus, or the fall of western Empire.

**3400:409 Imperial Spain, 1469-1700 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. This course examines the rise and fall of Spain as the first world power. It will cover Spanish political, cultural, and social history, 1469-1700.

**3400:410 History and Film (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Repeatable once with permission. Examines films as historical experiences, historical events, and artifacts of history. Themes and foci will vary.

**3400:416 Modern India (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. History of the Indian subcontinent from c. 1500 with emphasis on India society and culture, British imperialism, and the emergence of Indian nationalism.

**3400:417 Latin America and the United States (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Inter-American relations viewed from Latin American and U.S. perspectives; U.S. policy, imperialism, economic and cultural influences.

**3400:418 History of Brazil Since 1500 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Survey of the economic, political, social and cultural history of Brazil since 1500.

**3400:424 The Renaissance (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. The age of transition from the Middle Ages to modern times (1350-1600). Special emphasis on intellectual trends, the development of humanism, and the fine arts.

**3400:425 The Reformation (3 Credits)**

Prerequisite: Completion of a minimum of 48 credits or higher. Europe in 16th century; its religious, cultural, political and diplomatic development, with special emphasis on Protestant, Anglican and Catholic reformations.

**3400:429 Europe in the French Revolutionary Era-1789-1815 (3 Credits)**

Prerequisite: a minimum of Junior standing or permission of the instructor. Development of Revolution; Napoleon's regime and satellites.

**3400:438 Nazi Germany (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. This course covers the social, economic, and political history of Germany from World War I to 1945 with emphasis on the Third Reich.

**3400:440 Tudor & Stuart Britain, 1485-1714 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. An examination of the development of, and increasing links between the British kingdoms in the early modern period, with emphasis on culture, politics, and religion.

**3400:443 Churchill's England (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. An examination of the changes that Britain experienced during the life of Winston Churchill, 1874-1965. Emphasis is on cultural, social, and political developments.

**3400:451 Colonial American History (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. This course covers the history of colonial America from the first European contact in the Americas in 1492 to the onset of the American Revolution.

**3400:452 American Revolutionary Era (3 Credits)**

Prerequisite: Completion of a minimum of 48 credits or higher. The struggle for the rights of colonists and independence; the impact of war on American society and the creation of republican institutions.

**3400:453 The Early American Republic (3 Credits)**

Prerequisite: Completion of a minimum of 48 credits or higher. The evolution of the American republic from its early beginnings after the American Revolution to the antebellum era. Emphasis upon political, social, and cultural developments.

**3400:454 Civil War & Reconstruction, 1850-1877 (4 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Sectionalism, slavery and the causes of the Civil War; wartime activities of the Union and Confederacy; leading personalities; problems of reconstruction and the new Union.

**3400:455 Origins of Modern America, 1877-1917 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. United States from Reconstruction Era to World War I (1877-1920); emphasis on political responses to rise of an industrialized-urbanized society, the populist and progressive movements.

**3400:456 America in World Wars & Depression, 1917-1945 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. World War I and Versailles; the 1920s, the Great Depression and the New Deal; World War II.

**3400:457 The United States since 1945 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Nuclear age, cold war, foreign policy and domestic affairs to present. Social, political, constitutional, diplomatic, cultural and economic changes since 1945.

**3400:461 The United States as a World Power (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. The course analyzes the emergence and functioning of the United States as a world power, with particular emphasis on the 20th century.

**3400:463 United States Constitutional History Since 1870 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. This course examines the evolution of constitutional government from the drafting of the U.S. Constitution (1787) to present.

**3400:465 American Economy Since 1900 (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Survey of economic developments since 1900; topics include agriculture, business and labor. Special emphasis on role of big business and evolution of monetary and fiscal policy.

**3400:467 History of American Pop Culture (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Historical analysis of mass cultural phenomena and the social experiences associated with mass technologies that transformed modern America life in the 19th and 20th centuries.

**3400:468 African-American Social & Intellectual History (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Examination of black thought and activities reflective of African-American culture, conditions facing black people within America and efforts toward coordinated black activity.

**3400:469 African-American Women's History (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Study of black American women's lives from colonial times to the present featuring autobiographical. Fictional and secondary works authored by black women.

**3400:470 Ohio History (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Political, social, economic and intellectual history of Ohio, with special emphasis on Ohio's relationship to Old Northwest and to the nation.

**3400:471 American Environmental History (3 Credits)**

Prerequisite: a minimum of 48 credits completed or permission of the instructor. Utilization, conservation of natural resources from beginnings of American society to present; combination of economic, technological history of extensive treatment of public policy, environmental issues.

**3400:475 Mexico (3 Credits)**

History of Mexico from Indian civilizations to present with emphasis on relations with United States; social and political ramifications of the 20th Century Mexican revolution.

**3400:476 Central America & the Caribbean (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Selected aspects of the histories of Central American and Caribbean countries with emphasis on populist and peasant movements, political reform, social revolution, economic and under development, and relations with the United States.

**3400:483 History in Video Games (3 Credits)**

Prerequisite: Sophomore standing. Examines the presentation of history in video games analyzing them for accuracy, bias, structural limitations, and utility as teaching tools.

**3400:484 Museums and Archives (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. This course will focus on the work of history museums, historical societies and historic house museums and archives.

**3400:485 History, Communities, and Memory (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Course examines the interactions between the work of academic historians and the public in areas such as local history, monuments, oral history, film and the Internet.

**3400:487 Science and Technology in World History (3 Credits)**

Prerequisite: Completion of a minimum of 48 credits or higher. This course examines the development and diffusion of science and technology in human history, its impact on society, culture, and daily life.

**3400:489 Ottoman State and Society (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Explores political, economic, and social dynamics of one of the world's most enduring and expansive multiethnic empires.

**Gen Ed:** Tier 3 - Global Diversity

**3400:491 Honors Seminar in History (3 Credits)**

Prerequisite: Permission of department head or instructor. Selected readings; writing of research paper. For student seeking to graduate with honors in history and for student in Honors Program.

**3400:492 Honors Project in History (1-3 Credits)**

Prerequisite: 64 credits. An individual research project relevant to history, supervised by a member of the Department of History, culminating in an undergraduate thesis.

**3400:493 Special Studies: North American History (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Special studies in the history of North America (Rio Grande to Arctic). See department office for information on particular offerings.

**3400:494 Workshop in History (1-3 Credits)**

(May be repeated) Group studies of special subjects pertaining to history. May be used for elective credit only. May not be used to meet undergraduate or graduate major requirements in history.

**3400:495 Special Studies: European History (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Special studies in European history from the fall of the Roman Empire to the present. See department office for information on particular offerings.

**3400:496 Special Studies in History: Other (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. Special studies in the history of Latin America, Asia, Africa or the Pacific. See department office for information on particular offerings.

**3400:498 Race, Nation, and Class in the Middle East (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. This course analyzes identity politics and the development of the ideas of race, nation, and class in the Middle East from a historical perspective.

**3400:499 Women and Gender in Middle Eastern Societies (3 Credits)**

Prerequisite: a minimum of 48 credits or permission of the instructor. This course explores the multi-layered processes and dimensions, including texts, cultural values and practices, institutions, and events, which have shaped women's experiences in the Middle East.

**Gen Ed:** Tier 3 - Global Diversity

## Home Based Intervention Therapy (1820)

**1820:403 Home-Based Intervention Theory (3 Credits)**

Prerequisite: Admission to the Certificate Program. Overview of home based intervention to include philosophy and description of this programming as well as assessment of family, their home and community environment.

**1820:404 Home-Based Intervention Techniques & Practice (3 Credits)**

Prerequisite: 1820:403. Provides intervention techniques and skill areas required for home-based intervention and learning opportunities for matching techniques with specific family problems.

**1820:405 Home-Based Intervention Internship (3-5 Credits)**

Prerequisite: 1820:404. Gives students the opportunity to apply knowledge of home-based intervention in actual delivery process working with families in their homes under direct supervision of trained, experienced home based intervention therapists.

## Honors College (1870)

**1870:250 Honors Colloquium: Humanities (2 Credits)**

Prerequisite: admission to Williams Honors College. Interdisciplinary colloquium on important issues in humanities.

**1870:270 Honors Colloquium: Natural Science (2 Credits)**

Prerequisite: admission to Williams Honors College Interdisciplinary colloquium on important issues in natural sciences.

**1870:340 Honors Colloquium: Social Science (3 Credits)**

Prerequisite: admission to Williams Honors College. Interdisciplinary colloquium on important issues in social sciences.

**1870:350 Honors Colloquium: Humanities (3 Credits)**

Prerequisite: admission to Williams Honors College. Interdisciplinary colloquium on important issues in humanities.

**1870:360 Honors Colloquium: Social Science (2 Credits)**

Prerequisite: admission to Williams Honors College. Interdisciplinary colloquium on important issues in social sciences.

**1870:370 Honors Colloquium: Natural Science (3 Credits)**

Prerequisite: admission to Williams Honors College. Interdisciplinary colloquium on important issues in natural sciences.

**1870:450 Honors Colloquium: Humanities (2 Credits)**

Prerequisite: admission to Williams Honors College. Interdisciplinary colloquium on important issues in humanities.

**1870:460 Honors Colloquium: Social Science (2 Credits)**

Prerequisite: admission to Williams Honors College. Interdisciplinary colloquium on important issues in social sciences.

**1870:470 Honors Colloquium: Natural Science (2 Credits)**

Prerequisite: admission to Williams Honors College. Interdisciplinary colloquium on important issues in natural sciences.

## Hospitality Management (2280)

**2280:101 Introduction to Hospitality (3 Credits)**

Explores the various segments of the hospitality industry and introduces the knowledge and skills required for success.

**2280:120 Safety & Sanitation (2 Credits)**

This course covers an introduction to food service sanitation and safety practices pertinent to hospitality managers.

**2280:121 Fundamentals of Food Preparation (4 Credits)**

Prerequisite or Corequisite: 2280:120. Skills and basic knowledge of food preparation procedures in a laboratory situation.

**2280:122 A La Carte Cooking (4 Credits)**

Prerequisites: 2280:101, 2280:120, and 2280:121. Continuation of 2280:121. Food preparation techniques presented in laboratory situations for public consumption in a restaurant setting.

**2280:160 Wine & Beverage Service (3 Credits)**

Intensive examination of wine as related to hospitality industry. Emphasis on business practices. History and development of viticulture, enology.

**2280:230 Advanced Food Preparation (4 Credits)**

Prerequisites: 2280:101 and 2280:122. Lecture and demonstration followed by hands-on experience in the preparation of classical American dishes as well as cuisines and techniques from around the world.

**2280:232 Dining Room Service & Training (3 Credits)**

In-depth study of the styles of dining service, development of job descriptions, importance of courtesy, customer relations. Application of service techniques in restaurant environment.

**2280:233 Restaurant Operations & Management (4 Credits)**

Prerequisites: 2280:122, 2280:232 and 2280:245 for restaurant management option. Additional prerequisite: 2280:261 for culinary arts majors. Introduction to large quantity food service procedures with emphasis on sound principles of food handling service and sanitation in large quantity operations. Gourmet meals served in simulated restaurant atmosphere.

**2280:237 Internship: Hospitality Management (3 Credits)**

Prerequisite: Permission. Internship is an off-campus work experience in which the student applies concurrently learned concepts to practical situations within the hospitality industry.

**2280:240 Supervision in the Hospitality Industry (3 Credits)**

Prerequisite: 2280:101. Identifies various components of the hotel and food service operations and the role of managing human resources efficiently and effectively.

**2280:243 Food Equipment & Plant Operations (3 Credits)**

Prerequisite: 2280:120. Available food service equipment, its selection, use and care. Field trips taken to wholesale outlets and food service establishments to see food service equipment demonstrated and in operation.

**2280:245 Menu, Purchasing & Cost Control (4 Credits)**

Prerequisites: 2030:161 and 2280:101. This course integrates menu design and merchandising integrated with purchasing principles, specifications and receiving, as well as financial controls and procedures within the hospitality environment.

**2280:250 Front Office Operations (3 Credits)**

Prerequisite: 2280:101 with a grade of C or better. This course introduces the student to the functioning of the Front Office of a Hotel and expands student's knowledge of Hotel Operations.

**2280:256 Hospitality Law: Legal and Ethical Issues (3 Credits)**

Prerequisite: 2280:101. The course will address the critical legal and ethical issues in the hospitality industry.

**2280:261 Baking Fundamentals (3 Credits)**

Prerequisite: 2280:121 with a grade of C or better. Techniques and production of quick breads, yeast products, cakes, cookies, specialty desserts and pies. Emphasis on equipment, formulas, ingredient selection and product quality evaluation.

**2280:268 Revenue Centers (3 Credits)**

Prerequisite: 2280:101. An in-depth examination of the sales producing divisions of the hotel organization. The rooms, banquet, food and beverage, and special departments as well as their interconnections are studied.

**2280:278 Hospitality Industry Marketing (3 Credits)**

Prerequisite: 2280:101. Introduce various concepts of marketing, their application to the hospitality industry, and the key elements of a marketing plan.

**2280:280 Special Events Management (3 Credits)**

Prerequisites: 2280:101 and 2280:232. Defines scope and segmentation of convention and group business markets and develops related marketing strategies.

**2280:290 Special Topics: Hospitality Management (1-3 Credits)**

(May be repeated for a total of four credits) Prerequisite: Permission. Selected topics or subject areas of interest in food service management.

## Individualized Study (2100)

**2100:195 Individualized Study (1 Credit)**

Prerequisite: Admission to the Distinguished Student Program. Focused investigation of a specific topic mutually determined by the student and a supervising faculty member.

## Institute for Human Science and Culture (1900)

**1900:201 Curating Exhibits and Displays in Museums and Archives (3 Credits)**

Professionals in museums and archives design exhibitions and displays. Doing so requires working knowledge of visitors/researchers, educational initiatives, design approaches, institutional collections, policies and procedures, budgets, and cultural considerations, which this course addresses. Exhibition Curators may have backgrounds in art, anthropology, libraries, history, or other related fields.

**1900:245 ST: Human Science and Culture (3-6 Credits)**

Special project-based courses offered occasionally in areas where no formal course exists.

**1900:301 Foundations of Museums and Archives I (3 Credits)**

This course provides students with a basic set of skills that prepares them for work in the museum and archives professions. Topics covered include the role of museums and archives, handling and preservation, museum exhibit design and assessment, organizing and describing materials, policies and procedures, the relations, education and assessment, the research purposes museums and archives, and cultural considerations.

**1900:302 Foundations of Museums and Archives II (3 Credits)**

Prerequisite: 1900:301. Provides basic skills for working in museum and archives professions.

**1900:425 Practical Experience in Museums and Archives (1-3 Credits)**

Practical experience or independent reading/research in museums/archives, or related to human science and culture under the supervision and evaluation of a selected faculty member.

## Institute for Life Span Development and Gerontology (3006)

**3006:450 Interdisciplinary Seminar in Life-Span Development & Gerontology (2 Credits)**

(May be repeated for a total of two credits) Prerequisite: Permission of instructor. Introduction to interdisciplinary study of gerontology including discussion of dimensions of aging, historical framework of aging in America, demographics, service systems, and current issues.

**3006:485 Special Topics in Life-Span Development & Gerontology (1-3 Credits)**

Prerequisite: Permission of instructor. Specialized topics and current issues in life-span development or gerontology. Covers content or issues not currently addressed in other academic courses.

**3006:486 Retirement Specialist (2 Credits)**

An investigation of issues related to the design and implementation of pre-retirement planning and examination of life-span planning education as employed by labor, business and education.

**3006:490 Workshop in Life-Span Development & Gerontology (1-3 Credits)**

(May be repeated) Group studies of special topics in life-span development and gerontology. May not be used to meet certificate requirements. May be used for elective credit only.

**3006:495 Practicum in Life-Span Development & Gerontology (1-3 Credits)**

(May be repeated) Prerequisite: permission. Supervised experience in research or community agency work.

## Interdisciplinary - Polymer Science and Polymer Engineering (9821)

**9821:201 Introduction to Polymer Science (3 Credits)**

Prerequisites: 3150:151 and 3450:221. Introduction to the field of polymer science including molecular weight distributions, polymerization, chain statistics, polymer mixtures, rubber elasticity, polymer glasses, semi-crystalline polymers and viscoelasticity.

**9821:202 Introduction to Polymer Engineering (3 Credits)**

Prerequisites: 3450:222 and 3650:291. Introduction to the field of polymer engineering including classification of polymer materials, mechanical properties, fundamentals of polymer melt flow, polymer processing operations and compounding.

**9821:281 Polymer Science for Engineers (2 Credits)**

Prerequisites: 3150:151 and 3150:152. Chemical bonds and structure of organic molecules, polymer chain structure, amorphous and crystalline morphology and structural characterization, polymerization and copolymerization, experimental demonstrations, typical solid-state and flow properties.

**9821:301 Polymer Materials Science and Engineering (3 Credits)**

Corequisites: 3150:313 or 3650:340 or 4600:300 or permission. Materials science and engineering of polymers. Topics covered are the phase behavior and morphology of polymer solutions and blends, glassy polymers, polymer crystallization, materials characterization and multi-component polymer materials.

**9821:310 Impacts of Polymers on Modern Life (3 Credits)**

Prerequisite: High school chemistry of equivalent. Qualitative introduction to plastics and polymers, intended for non-science majors. Course explores the history and use of polymers in commercial products including food, cosmetics, and medicine. The course will also explore the socioeconomic trade-offs in the use of polymers, where quality of life, food safety, lifesaving technologies are weighed against environmental and health impacts.

**Gen Ed:** Tier 3 - Complex Systems

**9821:381 Polymer Morphology for Engineers (3 Credits)**

Prerequisites: 9821:281, 3150:151, 3650:292. Fundamental understanding of solid structure, crystallography and morphology, processed polymers, co-polymers and their blends.

## Interior Design (7300)

**7300:158 Introduction to Interior Design (3 Credits)**

Introduction to interior design studies with emphasis on developing basic skills and competencies required for residential design.

**7300:225 Textiles (3 Credits)**

Basic study of natural and manufactured fibers. Emphasis on physical properties, selection and care. Attention given to design and manufacture of textiles. Lecture/Laboratory.

**7300:257 Autocad for Interior Design (3 Credits)**

Prerequisite: 7300:158 or permission from instructor. An introductory course in computer drafting as an alternative to conventional drafting for interior design applications.

**7300:258 Light in Man-Made Environments (3 Credits)**

Prerequisites: 2940:250. Comprehensive study of the essential principles of light in a three-dimensional context for man-made environments.

**7300:259 Family Housing (3 Credits)**

A study of three basic aspects of family housing: physical/design, financial/legal, and sociological.

**7300:331 Interior Design Theory (3 Credits)**

Prerequisites: 7300:158 and 7100:144. A comprehensive study of interior design theories and application in the built environment.

**7300:333 Programming and Space Planning (3 Credits)**

Prerequisites: 7300:158 and 7300:257. A comprehensive study of space planning principles and the programming phase of the design process.

**7300:334 Specifications for Interiors I (3 Credits)**

Prerequisites: [7300:225 or 7350:225] and 7300:258. A comprehensive study of composition, characteristics, manufacture, dimensions and use, bi-products, installation, and specifications of interior construction materials.

**7300:335 Materials and Methods (3 Credits)**

A comprehensive study of interior finish material with emphasis on soft goods and textiles, selection criteria, estimating, and writing specifications.

**7300:336 Professional Practices (3 Credits)**

Study of the business of interior design to include initiating and maintaining a successful practice in residential or non-residential design.

**7300:337 Interior Design Contract Documents (3 Credits)**

Prerequisites: 7100:492. A comprehensive study of contract documents and work drawings required for the design of interior spaces. Emphasis on three-dimensional representation.

**7300:338 Introduction to REVIT for Interior Design (3 Credits)**

This is an introductory course in second generation parametric computer drafting as an alternative to conventional or older CAD programs for interior design applications.

**7300:418 History of Interior Design I (4 Credits)**

The study of furnishings, interiors, and architecture from antiquity through the eighteenth century, with emphasis on the social-cultural influences shaping their development.

**7300:419 History of Interior Design II (4 Credits)**

The study of nineteenth- and twentieth-century furnishings, interiors, and architecture, with emphasis on the social-cultural influences shaping their development.

**7300:421 Special Problems in Family & Consumer Sciences (1-3 Credits)**

Additional study or apprentice experience in specialized field or preparation; group and individual experimentation.

**7300:422 Textiles for Interiors (3 Credits)**

Prerequisite: 7300:225 or 7350:225. Evaluation of physical, aesthetic, comfort, care and durability properties of textile products and testing procedures to determine suitability for interiors.

**7300:433 Interior Design Studio I (3 Credits)**

Prerequisite: 7300:333. A comprehensive study of residential design with emphasis on conceptual, analytical and graphic skills.

**7300:434 Interior Design Studio III (3 Credits)**

Prerequisite: 7300.333. Advanced space planning and problem solving experiences for application in nonresidential design.

**7300:435 Decorative Elements in Interior Design (1 Credit)**

Prerequisites: 7300:334, 7300:335, 7300:337, [7300:418 or 7350:418], [7300:419 or 7350:419] and [7300:422 or 7350:422]. The selection and application of decorative elements in the built environment.

**7300:447 Senior Seminar: Critical Issues in FCS Professional Develop (1 Credit)**

Prerequisites: FCS major & senior standing. Consideration of family and consumer sciences as a profession and its impact on the quality of life of individuals, families and their environments. Analysis of challenges facing the profession and all home economists.

**7300:450 Families, Individuals & Environments (3 Credits)**

Prerequisites: Family Consumer Sciences major and senior standing or completion of 90 credits. Integrative exploration of issues affecting the well-being of individuals, families, and communities in the multiple environments in which they function.

**7300:458 Senior Design Studio II (3 Credits)**

Prerequisites: 7300:334, 7300:335, 7300:336, 7300:337 and [7300:422 or 7350:422]. A comprehensive study of the nonresidential design with emphasis on conceptual, analytical and graphic skills.



**7300:459 Interior Design Studio IV (3 Credits)**

Prerequisite: 7300:333. Advanced space planning and problem solving experiences for application in residential and nonresidential design.

**7300:478 Senior Portfolio Review (1 Credit)**

Prerequisite: Permission of instructor. The development of the interior design portfolio.

**7300:479 The NCIDQ Examination (1 Credit)**

Prerequisite: Permission of Program Director. The course is designed to help candidates prepare for the National Council for Interior Design Qualification Examination.

**7300:485 Seminar in Family & Consumer Sciences (1-3 Credits)**

Exploration and evaluation of current developments in selected areas.

**7300:494 Internship: Family and Consumer Sciences (1-6 Credits)**

Prerequisite: Permission of the instructor. In depth field experience in business, industry, or community agencies relating to the student's area of specialization.

**7300:497 Internship: Family & Consumer Sciences (2-6 Credits)**

Prerequisite: Permission of instructor. In-depth field experience in business, industry or community agencies related to student's area of specialization.

**7300:499 Senior Honors Project in Family & Consumer Sciences (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and approval of honors preceptor. Individual study supervised by adviser. Student and preceptor develop goals, objectives and methodology.

## International Business (6800)

**6800:305 International Business (3 Credits)**

Prerequisites: 48 hours of college credit. A basic course in international business which can also provide a platform for more specialized business courses.

**6800:406 Travel Abroad (0 Credits)**

Prerequisite: Must have been admitted to a major in a four-year degree granting college. Approved travel to a foreign country per the requirements of the International Business major.

**6800:421 Foreign Market Entry (3 Credits)**

Prerequisites: Must have been admitted to a major in a four-year degree granting college and 6800:305. A study of the business processes and procedures associated with successful foreign market entry. International Business practices around the world related to successful and unsuccessful entry are compared and contrasted. Letters of Credit, Import/Export Documentation and Global Shipping Standards are examined.

**6800:422 Foreign Market Distance Analysis (3 Credits)**

Prerequisites: Must have been admitted to a major in a four-year degree granting college, 6800:305, and 6800:406. The cultural, administrative, geographic, and economic difference between home and host countries can dramatically impact the success of foreign market entry by the home country. Students will learn how to successfully identify and respond to these differences.

**6800:492 Internship in International Business (3 Credits)**

Prerequisite: Permission of department chair. On-the-job experience with public or private sector organizations in the field of marketing. On-the-job learning objectives are established by the sponsoring organization and approved by the department chair. Field experiences are augmented by a weekly diary and a term paper, which are supervised and evaluated by the department chair.

**6800:496 Special Topics: International Business (1-3 Credits)**

(May be repeated for a total of three credits) Prerequisite: Permission of instructor. Provides the opportunity to study special topics and current issues in international business. Note: Other international business courses are offered under departmental course numbers. They are 6200:408, 6400:323, 6400:481, 6500:457, 6500:459 and 6600:385.

## International Development (3004)

**3004:201 Introduction to International Development (3 Credits)**

Uses multiple perspectives: economic, geographical, anthropological, political etc. to study relationships between industrialized and developing countries, poverty, productivity, justice and other aspects of development.

**3004:401 International Development Project (3 Credits)**

Prerequisites: 21 credits towards International Development Certificate. Research project to be carried out abroad. Students must arrange international experience through channels outside the Certificate program. Project report is capstone requirement of Certificate.

## Italian (3550)

**3550:101 Beginning Italian I (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3550:102 Beginning Italian II (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3550:201 Intermediate Italian I (3 Credits)**

Sequential. Prerequisite: 3550:102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3550:202 Intermediate Italian II (3 Credits)**

Sequential. Prerequisite: 3550:102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3550:301 Italian Composition & Conversation (3 Credits)**

Prerequisite: 3550:202 or equivalent. Italian composition using Italian models, special attention to words and idioms and development of oral expression and conversational ability.

**3550:302 Italian Composition & Conversation (3 Credits)**

Prerequisite: 3550:202 or equivalent. Italian composition using Italian models, special attention to words and idioms and development of oral expression and conversational ability.

**3550:422 Italian: Special Topics in Advanced Language Skills, or Culture, or Literature (1-4 Credits)**

Prerequisite: 3550:202 or equivalent. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

**3550:497 Individual Reading in Italian (1-3 Credits)**

Prerequisite: 3550:202 and permission of the department chair.

## Japanese (3560)

**3560:101 Beginning Japanese I (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing, and listening comprehension skills.

**3560:102 Beginning Japanese II (4 Credits)**

Sequential. Prerequisite: 3560:101 or equivalent. Acquisition of basic reading, speaking, writing, and listening comprehension skills.

**3560:201 Intermediate Japanese I (3 Credits)**

Sequential. Prerequisite: 3560:102 or equivalent. Continuing development of reading, writing, speaking, and listening comprehension skills.

**3560:202 Intermediate Japanese II (3 Credits)**

Sequential. Prerequisite: 3560:201 or equivalent. Continuing development of reading, writing, speaking, and listening comprehension skills.

**3560:210 Japanese Culture through Film (3 Credits)**

Prerequisites: A minimum of Sophomore standing or higher and completion of English Composition I and II (3300:111 and 3300:112) or equivalent. Exploration of various aspects of Japanese culture through viewing of films. Films are subtitled in English. Readings and discussions in English.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Global Diversity

**3560:301 Advanced Intermediate Japanese I (3 Credits)**

Prerequisite: 3560:202 or placement. Course focuses on intermediate-advanced speaking, listening, writing, and reading skills in Japanese, as well as cultural proficiency.

**3560:422 Special Topics in Language Skills, or Culture, or Literature (3 Credits)**

Prerequisite: 3560:202 or equivalent. (May be repeated). Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

**3560:497 Individual Reading in Japanese (1-3 Credits)**

Prerequisite: 3560:202 or permission of the department chair. Directed study in an area of individual interest chosen by the student in consultation with the instructor.

## Latin (3510)

**3510:101 Beginning Latin I (4 Credits)**

Sequential. Reading, writing and translation; oral and written drill; analysis of grammatical structure and English vocabulary building.

**3510:102 Beginning Latin II (4 Credits)**

Sequential. Prerequisite: 3510:101 or equivalent. Reading, writing and translation; oral and written drill; analysis of grammatical structure and English vocabulary building.

**3510:190 The Making of English Words from Latin and Greek Elements (3 Credits)**

The influence of Latin and Greek on English vocabulary with some attention to the use of these languages in the scientific and legal fields. No foreign language is necessary.

**3510:201 Intermediate Latin I (3 Credits)**

Prerequisite: 3510:102 or equivalent. A survey of readings of the less difficult authors such as Pliny, Caesar, Plautus, Cicero's Letters or equivalent material.

**3510:202 Intermediate Latin II (3 Credits)**

Prerequisite: 3510:201 or equivalent. A survey of readings of the less difficult authors such as Pliny, Caesar, Plautus, Cicero's Letters or equivalent material.

**3510:303 Advanced Latin I (3 Credits)**

Prerequisites: 3510:202 or equivalent. Satirists, dramatists, philosophical, religious writers, lyric and elegiac poets, medieval writers. (May be repeated for credit with change of subject)

**3510:304 Advanced Latin II (3 Credits)**

Prerequisites: 3510:202 or equivalent. Satirists, dramatists, philosophical, religious writers, lyric and elegiac poets, medieval writers. (May be repeated for credit with change of subject)

**3510:497 Latin Reading & Research (3 Credits)**

Generally Latin epigraphy, prose composition or philology; numismatics or certain other archaeological topics may be offered. (May be repeated for credit with change of subject)

**3510:498 Latin Reading & Research (3 Credits)**

Generally Latin epigraphy, prose composition or philology; numismatics or certain other archaeological topics may be offered. (May be repeated for credit with change of subject)

## Management (6500)

**6500:254 Global Experience (1-3 Credits)**

Prerequisite: 28 credit hours completed. Provides an opportunity for students to learn from faculty expertise in the context of a foreign country. International management practices are examined and aspects of local culture are studied.

**6500:301 Management: Principles & Concepts (3 Credits)**

Prerequisites: 48 completed credit hours. An interdisciplinary approach to the study of the basic principles of general management theory and practice.

**6500:302 Organizational Behavior & Leadership Skills (3 Credits)**

Prerequisite: 6500:301. Investigation of applications of behavioral and social sciences as they relate to individual, group behavior in organizations.

**6500:304 Business Statistics (3 Credits)**

Prerequisites: [3450:145 with a grade of C- or better or higher math] and 6200:250. Introduces statistical methods to support quantitative decision analysis for solving business problems. Includes probability, sampling, estimation, hypothesis testing, analysis of variance. Utilizes case studies.

**6500:305 Business Analytics (3 Credits)**

Prerequisites: 6500:304. Studies core statistical techniques; data retrieval, analysis and mining; and decision modeling to effectively persuade in the project-oriented world of data-driven decisions.

**6500:310 Business Information Systems (3 Credits)**

Prerequisites: Completion of 48 credit hours and [6200:250 or admission to the Computer Science major]. Provides a technical and organizational foundation for understanding the use and importance of information systems and information technology in today's business environment.

**6500:315 Applications Development for Business Processes (3 Credits)**

Prerequisites: 6200:250 and 48 completed hours. Analysis and automation of business operations and processes. Development of applications based on a simulated enterprise-wide database.

**6500:324 Database Management for Information Systems (3 Credits)**

Prerequisites: 6200:250 and 48 completed hours. An introduction to database design and management, including data modeling, relational theory, Structured Query Language, and database applications, development, using database management systems.

**6500:325 Systems, Analysis, & Design (3 Credits)**

Prerequisites: 6500:315. An introduction to the techniques of business modeling, systems design, and implementation, including the application of software engineering tools in support of modeling and code generation.

**6500:330 Principles of Supply Chain and Operations Management (3 Credits)**

Prerequisites: Completion of 32 credit hours. An overview of the terminology, fundamental concepts and scope of responsibility encountered in the fields of supply chain and operations management.

**6500:333 Supply Chain and Operations Analysis (3 Credits)**

Prerequisites: [6500:222 or 6500:304] and 6500:330. Application of quantitative models in the analysis and design of systems in the supply chain and in manufacturing and service operations environments.

**6500:334 Service Operations Management (3 Credits)**

Prerequisite: 6500:330. An overview of the fundamental terminology, principles, concepts and problem solving methods encountered in the contemporary field of service operations management.

**6500:341 Human Resource Management (3 Credits)**

Prerequisite: one course in psychology or sociology. Pre/Corequisite: 6500:301. Principles, policies, and practices in administering functions of recruiting, selecting, training, compensating, and appraising human resources of organizations.

**6500:342 Employee and Labor Relations (3 Credits)**

Prerequisite: 64 completed credit hours. Pre/Corequisite: 6500:341. Analysis of management, union and employee objectives, attitudes and strategy, as they affect conduct of business and economy. Stress placed on group assigned readings and reports.

**6500:350 Fundamentals of Enterprise Resource Planning (3 Credits)**

Prerequisites: 6200:250 Computer Applications for Business and 48 completed credit hours. The enterprise wide process of decreasing operating costs, rationalizing the supply chain, improving management control, and decreasing cycle time by implementing ERP based solutions.

**6500:390 Supply Chain Modeling and Decision Making (3 Credits)**

Prerequisites: 6200:250, [6500:304 or 6500:221], and 6500:330. Spreadsheet based, example-driven approach to develop models and methodologies for supply chain analysis and decision making.

**6500:410 Selected Topics in Entrepreneurship (1-3 Credits)**

Prerequisites: Must be admitted to a major in a four-year degree granting college, upper-college or graduate standing, and [6500:301 or 6500:600] or equivalent. Facilitates comparative international study of entrepreneurship, introduction of entrepreneurship to large organizations, or application of student's entrepreneurial skills. Six hour limit.

**6500:420 Data Networks and Security (3 Credits)**

Prerequisites: Must be admitted to a major in a four-year degree granting college, 6500:310, and upper level standing. Principles of the design and management of data networks for business communications.

**6500:421 Operations Research (3 Credits)**

Prerequisites: Must be admitted to a major in a four-year degree granting college and 6500:330. Examines the use of operations research techniques in managerial decision-making processes; constrained linear optimization, non-linear optimization, network analysis, queuing theory, simulation.

**6500:425 Decision Support with Data Warehousing & Data Mining (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, [6500:324 and 6500:305] or [6500:221 and 6500:222]. Examines managerial and technical aspects of business decision-making based on the use of data warehouses, on-line analytical processing (OLAP) and data mining.

**6500:426 E-Business Application Development (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, 6200:250, and upper level standing. Students will gain an understanding of issues and skills related to web application design and development.

**6500:427 Systems Integration (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college and 6500:315. The course provides an understanding of issues and underlying application integration. Topics include coverage of middleware technologies, B2B standards and XML.

**6500:428 Systems Development Project (3 Credits)**

Prerequisites: 6500:324 and 6500:325. Pre/Corequisite: 6500:427. Implementing business objects and use cases in projects. Object persistence, object collaboration, and controller and UI designs are discussed.

**6500:433 Supply Chain Logistics Planning (3 Credits)**

Prerequisites: Upper level standing, admission to a major in a 4-year degree granting college, and 6500:330. Emphasizes the importance of planning in the development of the domestic and global supply chain logistics system that includes transportation, inventory, warehousing and procurement.

**6500:434 Production Planning & Control (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, upper level standing, and 6500:333. Coverage of materials management, production planning, scheduling and control. Integrates material from previous courses, provides overall framework including use of computer and quantitative methods.

**6500:435 Quality Management & Control (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, upper level standing, and 6500:330. Emphasis on statistical techniques essential to controlling product quality for both measurement and attribute data. Includes control chart methods and acceptance sampling plans.

**6500:441 Training and Development (3 Credits)**

Prerequisites: Admission to a major in a 4-year degree granting college and 6500:341. Comprehensive study of employee training and development methods and practices including performance analysis, design, development, implementation and evaluation.

**6500:442 Compensation Management and Reward Systems (3 Credits)**

Prerequisites: Admission to a major in a 4-year degree granting college, junior standing and 6500:341. This course focuses on the development, implementation, and assessment of a business firm's compensation and reward system.

**6500:443 Human Resources Selection & Staffing (3 Credits)**

Prerequisites: Upper level standing, admission to a major in a 4-year degree granting college, and 6500:341. Advanced study of selection and staffing within business organizations. Emphasis on current research and practice. Activities include projects, case studies, interaction with human resource professionals.

**6500:457 International Management (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college; upper level standing and 6500:301 or equivalent. Management practices and techniques of international business organizations. Focus on structure and processes of resource allocation, design and technology, and the impact of culture.

**6500:458 Special Topics in Managerial Arbitration, Mediation & Conciliation (1-3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, upper level or graduate standing and [6500:301 or 6500:600 or equivalent]. Study of the various methods and mechanisms by which management can understand and deal with internal and external conflict. Six hour limit.

**6500:459 Selected Topics: International Management (1-3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, upper level standing, 6500:301 or equivalent, and 6500:457. Selected topics in international management focus on historical or contemporary managerial, production and organizational issues. Includes international simulation game. Six hour limit.

**6500:460 Special Topics in Management (3 Credits)**

Prerequisite: Must be admitted to a major in a 4-year degree granting college. Exploration of advanced topics of interest both to the student and professor. Many special applications, case studies, outside speakers, projects in conjunction with local industries.

**6500:471 Management Consulting Project (3 Credits)**

Prerequisites: Admitted to the Human Resources Management major, 6500:302, 6500:310, 6500:342, 6500:442, and 6500:443. Students develop skills in field-based management problem solving, project management, and requirements analysis under conditions of uncertainty in a collaborative interdisciplinary team environment.

**6500:475 Supply Chain Operations Strategy (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, 6500:302, 6500:310, 6500:333, and 6500:390. Pre/Corequisites: 6500:433 and 6500:476. Capstone course integrating supply chain concepts to solve real world supply chain problems primarily using a case study approach.

**6500:476 Supply Chain Sourcing (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college and 6500:330. Introduces the student to fundamental sourcing concepts as well as the scope of responsibility and critical roles of the sourcing function within the principal organization in a supply chain network.

**6500:477 Management Simulation (1 Credit)**

Prerequisite: 6500:301. Simulation of management practices through computerized game or experiential exercise.

**6500:478 Human Resource Simulation (1 Credit)**

Prerequisite: 6500:341. Simulation of human resource practices through computerized or experiential exercises.

**6500:479 Operations Simulation (1 Credit)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college and 6500:333. Simulation of operations management practices through computerized or experiential exercises.

**6500:480 Introduction to Health-Care Management (3 Credits)**

Prerequisites: Must be admitted to a 4-year degree granting college and hold at minimum a junior standing or higher (Students who are required to take 6500:301 or have completed 6500:301 or equivalent are ineligible to take this course for credit). Introductory course for health professionals covering principles and concepts of management applied to health services organizations. For those registered for graduate credit, a major paper is required.

**6500:482 Health Services Operations Management (3 Credits)**

Prerequisites: Must be admitted to a major in a 4-year degree granting college, [upper level standing and 6500:301 or 6500:480 or equivalents], or [graduate standing and 6500:580 or equivalent]. (Students who have completed 6500:330 are ineligible to take this course for credit). Application of production and operations management concepts and techniques in health services organizations.

**6500:485 Special Topics: Health Services Administration (1-3 Credits)**

Prerequisite: Must be admitted to a major in a 4-year degree granting college. Special topics in health services administration (e.g., management) focusing on historical and/or contemporary managerial organizational and/or policy/strategy issues as related to health-care organizations and health-care systems. Separate topics may be repeated for a maximum of six credits. For those registered for graduate credit, a major research paper is required.

**6500:486 Internship in Supply Chain/Ops (3 Credits)**

Prerequisite: Permission of department chair or designated faculty member. On the job experiences with public or private sector organizations.

**6500:487 Internship in Human Resources (3 Credits)**

Prerequisite: Permission of department chair or designated faculty member. On the job experiences with public or private sector organizations.

**6500:488 Internship in Information Systems (3 Credits)**

Prerequisite: Permission of department chair or designated faculty member. On the job experience with public or private sector organizations.

**6500:490 Strategic Management (3 Credits)**

Prerequisites: Admission to a major in the CBA, 97 credits in which 15 crd hrs, or half of major credits must be completed, 6100:230, 6200:201, 6200:202, 6200:250, [6400:220 or 6400:321 or 6200:424], 6400:301, 6500:301, 6500:304, [6500:305 or 3250:325], 6500:330, 6600:205, and 6800:305. Capstone course. Integrates the core business disciplines (accounting, economics, finance, management, marketing) through the use of case analysis. Objective and strategy formulation from an administrative viewpoint and international dimension. Emphasis on oral and written communications.

**6500:491 Workshop in Management (1-3 Credits)**

Prerequisite: Must be admitted to a major in a 4-year degree granting college. (May be repeated with permission of instructor or department) Group studies of special topics in management. May not be used to meet undergraduate major requirements in management. May be used for elective credits only.

# Manufacturing Engineering Technology (2880)

## 2880:100 Basic Principles of Manufacturing Management (4 Credits)

A survey of basic concepts of management and their interrelationships to a manufacturing environment. Includes production control, quality control, work measurement, and employee motivation.

## 2880:101 Introduction to Advanced Manufacturing (2 Credits)

This course defines advanced manufacturing and provides students with an overview of the knowledge, skills, and abilities necessary to succeed in an advanced manufacturing career.

## 2880:110 Manufacturing Processes (3 Credits)

Study of the machines, methods, and processes used in manufacturing.

## 2880:130 Work Measurement & Cost Estimating (3 Credits)

Prerequisite: 2030:152. Time and motion study. Development of accurate work methods and production standards, and their relationship to manufacturing cost estimates.

## 2880:140 Computer Aided Drawing (3 Credits)

Drafting procedures and techniques used for creating drawings using AutoCAD software. Topics include basic components, drawing, editing, dimensioning, layers, text, blocks, plotting, and hatch.

## 2880:151 Industrial Safety & Environmental Protection (2 Credits)

A contemporary overview of the science and management of occupational health and safety programs, policies, and procedures in an industrial and business type environment.

## 2880:201 Robotics & Automated Manufacturing (3 Credits)

Prerequisite: 2880:100 or permission of instructor. Study of manufacturing automation and the computer-based products and processes available for this task. Robots, machine controllers, and machine/process interfaces are investigated.

## 2880:211 Manufacturing Operations (3 Credits)

A study of all functions involved in a manufacturing production system. Areas covered include product design, forecasting, capacity planning, scheduling, materials management, and project management.

## 2880:225 Computer Aided Tool Design (3 Credits)

Prerequisite: 2880:140 or 2920:121. The study of standard tool design practices and procedures utilizing industry-standard computer-aided design software.

## 2880:230 3-D Modeling & Design (3 Credits)

Prerequisite: 2940:210. This course covers advanced topics in the use of AutoCAD. These topics include 3-D modeling. Laboratory.

## 2880:232 Labor Management Relations (3 Credits)

Prerequisite: 2880:100. Study of historical background of labor movement, management viewpoints, legal framework for modern labor organizations and collective bargaining process.

## 2880:241 Introduction to Quality Assurance (3 Credits)

Prerequisite: 2030:152. Theory and practice of inspection and sampling techniques for measurement of quality, QC charts, sampling plans, mill specs, checking machine capabilities, and setting tolerances.

## 2880:248 Introduction to CNC and Additive Manufacturing (3 Credits)

Prerequisites: 2030:153 and [2880:140 or 2920:121] or permission. This course provides an overview of CNC manual programming utilizing the G-code programming language along with an introduction to additive manufacturing processes.

## 2880:290 Special Topics: Industrial Technology (1-2 Credits)

Prerequisite: Permission. Selected topics or subject areas of interest in industrial technology. (May be repeated for a total of four credits)

# Marketing (6600)

## 6600:205 Marketing Principles (3 Credits)

Prerequisite: 24 hours of college credit. Pre/Corequisite: 3250:200. A general survey of marketing activities including analysis of markets, competition, consumer behavior, information systems, and the assessment of product, price, distribution, and promotion strategies.

## 6600:275 Professional Selling (3 Credits)

Prerequisite: 25 credits or permission from instructor. Builds communication skills while learning about buyer needs, persuasion and social influence, prospecting, making sales presentations, persuading, overcoming sales resistance, closing sales and building relationships.

## 6600:335 Marketing Research (3 Credits)

Prerequisites: 6500:304 and [6600:205 with a grade of C or better]. Corequisite: 6600:336. Student will gain hands-on experience in the understanding and use of appropriate tools and techniques for analyzing and presenting information derived from marketing databases. Includes problem definition and solution approach to marketing research decisions.

Gen Ed: Tier 3 - Critical Thinking

## 6600:336 Marketing Research Lab (1 Credit)

Prerequisites: 6500:304 and 6600:205. Corequisite: 6600:335. Students will gain hands-on experience in the understanding and use of appropriate tools and techniques for analyzing and presenting information derived from marketing databases. Includes problem definition and solution approach to marketing research decisions.

## 6600:355 Consumer Behavior (3 Credits)

Prerequisite: 6600:205 with a grade of C or better. Interdisciplinary approach to the analysis of the nature of consumer buying behavior. Economical, social, and psychological influences on consumers' decision-making processes are examined.

## 6600:375 Marketing & Sales Analytics (3 Credits)

Prerequisite: 6600:335. Develop the skills to provide clients with actionable marketing intelligence gleaned from the customer, sales force, channel, promotion and competitor databases that are now pervasive in the business world.

## 6600:432 Integrated Marketing Communications (3 Credits)

Prerequisites: Must be admitted to a 4 year major, 6600:205 with a grade of C or better, and 6600:355. This course stresses the need for marketers to create consistent coordinated communication programs using all elements of the promotion mix including advertising, public relations, sales promotion, social media and personal selling.

## 6600:434 Digital Marketing (3 Credits)

Prerequisites: Must be admitted to a major in a four-year degree granting college, 6600:205, and 6600:432. Focuses on the planning and execution of the promotion mix in the digital environment through online and mobile advertising, sales promotion, social media, blogging, website design and SEO.

**6600:440 Brand Management (3 Credits)**

Prerequisites: Must be admitted to a major in a four-year degree granting college, 6600:205, and 6600:355. This course studies the process of building and evolving successful brands. It focuses on brand equity development by creating a distinct brand identity, impeccable brand integrity and emotional resonance. It also emphasizes brand evolution through incremental and radical innovation.

**6600:446 Social Media Marketing (3 Credits)**

Prerequisites: Must be admitted to a four-years degree granting college, 6600:205, 6600:355, and 6600:432. Examines strategies used for marketing within social media. Topics include analytics and tactics to design, manage and optimize consumer engagement and commerce.

**6600:460 B2B Marketing (3 Credits)**

Prerequisites: Must be admitted to a four year degree granting program and 6600:205 with a grade of C or better. This course provides a thorough grounding in industrial and business-to-business marketing. While many of the concepts are similar to those used in consumer marketing, there are major differences. This course will explore both the similarities and the differences.

**6600:475 Business Negotiations (3 Credits)**

Prerequisites: Must be admitted to a major in a four-year degree granting college, 25 credits, and 6600:275. Examines business negotiation principles and practices, and builds skills in the process of negotiating business agreements within a global environment.

**6600:478 Advanced Professional Selling (3 Credits)**

Prerequisites: Must be admitted to a major in a four-year degree granting college and 6600:275. Broadens students understanding of the sales process looking at complex sales and solutions selling. Intense lab work focusing on communication skills, asking the right questions to fully understand needs, helping client turn implicit needs into explicit needs, conducting B2B and complex negotiations, and understanding how to create win-win solutions.

**6600:480 Sales Management (3 Credits)**

Prerequisites: Must be admitted to a major in a four-year degree granting college and [2520:101 or 6600:205]. Develops analytical and managerial skills through case studies and other learning activities relating to the organization, selection, training, motivation, and control of a domestic or global sales force.

**6600:486 Internship in Marketing (3 Credits)**

Prerequisites: Must be admitted to a 4-year degree granting major and permission of department chair. On-the-job experience with public or private sector organizations in the field of marketing. On-the-job learning objectives are established by the sponsoring organization and approved by the department chair. Field experiences are augmented by a weekly diary, two reflection papers, and an oral presentation of their experiences, which are supervised and evaluated by the department chair.

**6600:487 Internship in Sales Management (3 Credits)**

Prerequisite: Permission of department chair. On-the-job experience with public or private sector organizations in the field of marketing. On-the-job learning objectives are established by the sponsoring organization and approved by the department chair. Field experiences are augmented by a weekly diary and a term paper, which are supervised and evaluated by the department chair.

**6600:488 Internship in Integrated Marketing Communications (3 Credits)**

Prerequisite: Permission of department chair. On the job experience with public or private sector organizations in the field of marketing. On the job learning objectives are established by the sponsoring organization and approved by the department chair. Field experiences are augmented by the weekly diary and term paper, which are supervised and evaluated by the department chair.

**6600:491 Professional Workshops in Marketing (1-3 Credits)**

Prerequisites: Sophomore status and be admitted to a 4 year degree granting college. Special topics in marketing taught primarily by professionals with the objective of adding depth and an applied perspective to marketing concepts, issues, software & databases, problem solving and career planning. Special emphasis is given to timely issues and new technologies required by the rapidly changing marketplace. (May be repeated for up to six credits.)

**6600:493 Professional Insights: Sales Management (1 Credit)**

Prerequisites: Junior standing or higher and admission into a 4 year degree program. Sales Management is designed to link sales management majors' academic learning to professional practice. Guest speakers, recognized experts in their field, share important lessons in professional selling and sales management and challenge students to address key issues in their profession as preparation for an internship and career.

**6600:494 Professional Insights: Marketing Management (1 Credit)**

Prerequisites: Junior status and be admitted into a four year degree granting college. Marketing Management is designed to link marketing management majors' academic learning to professional practice. Guest speakers, recognized experts in their field, share important lessons in marketing management and challenge students to address key issues in their profession.

**6600:495 Professional Insights: IMC (1 Credit)**

Prerequisites: Junior status and be admitted into a four year degree granting program. IMC is designed to link Integrated Marketing Communication majors' academic learning to professional practice. Guest speakers, recognized experts in their field, share important lessons in IMC and challenge students to address key issues in their profession.

**6600:496 Special Topics: Marketing (1-3 Credits)**

Prerequisites: Must be admitted to a major in a four-year degree granting college and 6600:205. (May be repeated for a total of three credits) Provides an opportunity to examine special topics and/or current issues in the fields of marketing, sales retailing or advertising.

**6600:499 Marketing Capstone Project (3 Credits)**

Prerequisites: Must be admitted to a major in a four-year, degree granting college and for all Marketing majors: 6600:275, 6600:335, 6600:355, 6600:375. PLUS for Sales Management majors: 6600:475, 6600:480; For IMC majors: 6600:432, 6600:438; For Marketing Management majors: 6600:440, 6600:460. Student teams comprised of members from each marketing major will refine a live Client marketing strategy (product, price, distribution and promotion) and develop complementary integrated marketing communication and sales force plans.

## Marketing and Sales Technology (2520)

**2520:101 Essentials of Marketing Technology (3 Credits)**

Survey of marketing including its environment, buyer behavior, target market selection, product decision, distribution decisions, promotion decisions, pricing decisions and marketing management.

**2520:202 Retailing Fundamentals (3 Credits)**

Presents basic principles and practices of retailing operations, including site selection, buying, pricing and promotion practices. Use is made of extensive projects and investigations and actual retail operations.

**2520:203 Principles of Advertising (3 Credits)**

Prerequisite: 2520:101 or 6600:205. Focuses on principles and functions of advertising, creation and evaluation of advertisements, research of target market, message selection strategy, and media placement options.

**2520:204 Services Marketing (3 Credits)**

Prerequisites: 2520:203 and 2520:212. Corequisite: 2520:202. Focuses on quality customer service and its role in marketing. Evaluation of customers' needs and expectations, interpretation of customer data and creation of service strategies.

**2520:206 Retail Promotion & Advertising (3 Credits)**

Prerequisite: 2520:202 or permission. Studio course in retail display and promotion techniques. Window, interior and point of purchase categories; principles of design as applied to commercial art; function in visual design, elements of design, color theory, lettering, printing process, layout to camera-ready art.

**2520:212 Principles of Sales (3 Credits)**

Prerequisite: 2520:101 or permission. Study of basic principles of selling, emphasizing individual demonstrations and sales projects. Includes review of sales function as integral part of marketing process.

**2520:221 Marketing Projects (3 Credits)**

Prerequisite: 2520:203. Students will prepare marketing projects by applying knowledge and skills learned in previous marketing courses.

**2520:240 Marketing Internship (3 Credits)**

Prerequisites: 2520:101, 2520:203, 2520:202, and 2520:212. On-the-job work experience in a marketing environment in which students apply learned skills and concepts to practical business situations. Periodic reports and projects required as appropriate.

**2520:254 Sales Management Technology (3 Credits)**

Prerequisite: 2520:212. Process relating to the formulation, implementation, and control of a strategic sales program. Students will learn how to select, evaluate, and motivate a sales force.

**2520:290 Special Topics: Marketing & Sales (1-3 Credits)**

Prerequisite: Permission. Selected topics or subject areas of interest in sales and merchandising. (May be repeated for a total of four credits)

## Math - Associate Studies (2030)

**2030:130 Mathematics for Allied Health (3 Credits)**

Prerequisite: placement test, 2010:52, 2010:54, 2010:57, or 2010:84 with a grade of C or better. The real number system, systems of measurement, conversions, linear equations, factoring, quadratic equations, graphing, linear systems, organizing data, averages, standard deviation, the normal distribution.

**2030:151 Technical Mathematics I (2 Credits)**

Prerequisite: placement test, 2010:52, 2010:54, 2010:57, or 2010:84 with a grade of C or better. Fundamental concepts and operations, functions, graphs, factoring and algebraic fractions, and quadratic equations.

**2030:152 Technical Mathematics II (2 Credits)**

Prerequisite: 2030:151 with a grade of C- or better or placement test. Variation, equations of lines, Cramer's rule, right triangle trigonometry, oblique triangles, radian measure, and complex numbers.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**2030:153 Technical Mathematics III (2 Credits)**

Prerequisite: 2030:152 with a grade of C- or better or placement test. Factoring, algebraic fractions, exponents and radicals, equations with radicals, equations in quadratic form, functions, their properties and graphs, exponential and logarithmic functions.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**2030:154 Technical Mathematics IV (3 Credits)**

Prerequisite: 2030:153 with a grade of C- or better or placement test. Functions and their graphs, polynomial and rational functions, polynomial equations, graphs of trigonometric functions, trigonometric identities and equations, analytic geometry, complex numbers in polar form.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**2030:161 Mathematics for Modern Technology (4 Credits)**

Prerequisite: Placement test or completion of 2010:052, 2010:054, 2010:057, or 2010:084 with a grade of C or better. Lines, linear regression, sets, counting, basic probability, basic statistics, binomial and normal distributions, mathematics of finance, symbolic logic, arguments, logic circuits.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**2030:216 Applied Finite Mathematics (3 Credits)**

Prerequisite: 2030:153 with a grade of C- or better, or placement test. Number systems, integer rings, finite fields, number theory algorithms, prime numbers and primality tests, factoring, and random number.

**2030:255 Technical Calculus I (3 Credits)**

Prerequisite: 2030:154 with a grade of C- or better or placement test. The derivative, applications of the derivative, derivatives of the trigonometric, logarithmic and exponential functions. Integration by antidifferentiation.

**Gen Ed:** Tier 1 - Quantitative Reasoning; Tier 3 - Critical Thinking

**2030:260 Advanced Trigonometry (2 Credits)**

Prerequisite: 2030:153 or equivalent with a grade of C- or better, or placement test. Horizontal circular curves, vertical curves, and spherical triangles.

**2030:290 Special Topics: Associate Studies Mathematics (1-4 Credits)**

(May be repeated with a change in topic) Prerequisite: Permission. Selected topics on subject areas of interest in associate studies.

**2030:345 Technical Data Analysis (2 Credits)**

Prerequisite: [2030:154 or 2030:216] with a grade of C- or better. Data summarization including graphic representation, numerical measures, introduction to probability, confidence intervals and hypothesis testing.

**2030:356 Technical Calculus II (3 Credits)**

Prerequisite: 2030:255 or equivalent with a grade of C- or better, or placement test. Methods and applications of integration, first and second order differential equations and applications, series expansion, Laplace transform, partial derivatives, and double integrals.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**2030:361 Applied Cryptography (3 Credits)**

Prerequisite: A grade of C or better in 2030:216. Symmetric cryptography, modular arithmetic, stream and block ciphers, random numbers, Advanced Encryption Standard, public-key cryptography, key exchange, digital signatures, hash functions, message authentication.

**2030:461 Applied Cryptanalysis (3 Credits)**

Prerequisite: 2030:361 with a grade of C or better. Cryptanalysis concepts; cryptanalysis of symmetric and public key cryptosystems, key exchange systems, and digital signatures; hash function collision resistance; cryptanalysis with quantum computer.

**2030:480 Advanced Topics in Technical Mathematics (2 Credits)**

Prerequisite: 2030:255 or equivalent with a grade of C- or better, or placement test. Matrices, introduction to series, partial derivatives, least squares adjustments, topics in astronomy, and coordinate systems.

## Mathematics (3450)

**3450:135 Mathematics for Everyday Life (3 Credits)**

Prerequisite: 2010:52, 2010:57, or 2010:84 with a grade of C- or better or placement test. Contemporary applications of mathematics for the non-science major to develop skills in logical thinking and reading technical material. Topics include voting, apportionment, scheduling, patterns, networks.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:140 Fundamentals of Mathematics for Primary Educators (3 Credits)**

Prerequisite: placement test or 3470:250 with a grade of C- or better. Corequisite: 5100:200. A problem-solving and inquiry-based approach to number systems; bases; operations, properties, relationships, algorithms of Real Numbers; patterns and algebra.

**3450:145 Algebra for Calculus (4 Credits)**

Prerequisite: 2010:85 with a grade of C or better or placement test. Real numbers, equations and inequalities, linear and quadratic functions. Exponential and logarithmic functions. Systems of equations, matrices, determinants. Permutations and combinations.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:149 Precalculus Mathematics (4 Credits)**

Prerequisite: 3450:145 with a grade of C- or better or placement. Functions, polynomial functions, complex numbers, exponential and logarithmic functions, systems of equations, trigonometric functions, mathematical inductions, sequences, and binomial theorem.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:208 Introduction to Discrete Mathematics (4 Credits)**

Prerequisite: Completion of 3450:145 or 3450:149 with a grade of C- or better or placement. A foundation course in discrete mathematics with applications. Topics include sets, number systems, Boolean Algebra, logic, relations, functions, recursion, matrices, induction, graphs, and trees.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:209 Discrete Mathematics for Educators (4 Credits)**

Prerequisite: Completion of 3450:140 with a grade of C- or better or placement. Corequisite: 3450:231. Introduction to discrete mathematics topics for middle school instruction: sets, counting, probability, recurrence relations, graph theory, logic and elementary proof techniques.

**3450:210 Calculus with Business Applications (3 Credits)**

Prerequisite: Mathematics Placement Test or completion of 3450:145 with a grade of C- or better. Review of functions, derivatives of functions, extrema and concavity, optimization, logarithmic and exponential functions, extrema for multivariate functions. Graphing calculator required. For business or economics majors only.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:215 Concepts of Calculus (4 Credits)**

Prerequisite: Completion of 145 or 149 with a grade of C- or better or placement. Functions; limits and continuity; differentiation and applications of differentiation; logarithmic and exponential functions; integration and applications of integration; partial differentiation.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:221 Analytic Geometry-Calculus I (4 Credits)**

Prerequisite: 3450:149 with a grade of C- or better or placement test. Limits; continuity; rates of change; derivatives and applications algebraic, trigonometric, transcendental functions; curve sketching, antiderivatives and integration, areas.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:222 Analytic Geometry-Calculus II (4 Credits)**

Prerequisite: Completion of 3450:221 with a grade of C- or better. Methods and applications of integration; sequences, series and power series; Taylor polynomials and Taylor series; parametric and polar coordinates.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:223 Analytic Geometry-Calculus III (4 Credits)**

Prerequisite: Completion of 3450:222 with a grade of C- or better. Vector algebra, cylindrical, spherical coordinates, vector-valued functions, curvature; functions of several variables, limit, continuity, partial derivatives, differentials, directional derivatives, maxima and minima, multiple integrals, Divergence Theorem.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:231 Modeling with Algebraic and Transcendental Functions (4 Credits)**

Prerequisites: Completion of 3450:140 with a grade of C- or better or placement test or permission. Modeling and regression with algebraic, exponential, logarithmic, and trigonometric functions; systems of equations and matrices. These topics will be enhanced by the use of CAS.

**3450:240 Mathematical Foundations for Early Childhood Educators (3 Credits)**

Prerequisite: Completion of 3450:140 with a grade of C- or better. A problem-solving and inquiry-based approach to functions and algebra, coordinate and Euclidean geometry, and elementary data analysis.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:289 Selected Topics in Mathematics (1-3 Credits)**

Prerequisite: Permission. Selected topics of interest in mathematics.

**3450:307 Fundamentals of Advanced Mathematics (3 Credits)**

Prerequisite: Completion of 3450:222 with a grade of C- or better. Logic, solving problems, and doing proofs in mathematics. Sets, extended set operations, and indexed family sets, induction. Binary relations. Functions, cardinality. Introductory concepts of algebra and analysis.

**3450:312 Linear Algebra (3 Credits)**

Prerequisite: Completion of 3450:223 with a grade of C- or better. Study of vector spaces, linear transformations, matrices, determinants, inner products, the eigenvalue problem, quadratic forms and canonical forms.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3450:331 Modeling with Calculus (4 Credits)**

Prerequisite: Completion of 3450:231 with a grade of C- or better. Introduction to limits, continuity, differentiation with applications, integration with applications, sequences and series. These topics will be enhanced by the use of CAS.

**3450:335 Introduction to Ordinary Differential Equations (3 Credits)**

Prerequisite: Completion of 3450:223 with a grade of C- or better or permission of instructor. Basic techniques for solving ODEs and systems of ODEs. Analysis of models involving differential equations of first order and simple equations of second order.

**Gen Ed:** Tier 1 - Quantitative Reasoning



**3450:341 Geometry and Measurement (3 Credits)**

Prerequisites: Completion of 3450:209 with a grade of C- or better, or 3450:307 with a grade of C- or better and be admitted to the College of Education. Basic Constructions, Polygons, Similarity, Pythagorean Theorem, Circles, Congruence, Perimeters and Areas of Plane Figures, Surface and Volume of Solids, Rigid Motions and Symmetry, Coordinate geometry.

**3450:401 History of Mathematics (3 Credits)**

Prerequisite : Completion of 3450:307 with a grade of "C-" or better. Origin and development of mathematical ideas.

**3450:410 Advanced Linear Algebra (3 Credits)**

Prerequisite: Completion of 3450:312 with a grade of C- or better. Study of vector spaces, linear transformation, canonical and quadratic forms, inner product spaces.

**3450:411 Abstract Algebra I (3 Credits)**

Prerequisite: Completion of 3450:307 with a grade of C- or better or permission of instructor. Study of groups, rings, fields, integral domains.

**3450:412 Abstract Algebra II (3 Credits)**

Prerequisite: Completion of 3450:411 with a grade of C- or better or permission of instructor. Study of groups, rings, fields, integral domains, vector spaces, field extensions, Galois theory.

**3450:413 Theory of Numbers (3 Credits)**

Prerequisite: Completion of 3450:222 with a grade of C- or better or permission. Euclidean algorithm, unique factorization theorem, congruences, primitive roots, indices, quadratic residues, number-theoretic functions, Gaussian integers and continued fractions.

**3450:415 Combinatorics & Graph Theory (3 Credits)**

Prerequisite: Completion of 3450:222 with a grade of C- or better or permission. Introduction to basic ideas and techniques of mathematical counting; properties of structure of systems.

**3450:420 Mathematical Technology and Communication (3 Credits)**

Prerequisites: Completion of 3450:222 and 3450:312 with grades of C- or better, or permission. Graphical, numerical, and algebraic computation with applications using a variety of mathematical hardware and software: symbolic manipulators, dynamic geometry software, programs, scripts and web-browsers.

**3450:421 Advanced Calculus I (3 Credits)**

Sequential. Prerequisite: Completion of 3450:223 with a grade of C- or better; 3450:307 is highly recommended. Real number system, sequences, series, set theory, continuity, differentiation, integration, partial derivatives, multiple integration, maxima and minima, convergence and uniform convergence, power series, improper integrals, transformations, line and surface integrals.

**3450:422 Advanced Calculus II (3 Credits)**

Sequential. Prerequisite: Completion of 3450:421 with a grade of C- or better or permission of instructor. Real number system, sequences, series, set theory, continuity, differentiation, integration, partial derivatives, multiple integration, maxima and minima, convergence and uniform convergence, power series, improper integrals, transformations, line and surface integrals.

**3450:425 Complex Variables (3 Credits)**

Prerequisite: Completion of 3450:223 with a grade of C- or better. Complex variables; elementary functions, differentiation and analytic functions; integration and Cauchy's theorem; power series and Laurent series; residue theorem; applications such as conformal mappings, inversion of integral transform.

**3450:427 Applied Numerical Methods I (3 Credits)**

Prerequisites: Completion of 3450:222 and 3460:209 with grades of C- or better or permission. Numerical methods in polynomial interpolation, rootfinding, numerical integration, and numerical linear algebra.

**3450:428 Applied Numerical Methods II (3 Credits)**

Prerequisites: Completion of 3450:335 and 3450:427 with grades of C- or better or permission. Numerical methods in the solution of ordinary and partial differential equations. Numerical differentiation, Runge-Kutta methods, and iterative methods for ODEs, finite differences for PDEs.

**3450:430 Numerical Solutions for Partial Differential Equations (3 Credits)**

Prerequisite: Completion of 3450:428 with a grade of C- or better or equivalent. For advanced undergraduate and graduate students. The study of finite difference and finite element methods for partial differential equations consistency, stability, convergence and computer implementation.

**3450:432 Partial Differential Equations (3 Credits)**

Prerequisite: Completion of 3450:335 with a grade of C- or better. The classical initial value and boundary value problems of mathematical physics developed and solved using Fourier series and integral transforms.

**3450:435 Systems of Ordinary Differential Equations (3 Credits)**

Prerequisites: Completion of 3450:335 and either 3450:312 or 3450:428 with grades of C- or better or permission. Analysis, solution of systems of equations, linear, nonlinear. Topics: stability theory, perturbation methods, asymptotic methods, applications from physical, social sciences.

**3450:436 Mathematical Models (3 Credits)**

Prerequisite: Completion of 3450:335 with a grade of C- or better, and a six-hour sequence in an approved applied area, or permission. Formulation and analysis of mathematical models in social and physical sciences. Analysis of deterministic and stochastic models. Topics may include stochastic processes, linear programming, graph theory, theory of measurement.

**3450:438 Advanced Engineering Mathematics I (3 Credits)**

Prerequisites: Completion of 3450:335 and 3450:312 with grades of C- or better or permission. Matrices, eigenvalue problems, systems of ODEs, vector analysis, complex variables.

**3450:439 Advanced Engineering Mathematics II (3 Credits)**

Prerequisites: Completion of 3450:335 and 3450:312 with grades of C- or better or permission. Special functions, Fourier series and transforms, PDEs.

**3450:441 Concepts in Geometry (4 Credits)**

Prerequisite: 3450:307 with a grade of C- or better or permission of instructor. Axiomatic treatment of both Euclidean and non-Euclidean geometries. Other concepts included are finite geometry, transformations, constructions and inversions.

**3450:445 Introduction to Topology (3 Credits)**

Prerequisite: Completion of 3450:307 with a grade of C- or better or permission of instructor. Introduction to topological spaces and topologies, mappings, cardinality, homeomorphisms, connected spaces, metric spaces.

**3450:489 Topics in Mathematics (1-4 Credits)**

(May be repeated for a total of 12 credits) Prerequisite: Permission of instructor. Selected topics in mathematics and applied mathematics at an advanced level.

**3450:491 Workshop in Mathematics (1-4 Credits)**

(May be repeated) Group studies of special topics in mathematics and applied mathematics. May not be used to meet undergraduate or graduate major requirements. May be used for elective credit.

**3450:497 Individual Reading: Mathematics (1-2 Credits)**

Prerequisites: senior standing and permission. Mathematics or applied mathematics majors only. Directed studies designed as an introduction to research problems, under guidance of selected faculty member.

**3450:498 Senior Honors Project: Mathematics (1-3 Credits)**

Prerequisite: Permission of Instructor. Directed study for senior student in the Honors Program. An introduction to research problems in mathematics and applied mathematics under the guidance of selected faculty. May be repeated for up to six credits.

## Mechanical Engineering (4600)

**4600:165 Tools for Mechanical Engineering (3 Credits)**

Corequisite: 3450:149. Personal computer DOS system, word processing, spreadsheet, computer-aided drafting, math calculating package, mechanical graphics, and introduction to mechanical engineering program and curriculum.

**4600:203 Dynamics (3 Credits)**

Prerequisite: 3450:222, 3650:291, 4300:201. Corequisite: 3450:223. Kinematics and kinetics of particles and rigid bodies. Principles of work, energy, momentum and impulse.

**4600:260 Engineering Analysis I (2 Credits)**

Prerequisite: 3450:222; corequisite: 3450:223. Introduction to numerical methods in mechanical engineering; applications of computer tools (MatLab).

**4600:300 Thermodynamics I (3 Credits)**

Prerequisites: 3450:223 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 3650:292. Basic concepts of thermodynamics. Pure substances, closed and open systems, the first and second laws of thermodynamics. Entropy, vapor power cycles and vapor compression refrigeration.

**4600:301 Thermodynamics II (2 Credits)**

Prerequisites: 3450:335, 4600:300 and admission to an engineering major within the College of Engineering and Polymer Science. Absorption refrigeration. Gas cycles. Thermodynamics of state, gas mixtures and gas-vapor mixtures. Combustion.

**4600:305 Thermal Science (2 Credits)**

Prerequisite: 3450:223 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 3650:292. Credit not allowed for both 300 and 305. Introduction to first and second laws of thermodynamics, perfect gas relationships, equations of state, cycle analysis. Introduction to conduction, convection and radiation heat transfer.

**4600:310 Fluid Mechanics I (2 Credits)**

Prerequisites: 3450:223, 4600:203 and admission to an engineering major within the College of Engineering and Polymer Science. Properties and behavior of gases and liquids at rest and in motion. Energy equation. Flow in conduits. Forces on body submerged in moving fluid. Dimensional analysis and similitude.

**4600:311 Fluid Mechanics II (3 Credits)**

Prerequisites: 3450:335, 4600:310 and admission to an engineering major within the College of Engineering and Polymer Science. Navier-Stokes equations. The boundary layer. External viscous flows and potential flow. Fundamentals of compressible flow. Concepts of computational fluid dynamics.

**4600:315 Heat Transfer (3 Credits)**

Prerequisites: 4600:300, [4600:310 or 4800:360], [4600:360 or 4800:220] and admission to an engineering major within the College of Engineering and Polymer Science. Fundamentals of heat transfer by conduction, convection and radiation.

**4600:321 Kinematics of Machines (2 Credits)**

Prerequisites: 4600:165, 4600:203 and admission to an engineering major within the College of Engineering and Polymer Science. Displacements, velocities, accelerations and introduction to plan motion mechanisms. Introduction to design of gears, gear trains and cams.

**4600:336 Analysis of Mechanical Components (3 Credits)**

Prerequisites: 4300:202 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 3450:335. Analysis of stress and strain at a point. Mohr's circles, shear centers, elastic instability. Stresses in thick and thin cylinders. Fatigue analysis.

**4600:337 Design of Mechanical Components (3 Credits)**

Prerequisites: [4600:336 or 4900:336] and admission to an engineering major within the College of Engineering and Polymer Science. Application of stress analysis to design of fasteners, welds, springs, ball bearings and gears. Introduction to journal bearings and lubrication. Component design projects.

**4600:340 Systems Dynamics & Response (3 Credits)**

Prerequisites: 3450:335, 4600:203 and admission to an engineering major within the College of Engineering and Polymer Science. A unified approach to modeling, analysis, response and stability of engineering systems: analog, digital and hybrid computer simulation of interdisciplinary engineering problems are included.

**4600:360 Engineering Analysis II (2 Credits)**

Prerequisites: 3450:335, 4600:260 and admission to an engineering major within the College of Engineering and Polymer Science. Numerical methods of solution of mechanical engineering problems.

**4600:380 Introduction to Materials Science and Engineering (2 Credits)**

Prerequisites: 3150:153 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4300:202. Introduction to metallurgy and advanced engineering materials including polymers, composites and ceramics. Topics include structure of materials, macroscopic mechanical behavior, phase change and heat treatment of metals, and theories of failure.

**4600:400 Thermal System Components (3 Credits)**

Prerequisites: 4600:301, 4600:311, 4600:315 and admission to an engineering major within the College of Engineering and Polymer Science. Performance analysis and design of basic components of thermal energy exchange and conversion systems. Components studied include heat exchangers, pumps, compressors, turbines and expansion engines.

**4600:402 Senior Seminar (1 Credit)**

Prerequisite: Admission to the College of Engineering. Corequisites: 4600:400, 4600:441, 4600:460 and [4600:401 or 4600:461 or 4700:499]. Students need further education in ethics, codes and standards, intellectual property, product liability, safety issues, technical writing, diversity, and job opportunities.

**4600:410 Heating & Air Conditioning (3 Credits)**

Prerequisites: 4600:301 or permission. Corequisite: 4600:315 or permission. Thermodynamics of gas mixtures. Design and selection of air conditioning equipment. Control of gas mixtures, heating, cooling and humidity.

**4600:411 Compressible Fluid Mechanics (3 Credits)**

Prerequisites: 4600:301, 4600:311 and admission to an engineering major within the College of Engineering and Polymer Science. Subsonic and supersonic flow in nozzles, diffusers and ducts. One-dimensional reactive gas dynamics. Prandtl-Myer theory. Applications to design and analysis of compressors, turbines and propulsion devices.

**4600:412 Fundamentals of Flight (3 Credits)**

Prerequisites: 4600:311 and admission to an engineering major within the College of Engineering and Polymer Science. Introduction to basic aerodynamics, airplane performance, stability and control, astronautics and propulsion. Design considerations are emphasized.

**4600:413 Introduction to Aerodynamics (3 Credits)**

Prerequisites: 4600:311 and admission to an engineering major within the College of Engineering and Polymer Science. Introduction of aerodynamic concepts; includes conformal transformations, theory of thin airfoils, two-dimensional airfoil theory, wings of finite span, lifting line theories, lumped vortex, vortex lattice, and panel methods.

**4600:414 Introduction to Aerospace Propulsion (3 Credits)**

Prerequisites: 4600:311 and admission to an engineering major within the College of Engineering and Polymer Science. Introduction to propulsion systems currently used in aerospace fields; propulsion principles for turbojets, turbofans, ramjets, chemical rockets, and electrical rocket propulsion.

**4600:415 Energy Conversion (3 Credits)**

Prerequisites: 4600:301 or permission. Corequisite: 4600:315 or permission. Topics from fields of internal combustion engines, cycle analysis, modern conversion devices.

**4600:416 Heat Transfer Processes (3 Credits)**

Prerequisite: 4600:315 or permission. Analysis, design of extended surfaces. Natural convection and mixed convection, combined modes of heat transfer and heat transfer with phase changes.

**4600:420 Introduction to Finite Element Method (3 Credits)**

Prerequisites: 4300:202, [4600:315 or 4800:362], and admission to an engineering major within the College of Engineering and Polymer Science. Introduction to matrix and finite element methods. Stiffness and flexibility formulations in solid mechanics and thermal sciences. Basic finite element methods and its implementation.

**4600:422 Experimental Stress Analysis I (3 Credits)**

Prerequisite: 4600:336 or permission. Experimental methods of determining stress or strain: brittle lacquer, strain gages, photoelasticity, full field techniques.

**4600:430 Machine Dynamics (3 Credits)**

Prerequisite: 4600:321 or permission. Static and dynamic forces in machines, products of inertia, dynamic equivalence, flywheels. Balancing of rotating, reciprocating, cyclic plane motion. Computer simulation of transient mechanism dynamics, other topics in advanced dynamics.

**4600:431 Fundamentals of Mechanical Vibrations (3 Credits)**

Prerequisites: 3450:335, 4600:203 and admission to an engineering major within the College of Engineering and Polymer Science or permission. Undamped and forced vibrations of systems having one or two degrees of freedom.

**4600:432 Vehicle Dynamics (3 Credits)**

Prerequisites: 4600:203 or permission and 3450:335 or permission. Application of dynamic systems analysis techniques to road vehicles. Newtonian and Lagrangian methods. Tire/road interface. Ride characteristics, handling and stability. Digital simulation.

**4600:440 System Dynamics & Control (4 Credits)**

See department for course description.

**4600:441 Control Systems Design (3 Credits)**

Prerequisites: 4600:340 and admission to an engineering major within the College of Engineering and Polymer Science or permission. Methods of feedback control design such as minimized error, root-locus, frequency domain. Compensation techniques. Multivariable and nonlinear design methods and computer-aided control design.

**4600:442 Industrial Automatic Control (3 Credits)**

Prerequisite: 4600:441 or permission. Operation of basic control mechanisms. Study of mechanical, hydraulic, pneumatic, fluidic control systems, including application areas. Tuning of control devices for optimum performance of system. Case studies on control applications from industry, e.g. boilers, furnaces, process heaters.

**4600:443 Optimization Methods in Mechanical Engineering (3 Credits)**

Prerequisite: 4600:360 or permission. Development and method of solution of optimization problems in mechanical engineering. The use of dynamic programming and operational research methods for optimization including computer utilization and applications.

**4600:444 Robot Design, Control & Application (3 Credits)**

Prerequisites: [4600:321 or 4600:441] or permission. Robot design and control. Kinematic transformations, velocities and accelerations, path trajectories and dynamics, control and sensing in robotics. The automated factory with robot applications.

**4600:450 Introduction to Computational Fluid Flow & Convection (3 Credits)**

Prerequisites: 4600:315 or permission, 4600:360 or permission. Numerical modeling of fluid/thermal systems; numerical solution of the momentum and thermal boundary layer equations; flow simulation using advanced heat transfer/fluid/graphics packages.

**4600:460 Concepts of Design (3 Credits)**

Prerequisites: 4600:337 and admission to an engineering major within the College of Engineering and Polymer Science. Design process. Creativity and inventiveness. Tools of decision making, engineering economics, reliability, optimization. Case studies.

**4600:461 ME Senior Design Project I (2 Credits)**

Prerequisite: Admission to an engineering major within the College of Engineering and Polymer Science. Corequisites: 4600:400, 4600:441 and 4600:460. Detailed senior design project. Design, feasibility, and cost analysis.

**Gen Ed:** Tier 3 - Complex Systems

**4600:462 Pressure Vessel Design (3 Credits)**

Prerequisite: 4600:336 or permission. Introduction to modern pressure vessel technology. Topics include basic structural considerations, materials and their environment and design-construction features.

**4600:463 Computer Aided Design & Manufacturing (3 Credits)**

Prerequisites: 4600:165 or permission, 4600:360 or permission. The use of computer systems to assist in the creation, modification, analysis, or optimization of engineering designs, and to plan, manage, and control manufacturing plants.

**4600:465 Technology Based Startups: Ideate, Invent and Innovate (3 Credits)**

Prerequisite: Permission of the department. This course will provide students with the opportunity to extend their fundamental knowledge of entrepreneurship within the specific interdisciplinary context of technology commercialization. Working in interdisciplinary groups the student teams/groups will be taught design thinking approaches that put the customer at the center of the creative process. Brainstorming exercises will be held to solve open ended problems on special topics (e.g. biomimicry, software, medical devices, sensors etc.) so that teams can ideate and conceptualize product, process or service based ideas that solve real problems. In some cases, students can be assigned known research technologies and learn how to come up with applications that have commercialization potential. The evaluation will include, but not be limited to, evaluation of the underlying technology, determination of potential customer value proposition(s), determination of market feasibility, examination of licensing/spin-off options, identification of potential licensees, estimation of potential market size and value, and development of recommendations for further funding, growth (or abandonment). By working in teams, students will learn how to create/invent a product prototype, learn how to listen to potential customers and come back to describe the value proposition that will make the startup successful.

**4600:471 ME Senior Design Project II (2 Credits)**

Prerequisites: 4600:461 and admission to an engineering major within the College of Engineering and Polymer Science. Detailed senior design project. Final design and implementation.

**4600:480 Materials Selection in Design (3 Credits)**

Prerequisites: [4200:305 or 4600:380] and admission to an engineering major within the College of Engineering and Polymer Science or permission. Materials selection from the perspective of design including material properties, processing approaches, shape considerations, hybrid materials, and tradeoffs including environmental and cost.

**4600:482 Fundamentals of Composite Processing and Mechanics (3 Credits)**

Prerequisites: 3450:335, 4300:202, and admission to an engineering major within the College of Engineering and Polymer Science. Polymer-matrix composite processing, manufacturing, and mechanics. The emphasis is on discontinuous fiber reinforcements.

**4600:483 Measurements Laboratory (2 Credits)**

Prerequisites: 4600:300, 4600:310 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4600:340. Development of methods to measure temperature, pressure, flow rate, viscosity and motion. Includes both lecture and laboratory experience and emphasizes calibration and accuracy of appropriate instruments.

**4600:484 Mechanical Engineering Laboratory (2 Credits)**

Prerequisite: 4600:301, 4600:311, 4600:315, 4600:380, 4600:431, 4600:483 and admission to an engineering major within the College of Engineering and Polymer Science. Corequisite: 4600:441. Laboratory experiments in area of dynamics, vibrations, thermodynamics, fluids, heat transfer and controls.

**4600:485 3D Printing and Additive Manufacturing (3 Credits)**

Prerequisites: 4600:165, 4600:360, and junior or greater standing or permission. Introduction to 3D Printing and Additive Manufacturing including various processes, materials, and applications; Hands-on practice and design/manufacturing project; State of the art of 3D Printing.

**4600:486 Special Topics: Mechanical Engineering (1-3 Credits)**

Prerequisite: Permission. Brief description of current content to be announced in schedule of classes.

**4600:497 Honors Project in Mechanical Engineering (4 Credits)**

Prerequisite: senior standing in Honors Program. Individual creative project in thermal science, mechanics or design relevant to mechanical engineering, supervised by faculty member of the department.

**Gen Ed:** Tier 3 - Complex Systems

**4600:498 Experimental Investigation in Mechanical Engineering (1-2 Credits)**

Individual independent laboratory investigations in areas relevant to mechanical engineering. Student suggests a project and makes appropriate arrangements with faculty for supervision.

## Mechanical Engineering Technology (2920)

**2920:100 Survey of Mechanical Engineering Technology (2 Credits)**

Corequisite: 2030:154. Overview of the Mechanical Engineering Technology degree programs; pre-testing; career opportunities; professional societies & certification; standards; and useful tools of the MET field.

**2920:101 Introduction to Mechanical Design (3 Credits)**

Prerequisite: 2880:140 or 2920:121. Corequisite: [2880:230 or 2920:100] and 2030:154. Topics in engineering drawing: conventions, sections, dimensioning and tolerancing. Detail drawings, subassembly and assembly drawings. Introduction to various mechanical components and mechanical design tools.

**2920:121 Fundamentals of Engineering Drawing (3 Credits)**

Fundamentals of engineering drawing using freehand sketching and CAD; orthographic and isometric projections, sectioning, assemblies, and introduction to geometric dimensioning and tolerancing. Laboratory.

**2920:130 Introduction to Hydraulics and Pneumatics (3 Credits)**

Principles of hydrostatic forces, pressure, density, viscosity, incompressible and compressible fluids. Principles of hydraulic and pneumatic devices and systems.

**2920:142 Introduction to Material Technology (3 Credits)**

Fundamental properties of materials. Material testing. Applications of methods to control material properties.

**2920:243 Kinematics (3 Credits)**

Prerequisite: 2990:125. Corequisite: 2920:101. Study of rigid-body motions of simple linkages, cams, gears, and gear trains. Vector solutions emphasized. Industrial applications presented and computers used to analyze mechanisms.

**2920:245 Mechanical Design II (5 Credits)**

Prerequisites: 2920:101, 2920:243, and 2990:225. Corequisite: 2920:142. Advanced stress and fatigue analysis, theories of failure. Design of machine elements: gears, keys and keyways. Experimental stress analysis and design projects.

**2920:249 Applied Thermal Energy I (2 Credits)**

Prerequisites: 2030:255 and 3650:164. Thermodynamic principles. Study of power cycles. Applications in I.C. engines, compressors, steam power cycles, refrigeration.

**2920:251 Fluid Power (2 Credits)**

Prerequisites: 3650:160 and 3650:164. Statics and dynamics of fluids. Viscosity, energy and momentum relationships. Fluid machinery and measurements.

**2920:252 Thermo-Fluids Laboratory (1 Credit)**

Prerequisite: 2920:251. Corequisite: 2920:249. Laboratory experiments in applied thermal energy and fluid power.

**2920:290 Special Topics: Mechanical Engineering Technology (1-3 Credits)**

Prerequisite: Permission. Selected topics or subject areas of interest in Mechanical Engineering Technology. (May be repeated for a total of four credits)

**2920:310 Economics of Technology (3 Credits)**

Prerequisite: 64 credits or permission. Economic principles as they pertain to technology. Equivalence, alternatives, costs, depreciation, valuation. Project studies.

**2920:344 Dynamics (3 Credits)**

Prerequisites: 2920:243, 2030:255, and 2990:125. Introduces particle dynamics, displacement, velocity, and acceleration of constrained rigid bodies in plane motion. Kinetics of particles and rigid bodies, work and energy, mechanical vibration.

**2920:346 Mechanical Design III (4 Credits)**

Prerequisites: 2920:245 and 2920:344. Continuation of design of mechanical components: gears, bearings, shafts, springs, and fasteners. Special topics presented will be coordinated with assigned design projects.

**2920:347 Production Machinery & Processes (3 Credits)**

Prerequisites: 2030:255 and [2880:110 or 2920:142]. Study of manufacturing processes (casting, forging, welding, forming sheet metal), integrating material technology, mechanical design, and mechanics of materials.

**2920:365 Applied Thermal Energy II (3 Credits)**

Prerequisites: 2030:255, 2920:249, and 2920:251. Review and application of basic thermodynamic principles used in designing automotive engines and refrigeration equipment. Introduction to heat transfer, heating, ventilation, and air conditioning.

**2920:370 Plastics Design & Process (3 Credits)**

Prerequisites: 2820:111 or higher. Introduction to structure and properties of polymers, selection based on properties and cost, design of products and tools, basic principles of the major processes.

**2920:402 Mechanical Projects (2 Credits)**

Prerequisites: 2920:310, 2920:365, 2920:370, 2920:490, and [2870:301 or 2920:405]. Individual projects emphasizing creative technical design.

**2920:405 Introduction to Industrial Machine Control (3 Credits)**

Prerequisite: 2860:370. Principles and design of industrial machine control systems. Application oriented study of typical control devices. Utilization of programmable controllers as the system logic controllers.

**2920:470 Plastics Processing & Testing (2 Credits)**

Prerequisite: 2920:370 or permission. Use of basic polymer testing methods. Setup and operation of modern molding and extrusion equipment. Basic troubleshooting procedures. Study of processing effects on final properties.

**2920:490 Mechanical Engineering Technology Senior Seminar (1 Credit)**

Prerequisites: 2920:346 and 2920:347. An opportunity for post-testing of all MET students and the presentation of social and professional responsibilities, diversity, professional certification, life-long learning, and career opportunities.

**2920:497 Senior Honors Project in Mechanical Engineering Technology (1-3 Credits)**

Prerequisites: Senior standing in Honors Program, permission of area honors preceptor, and major in mechanical technology. Independent research leading to completion of senior honors thesis or other original work. (May be repeated for a total of six credits)

**2920:498 Independent Study in Mechanical Engineering Technology (1-4 Credits)**

Prerequisite: Permission. Directed study in a special field of interest chosen by the student in consultation with the instructor. (May be repeated for a total of six credits).

## Medical Assisting (2740)

**2740:126 Administrative Medical Assisting I (3 Credits)**

Theory and practice in administrative medical assisting competencies such as legal and ethical concepts, medical front office responsibilities, and financial administration.

**2740:127 Administrative Medical Assisting II (3 Credits)**

Theory and practice in administrative medical assisting. Simulating a medical office, competencies include utilizing computerized practice management software, medical office management, medical financing and insurance.

**2740:135 Clinical Medical Assisting I (4 Credits)**

Prerequisites: 2750:120, 2750:230, 2780:206, and 2780:207. First clinical course covering medical laboratory, PE, vital signs, EKGs, microbiology, procedural asepsis, suture removal, basic PT, eye and ear treatments, and basic nutrition.

**2740:235 Clinical Medical Assisting II (4 Credits)**

Prerequisites: 2740:135, 2750:120, 2750:230, 2780:206, and 2780:207. The second medical assisting clinical course covers theory and practice of POL laboratory tests, medication administration, minor office surgery, venipuncture, emergent services, and radiography principles.

**2740:242 Medical Transcription II (3 Credits)**

Prerequisites: 2540:119, 2740:151, 2750:120, and 2740:240. This course is an advanced medical transcription course. Emphasis will be placed on development of accuracy, speed, and medical knowledge for transcription of medical documents.

**2740:245 Medical Billing Externship (4 Credits)**

Prerequisites: 2740:127, 2740:245, 2750:120, 2750:121, 2750:227, 2750:229, 2750:230, 2750:328, 2780:206, and 2780:207 (thus completing all other Medical Billing Certificate course work), a 2.0 cumulative GPA, and permission from the Medical Assisting program director. This externship is a minimum 160 hour medical billing work experience, required seminar hours and preparation for the optional CPC and CCSP exams.

**2740:246 Medical Assisting Practicum (4 Credits)**

Prerequisites: 2740:126, 2740:127, 2740:135, 2740:235, 2750:230, 2780:206, and 2780:207 (thus completing all other Associate of Applied Science in Medical Assisting Technology course work, with a 2.0 cumulative GPA), and permission from the program director. The practicum work experience of a minimum of 160 hours; seminar hours will also be required. This class prepares students for their national certification exam.

**2740:290 Special Topics: Medical Assisting (1-2 Credits)**

Prerequisite: Permission. Selected topics or workshops of interest in medical assisting technology.

## Medical Studies (1880)

### 1880:201 Medical Seminar & Practicum I (3 Credits)

Prerequisites: 3100:191. Provides field experiences in health-care delivery in geographic area served by Northeastern Ohio Universities College of Medicine and The University of Akron. Student directed in supervised roles of professional and paraprofessional in meeting health-care needs of community. Open to first-year student in Phase 1 of B.S./M.D. program.

## Middle Level Education (5250)

### 5250:100 Orientation to Middle Level Education (0 Credits)

Prerequisite: Admission to Middle Level Education Program. Corequisite: 5100:200. Orientation to the information and strategies necessary for a student to be successful in the program, including portfolio development.

### 5250:300 Middle Level Education (3 Credits)

Prerequisite or corequisite: 5500:308. Reviews nature/needs of early adolescents; developmentally appropriate middle schooling; philosophy of school organizations; curriculum, pedagogy, and assessment; cultural and community contexts. 15 field hours.

### 5250:333 Teaching Science to Middle Level Learners (4 Credits)

Prerequisite: 5500:308. A methods course for the prospective teacher to develop a point of view toward science teaching and strategies for effective standards-based science teaching. (15 field hours)

### 5250:338 Teaching Social Studies to Middle Childhood (3 Credits)

Prerequisite: 5500:308. A methods course to examine the school social studies curriculum and strategies for effective teaching. (15 field hours)

### 5250:342 Teaching Math to Middle Level Learners (3 Credits)

Prerequisite: 5500:308. Modern strategies of psychology and methodology in middle childhood mathematics on exploratory, structural and mastery levels of learning. (15 field hours)

### 5250:350 Teaching Language Arts & Media to Middle Level Learners (3 Credits)

Prerequisites: 5500:240, 5500:241, and 5500:308. This course provides preservice middle grade teachers with strategies for integrating the language arts in the areas of reading, writing, speaking, listening, media and drama. (15 Field Hours)

### 5250:351 Modes of Writing for the Middle Grades (3 Credits)

Prerequisite: Admission to the Teacher Education Program. This course will provide middle school languages arts teachers the understandings and skills necessary to teach writing in varieties of forms and modes including newswriting.

### 5250:430 Honors Research Project: Middle Level Education (1-6 Credits)

(May be repeated for a total of six credits.) Prerequisites: Permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.

### 5250:480 Special Topics: Middle School (1-3 Credits)

Prerequisite: Permission of instructor. (May be repeated with change of topic) Group study of special topics in middle childhood of critical contemporary concern in professional education.

### 5250:490 Workshop: Middle Level (1-3 Credits)

Elective workshop for Middle Childhood majors who would like to pursue further refinement of teaching skills. Emphasis in demonstrations of teaching techniques and development.

### 5250:495 Student Teaching: Grades 4-6 (5 Credits)

Planned teaching experience in schools selected and supervised by the Office of Field Experience.

### 5250:496 Student Teaching: Grades 7-9 (6 Credits)

Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio; senior status. Corequisite: 498. Planned teaching experience in schools selected and supervised by the Office of Field Experiences.

### 5250:497 Independent Study (1-3 Credits)

Prerequisites: Permission of advisor and department head. Specific area of curriculum investigation pertinent to middle level education as determined by student's academic needs.

### 5250:498 Student Teaching Colloquium: Middle Grades (1 Credit)

Corequisite: 5250:499. Prepares learner for final phase of becoming a decision maker. Explores problems encountered in the classroom, initiates reflective practice and concepts of other research.

### 5250:499 Student Teaching: Middle Level Education (11 Credits)

Corequisite: 5250:498. 322 Field Hours. Planned teaching experience in schools selected and supervised by the Office of Field Experiences.

## Military Science (1600)

### 1600:100 Introduction to the Army and Critical Thinking (1 Credit)

Study of the mission of the Army, the principles of basic military leadership and management, land navigation, and opportunities in the Army. A geographical and cultural examination of the countries where U.S. soldiers are located. Leadership laboratory required. No military obligation incurred.

### 1600:101 Introduction to the Profession of Arms (1 Credit)

Study of the principles and techniques of military leadership and human resource management. Introduction to drill and ceremony, small unit tactics, briefing techniques, and public speaking. Leadership laboratory required. No military obligation incurred.

### 1600:110 Leadership and Personal Development Laboratory (1 Credit)

Students will participate in labs as a member of a cadet squad, learning to work with new people and gaining confidence through engaging in new and challenging situations that reinforce classroom instruction.

### 1600:111 Introduction to Tactical Leadership Laboratory (1 Credit)

Students will participate in labs as a member of a cadet squad, learning to work with new people and gaining confidence through engaging in new and challenging situations that reinforce classroom instruction. This Laboratory session will focus more on tactical training.

### 1600:200 Innovative Team Leadership (2 Credits)

Study of the principles of war and the art of leadership. Basic military skills taught through practical applications in marksmanship, map reading, first aid, and drill and ceremony. Leadership laboratory required. No military obligation incurred.

### 1600:201 Foundations of Tactical Leadership (2 Credits)

Study and application of the Leadership Development Program (LDP). Introduction to tactics, patrolling, and basic military skills. Leadership laboratory required. No military obligation incurred.

### 1600:210 Innovative Team Leadership Laboratory (1 Credit)

In their second year of military Science, students will begin to have a bigger leadership role within the ROTC organization and will participate in labs as a team leader. They will be responsible for the readiness and accountability of the first year cadets and are expected to begin to show confidence in leading others.

**1600:211 Foundations of Tactical Leadership Laboratory (1 Credit)**

Students will have a bigger leadership role within the ROTC organization and will participate in labs as a team leader. They will be responsible for the readiness and accountability of the first year cadets and are expected to begin to show confidence in leading others and in conducting tactical exercises.

**1600:300 Adaptive Team Leadership (3 Credits)**

Prerequisites: 1600:100, 1600:101, 1600:200, and 1600:201. Study in the application of military tactics, military history, military briefing techniques and equipment. Practical work with operations orders and planning, organizing, and executing training. Leadership laboratory required.

**1600:301 Leadership Under Fire (3 Credits)**

Prerequisite: 1600:300. Study of leadership, leadership counseling and tactics at the small-unit level. Practical work with land navigation, marksmanship training, squad and platoon movement, and battlefield survival. Leadership laboratory required.

**1600:310 Adaptive Team Leadership Laboratory (1 Credit)**

Prerequisite: 1600:211. Corequisite: 1600:300. In their third year, as students enter the ROTC Advanced course, students will take on a much larger leadership role; responsible for squads and platoons of cadets as well as training them on the subject matter of each lab. They learn to motivate, instill confidence, and take responsibility for the quality of the training and activities of the labs.

**1600:311 Leadership Under Fire Laboratory (1 Credit)**

Prerequisite: 1600:310. Corequisite: 1600:301. In their third year, as students enter the ROTC Advanced course, students will take on a much larger leadership role; responsible for squads and platoons of cadets as well as training them on the subject matter of each lab. They learn to motivate, instill confidence, and take responsibility for the quality of the training and activities of the labs.

**1600:400 Developing Adaptive Leaders (3 Credits)**

Prerequisites: 1600:300 and 1600:30. Intensive investigation of the leadership process to include applicatory work emphasizing officer ethics, duties, and responsibilities. Management and supervisory skills. Practical experience with the Leadership Development Program (LDP). Leadership laboratory required.

**1600:401 Leadership in a Complex World (3 Credits)**

Prerequisites: 1600:300 and 1600:301. Study of officer leadership and managerial responsibilities. Study of Army command organization and procedures, training management, personnel system, Uniform Code of Military Justice, and continued emphasis on counseling and human relations. Leadership laboratory required.

**1600:410 Developing Adaptive Leaders Laboratory (1 Credit)**

Prerequisite: 1600:311. Corequisite: 1600:400. Senior ROTC students are responsible for planning, managing, and supervising leadership labs for the entire cadet Battalion, as well as acquiring the necessary resources and equipment required for training.

**1600:411 Leadership in a Complex World Laboratory (1 Credit)**

Prerequisite: 1600:410. Corequisite: 1600:401. Senior ROTC students are responsible for planning, managing, and supervising leadership labs for the entire cadet Battalion, as well as acquiring the necessary resources and equipment required for training. They will later utilize the experience gained in leading cadets to aid them in leading United States Army Soldiers.

**1600:490 Special Topics in Military Science (1-3 Credits)**

Prerequisite: Permission. (May be repeated for a maximum of six credits) Content varies with special topics. Texts to be selected according to topic and will use relevant library periodicals and journals. Existing library resources are adequate to support the course. Basic Camp, Advanced Camp, Airborne, and other specialty schools qualify for course credit.

## Modern Languages (3500)

**3500:101 Beginning Modern Language I (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3500:102 Beginning Modern Language II (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3500:201 Intermediate Modern Language I (3 Credits)**

Sequential. Prerequisite: 3500:102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3500:202 Intermediate Modern Language II (3 Credits)**

Sequential. Prerequisite: 102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3500:422 Modern Languages: Special Topics in Advanced Language Skills, or Culture, or Literature (1-4 Credits)**

Prerequisite: Modern Languages 3500:202 or equivalent. Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

**3500:490 Workshop in Modern Languages (1-4 Credits)**

Prerequisite: Permission of instructor. (May be repeated for a total of 8 credits) Group studies of special topics in modern languages.

**3500:497 Individual Readings in Modern Languages (1-3 Credits)**

Prerequisites: 3500:202 and permission of department chair.

**3500:498 Senior Honors Project (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission. Open only to language major enrolled in Honors Program. Independent study leading to completion of senior honors thesis or other original work.

## Music - School of (7500)

**7500:100 Fundamentals of Music (2 Credits)**

Introduction of basic notation and development of functional music reading and keyboard skills. Conducted in electronic keyboard laboratory with computer-assisted instruction available. For non-music majors only, with little or no previous musical training.

**7500:101 Introduction to Music Theory (2 Credits)**

Prerequisite: Undergraduate Theory Placement Examination. Designed for prospective music major to correct deficiencies in theory background as determined through department placement testing. Includes classroom instruction and computer assisted instruction in basic notation, scales, meter, key signatures, ear training and basic familiarity with the keyboard. Credit not applicable toward music degree.

**7500:102 Introduction to Music Education (2 Credits)**

Prerequisites: 7500:121 and 7500:154. Overview of the music teaching profession and its processes. Screening of degree candidates is built into the course with clinical field experience.

**7500:103 Trends in Jazz (2 Credits)**

An overview of the first 100 years of jazz music with emphasis on major figures and styles central to the development of jazz. This course is specifically designed for the non-music major.

**7500:104 Class Piano I (2 Credits)**

Prerequisite: 7500:101. Designed for student with no previous keyboard experience to learn rudimentary keyboard skills such as playing scales, chords, arpeggios and melodic patterns as well as simple music.

**7500:105 Class Piano II (2 Credits)**

Prerequisite: 7500:104. Continuation of work begun in 104.

**7500:106 Music Orientation (0 Credits)**

Zero credit class designed to provide information and support for incoming music majors as they transition into the academic environment of the School of Music.

**7500:107 Class Voice I (2 Credits)**

Prerequisite: 7500:101. Minimum memorization and solo singing requirement: seven songs. Voice literature emphasis; folk songs, ballads, spirituals, sacred songs and easy art songs in English.

**7500:108 Class Voice II (2 Credits)**

Prerequisite: 7500:107. Minimum memorization and solo singing requirement: eight songs. Vocal literature emphasis: old Italian and English songs, art songs in English or foreign language if student is conversant with the language.

**7500:110 Class Guitar (1 Credit)**

Introduction to the guitar, its repertoire and techniques. Basic classical techniques and music reading, strums, finger-picking, accompaniment patterns, blues styles will be covered.

**7500:121 Theory and Musicianship I (4 Credits)**

Sequential, Prerequisite: Grade of C- or higher in 7500:101 or placement. Analysis, aural/oral skills; Diatonic pitch materials, three clefs; simple-compound meters, rhythmic divisions and subdivisions.

**7500:122 Theory and Musicianship II (4 Credits)**

Sequential, Prerequisite: Grade of C- or higher in 7500:121. Theory, analysis, aural/oral skills: Seventh chords, secondary function, four-part dictation; asymmetric meters, borrowed subdivision.

**7500:141 Ear Training/Sight Reading I (1 Credit)**

Prerequisite: Placement in Theory I. Corequisite: 7500:151. Major and minor keys; intervals, triads and inversions; diatonic progressions; three clefs; simple and compound meters; subdivision through sixteenth notes.

**7500:142 Ear Training/Sight Reading II (1 Credit)**

Prerequisites: 7500:141 and 7500:151. Corequisite: 7500:152. Seventh chords; melodic chromaticism; secondary function; four-part dictation; asymmetric meters; borrowed subdivision.

**7500:151 Theory I (3 Credits)**

Sequential, Prerequisite: Theory Placement Examination (with a score of 65% or higher) or the grade of C- or higher in 7500:101. Study/creative use of elements of music; investigation of music of major composers of classic/romantic eras; introduction to earlier musical practices and contemporary music.

**7500:152 Theory II (3 Credits)**

Sequential, Prerequisite: grade of C- or higher in 7500:151. Study/creative use of elements of music; investigation of music of major composers of classic/romantic eras; introduction to earlier musical practices and contemporary music.

**7500:154 Music Literature I (2 Credits)**

Sequential. Familiarization with large body of musical material from all branches of music writing; vocal, instrumental, symphonic and choral music literature. Special attention given to style, form and structural procedures of principal composers.

**Gen Ed:** Tier 2 - Arts

**7500:155 Music Literature II (2 Credits)**

Sequential. Familiarization with large body of musical material from all branches of music writing; vocal, instrumental, symphonic and choral music literature. Special attention given to style, form and structural procedures of principal composers.

**Gen Ed:** Tier 3 - Domestic Diversity

**7500:157 Student Recital (0 Credits)**

Required of all music majors until minimum requirement is met. Forum for student and faculty members providing lectures, recitals and opportunity for practice of various skills necessary for successful music performance.

**7500:200 Seminar in Music (1-3 Credits)**

Exploration of special topics in music for the non-music major (may be repeated for a total of 9 credits)

**7500:201 Exploring Music: Bach to Rock (3 Credits)**

This course provides non-music majors with the skills to evaluate a wide range of music.

**Gen Ed:** Tier 2 - Arts

**7500:210 Jazz Improvisation I (2 Credits)**

Prerequisites: 7500:262 and permission of instructor. Study and application of principles of jazz improvisation as they relate the chord-scale structures, motif development and style.

**7500:211 Jazz Improvisation II (2 Credits)**

Prerequisite: 7500:210. Advanced study in principles of jazz composition.

**7500:212 Music Industry: A Survey of Practices & Opportunities (2 Credits)**

A study of current practices affecting the professional musician and a survey of career opportunities relating to the music industry.

**7500:221 Theory and Musicianship III (4 Credits)**

Sequential, Prerequisite: 7500:122. Theory, analysis, and aural/oral skills: Chromatic harmony, dictation of mixed and irregular meters, syncopation, dotted rhythms, and ties.

**7500:222 Theory and Musicianship IV (4 Credits)**

Sequential, Prerequisite: 7500:221. Theory, analysis, and aural/oral skills: Advanced chromaticism and rhythm, extended tonality, form, serial and non-serial atonality.

**7500:241 Ear Training/Sight Reading III (1 Credit)**

Prerequisites: 7500:142 and 7500:152. Corequisite: 7500:251. Modulation; chromatic harmony; mixed meters.

**7500:242 Ear Training/Sight Reading IV (1 Credit)**

Prerequisites: 7500:241 and 7500:251. Corequisite: 7500:252. Twentieth-century materials: modes; whole-tone and octatonic scales; secundal and quartal/quintal harmony; classical, jazz, and non-western examples; polyrhythm; total and atonal contexts.



**7500:251 Theory III (3 Credits)**

Sequential, Prerequisite: The grade of C- or higher in 7500:152. Renaissance vocal counterpoint; Baroque instrumental counterpoint; form and analysis of music of all eras.

**7500:252 Theory IV (3 Credits)**

Sequential, Prerequisite: The grade of C- (70%) or higher in 7500:251. Renaissance vocal counterpoint; Baroque instrumental counterpoint; form and analysis of music of all eras.

**7500:254 String Methods I (1 Credit)**

Prerequisites: 7500:102, 7500:155, 7500:222, 7500:262, 7500:276, and 7500:277. Fundamentals of technique, tone production, methods, and materials pertaining to teaching violin, viola, cello and string bass in the public schools.

**7500:255 String Methods II (1 Credit)**

Prerequisites: 102, 155, 222, 254, 262, 276, 277. Continuation of the fundamentals of technique, tone production, methods, and materials pertaining to teaching violin, viola, cello and string bass in the public schools.

**7500:259 Fretboard Harmony (2 Credits)**

Prerequisite: 7500:261 or permission of instructor. Essentials of basic theory and harmony as applied to the guitar fretboard: accompaniment, improvisation, transposition, modulation, figures bass, sight reading.

**7500:261 Keyboard Harmony I (2 Credits)**

Sequential. Prerequisites: 7500:105 or equivalency and 7500:122. Essentials of basic theory and harmony practically applied at keyboard; accompaniment, improvisation, transposition, modulation and sight-reading.

**7500:262 Keyboard Harmony II (2 Credits)**

Sequential. Prerequisites: 7500:105 or equivalency and 7500:122. Essentials of basic theory and harmony practically applied at keyboard; accompaniment, improvisation, transposition, modulation and sight-reading.

**7500:265 Diction for Singers I (2 Credits)**

Sequential. Prerequisite: Permission. Study of diction of the four most used languages (Italian, German, French and English) in vocal performance and international phonetic alphabet. Designed for student who expects to function as vocal performers and/or choral and studio voice teachers.

**7500:266 Diction for Singers II (2 Credits)**

Sequential. Prerequisite: 7500:265. Study of diction of the four most used languages (Italian, German, French and English) in vocal performance and international phonetic alphabet. Designed for student who expects to function as vocal performers and/or choral and studio voice teachers.

**7500:268 Group Vocal Techniques for Choral Music Education (2 Credits)**

Prerequisites: [7510:120 or 7510:121], and 7520:124. Corequisite: 7500:265. Foundational concepts of group vocal techniques. Designed for choral educators to learn physiology of the voice, basics of vocal production, and applications for the Pre-K-12 choral classroom.

**7500:271 Piano Pedagogy & Literature I (2 Credits)**

Prerequisite: Permission of instructor. Examination of musical content and pedagogical orientation of beginning piano material to include appropriate teaching works, methods and ensemble pieces from a variety of historical periods.

**7500:272 Piano Pedagogy & Literature II (2 Credits)**

Prerequisite: 7520:125 or permission of the instructor. A survey of piano literature at all levels of difficulty, with practical emphasis on its use for teaching.

**7500:276 Trumpet & French Horn Methods (1 Credit)**

Prerequisite: 7500:102. A comprehensive approach to the performance and pedagogy of the trumpet and French horn for the instrumental music education major in preparation for teaching music.

**7500:277 Clarinet & Saxophone Methods (1 Credit)**

Prerequisite: 7500:276. A comprehensive approach to the performance and pedagogy of the clarinet and saxophone for the instrumental music education major in preparation for teaching music.

**7500:289 Music Education Department Jury (0 Credits)**

Prerequisites: minimum 2.5 accum, C or higher in all freshman/ sophomore music education coursework, and minimum 200 jury level. Sophomore exam for music education majors.

**7500:298 Technologies of Music Education (2 Credits)**

Introductory hands-on experiences with a wide range of technology applications and strategies to integrate technology into the music curriculum.

**7500:305 Marching Band Organization & Techniques (1-2 Credits)**

Prerequisite: 7500:289, two semesters 7510:126. A discussion of the marching band. Students learn to write complete half-time show, administer marching band program. Required for instrumental music education majors.

**7500:307 Techniques of Jazz Ensemble Performance & Direction (1-2 Credits)**

Prerequisite: 7500:102, 7500:155, 7500:222, 7500:262, 7500:276, 7500:277, and 7500:305; permission of instructor. Basic experiences relating to conducting, rehearsal techniques, improvisation, performance, repertoire and other matters related to organization and direction of stage bands. Required for instrumental majors.

**7500:308 History & Literature of Jazz (3 Credits)**

Prerequisite: Permission of instructor. Study of origins of jazz music, its development and influence on today's culture. Investigates evolution of musical instruments as they pertain to jazz music, the artists who perform on them, and their music through live and recorded listening experiences.

**7500:309 Jazz Keyboard Techniques (2 Credits)**

Prerequisite: 7500:262. Study of and familiarization with basic jazz keyboard techniques as they relate to contemporary jazz harmony and theory.

**7500:310 Jazz Improvisation III (2 Credits)**

Prerequisite: 7500:211. Advanced study in the principles of jazz improvisation.

**7500:311 Jazz Improvisation IV (2 Credits)**

Prerequisite: 7500:310. Advanced study in the principles of jazz improvisation.

**7500:315 Equity and Excellence in Music Education (3 Credits)**

Prerequisite: 7500:289. Inquiry-based seminars and service learning field experiences for the music education major to develop competence implementing equity and excellence in a culturally pluralistic society.

**7500:325 Research in Music (2 Credits)**

Prerequisites: 7500:155, 7500:222, and 7500:262. Techniques of basic research methods; examination of selected music materials; field trips to specialized collections.

**7500:339 Teaching General Music I (2 Credits)**

Prerequisites: 7500:222, 7500:262, and 7500:289. Methods and materials for teaching general music in pre-K to 12th grade classrooms.

**7500:340 Teaching General Music II (2 Credits)**

Prerequisites: 7500:289, and 7500:339. Advanced methods and materials for teaching general music with emphasis on Orff, Kodaly and Dalcroze methodologies.

**7500:341 Junior High/Middle School Choral Methods (2 Credits)**

Prerequisites: 7500:289, and 7500:340. Methods and materials for teaching choral music at the JH/MS level. Develops competencies in literature selection, rehearsal techniques and assessment of the adolescent voice.

**7500:344 Secondary Choral Music Methods/Materials (2 Credits)**

Prerequisites: 7500:351, and 7500:361. Methods, techniques, and materials for teaching secondary choral music. Develops competencies in literature selection, rehearsal techniques, and programming methodology.

**7500:345 Low Brass Methods (1 Credit)**

Prerequisites: 7500:222, 7500:262, 7500:277, and 7500:289. A comprehensive approach to the pedagogy and performance of the low brass for the instrumental music education major in preparation for teaching music.

**7500:346 Flute & Double Reed Methods (1 Credit)**

Prerequisites: 7500:345, 7500:340, and 7500:351. A comprehensive approach to the pedagogy and performance of the flute and double reeds for the instrumental music education major in preparation for teaching music.

**7500:351 Music History I (3 Credits)**

Sequential. Prerequisites: 7500:122 and 7500:155. Development of music from ancient to modern times; scores, recordings and live performances as illustrative material.

**7500:352 Music History II (3 Credits)**

Sequential. Prerequisites: 7500:351. Development of music from ancient to modern times; scores, recordings and live performances as illustrative material.

**7500:353 Electronic Music (3 Credits)**

Theory of electronically generated sound and practice of electronic music composition. Emphasis is on understanding digital and analog synthesizers in a MIDI recording studio.

**7500:361 Conducting (2 Credits)**

Prerequisites: All Majors 7500:155, 7500:222, and 7500:262; Vocal 7500:289, 7500:351, or permission; Instrumental 7500:254, 7500:346, 7500:352, 7500:454 or permission. Study and practice of conducting techniques; patterns, fermatas, tempo and dynamic change, attacks and releases, score reading, aural skills. One hour lab required.

**7500:363 Intermediate Conducting: Choral (2 Credits)**

Prerequisite: 7500:361 or instructor permission. Introduction to choral conducting with emphasis on manual techniques, vocal skills, aural skills, and gaining conducting experience.

**7500:366 Song Literature I (2 Credits)**

Prerequisite: 7500:222 or permission. Systematic study of French and German song literature presented chronologically. Includes study of stylistic compositional characteristics and repertoire of major composers of song literature.

**7500:367 Song Literature II (2 Credits)**

Prerequisite: 7500:222 or permission. Systematic study of American, British and Italian song literature presented chronologically. Includes study of stylistic compositional characteristics and repertoire of major composers of song literature.

**7500:368 Guitar Styles (2 Credits)**

Prerequisite: 200 performance level or permission of instructor. Techniques involved in performing musical styles other than those in classical guitar. Included are plectrum styles such as bluegrass, country and rock, as well as flamenco, folk, popular and jazz.

**7500:371 Analytical Techniques (2 Credits)**

Prerequisite: 7500:222. Techniques for analysis of musical score from all eras of Western music history, with major emphasis on works of Baroque, Classical and Romantic periods.

**Gen Ed:** Tier 3 - Critical Thinking

**7500:372 Post-Tonal Analytic Techniques (2 Credits)**

Prerequisite: 7500:222. Techniques for the analysis of musical scores from the 20th and 21st Centuries. Required of a composition major.

**7500:407 Jazz Arranging & Scoring (2 Credits)**

Prerequisites: 7500:309 and 7500:454. Study of jazz instrumentation from small groups to large ensembles.

**7500:415 Teaching and Literature: Brass Instruments (2 Credits)**

Prerequisite: Permission of instructor. Research in current trends and issues in brass teaching techniques and appropriate literature.

**7500:416 Teaching and Literature: Woodwind Instruments (2 Credits)**

Prerequisite: Permission of instructor. Research in current trends and issues in woodwind teaching techniques and appropriate literature.

**7500:432 Teaching & Literature: Percussion Instruments (2 Credits)**

To train undergraduate and graduate percussion students in techniques of percussion education. Emphasis on research, literature, performance, and techniques from elementary through secondary levels.

**7500:442 Instrumental Methods (2 Credits)**

Prerequisites: 7500:254, 7500:346, 7500:352, and 7500:454. Procedures for teaching instrumental music at all levels. Special emphasis will be placed on classroom management, recruitment, assessment, literature selection, scheduling, and rehearsal organization. Clinical and field experience.

**7500:443 Instrumental Practicum (2 Credits)**

Prerequisite: 7500:442. Procedures for teaching instrumental music at all levels. Special emphasis will be placed on classroom management, recruitment, assessment, literature selection, scheduling, and rehearsal organization. Clinical and field experience.

**7500:451 Introduction to Musicology (2 Credits)**

Prerequisite: 7500:352. Comparative musicology; acoustics; psychology and physiology of music; aesthetics; theory of music theory; historical musicology.

**7500:453 Music Software Survey and Use (2 Credits)**

Prerequisite: 7500:122 or permission of instructor. A survey and evaluation of available software in the various forms of musical instruction. Students will design a course suitable for submission to a programmer.

**7500:454 Orchestration (2 Credits)**

Prerequisite: 7500:222. Theory of instrumentation ranging from small ensembles to full band and orchestras.

**7500:455 Advanced Conducting: Instrumental (2 Credits)**

Prerequisite: 7500:361 and 7500:442 or permission. Baton techniques and problems relating to practice, reading and preparation of scores; organization of ensembles; programming; conducting large instrumental ensembles. One hour lab required.

**7500:456 Advanced Conducting: Choral (2 Credits)**

Prerequisite: 7500:363. Conducting techniques to the choral ensemble, including leadership, error detection, tonal development, stylistic accuracy and analysis. One hour lab required.

**7500:457 Senior Recital (0 Credits)**

Permission of applied instructor is required for this course, which is taken only during the semester of the Senior Recital.

**7500:458 Percussion Methods (1 Credit)**

Prerequisites: 7500:346, 7500:352 and admission into a Music Education Program. A comprehensive approach to the pedagogy and performance of the percussion instruments for the instrumental education major in preparation for teaching music.

**7500:463 Repertoire & Pedagogy: String Instruments (3 Credits)**

Prerequisite: Permission of instructor. Study in depth of the four bowed string instruments, their teaching and close relationship. Despite obvious difference in physical application of cello and bass from violin and viola, methods of bowing, sound production and coloring are closely related. Application of the instruments to solo, chamber and orchestral playing.

**7500:465 Vocal Pedagogy (2 Credits)**

Prerequisite: Junior standing. In depth study of subjects dealing with teaching voice: physiology of the vocal instrument, principles governing vocal production and application of vocal pedagogy.

**7500:467 Guitar Pedagogy (2 Credits)**

Prerequisite: Permission of instructor. A systematic analysis of prevailing schools of guitar pedagogy. Sound production physiology, method books and special problems in teaching addressed.

**7500:468 Guitar Arranging (2 Credits)**

Prerequisite: Permission of instructor. After comparative analysis of selected examples, students make original solo guitar arrangements of works written for other solo instruments and ensembles.

**7500:469 History & Literature: Guitar & Lute (2 Credits)**

Prerequisite: Permission of instructor. Study of plucked, fretted, string instruments from the 14th Century to the present: construction, notation, literature and performance practices. Modern editions and recordings evaluated.

**7500:471 Counterpoint (2 Credits)**

Prerequisite: Permission of instructor. Designed to give student of theory-composition necessary knowledge and skills for understanding contrapuntal practices and procedures; emphasis on 20th-Century techniques.

**7500:472 Advanced Orchestration (2 Credits)**

Prerequisite: 7500:454. Study of techniques of orchestral style as found in major works from classical orchestra of Haydn and Mozart through modern orchestra of Stravinsky, Bartok, Berg and Schoenberg.

**7500:490 Workshop in Music (1-3 Credits)**

Prerequisite: Permission of instructor. Investigation of topics not offered in regular curriculum. Graduate student must fulfill additional requirements.

**7500:492 Student Teaching Colloquium (1 Credit)**

Prerequisite: restricted to students enrolled in Student Teaching in Music. For music education majors; certification, contracts, benefits, job market prospects and student teaching experience sharing.

**7500:497 Independent Study in Music (1-2 Credits)**

(May be repeated for a total of four credits) Prerequisites: A minimum academic standing of Senior, a Music major and permission of department head. Independent study under supervision of specially selected faculty members in subject area bearing on student's own goals.

**7500:498 Senior Honors Project: Music (1-3 Credits)**

(May be repeated for a total of six credits) Individually designed project demonstrating scholarship, analysis, advanced musicianship, research and/or creativity according to student interest. Restricted to University honors music student.

## Music Organizations (7510)

**7510:101 University Symphony Youth Orchestra (1 Credit)**

This ensemble is designed for the post-secondary student who wishes to participate in a select group performing orchestral literature. By audition only.

**7510:102 Akron Symphony Chorus (1 Credit)**

Open to University and community members by audition. Prospective members should contact School of Music two weeks before semester begins. Performs with Akron Symphony Orchestra.

**7510:103 University Symphony: Orchestra (1 Credit)**

Membership by audition. Organization devoted to study of orchestral literature. Full-length concerts as well as special University appearances. Major conducted ensemble.

**7510:104 Wind Symphony (1 Credit)**

Membership by audition. The Wind Symphony is the most select band at the University and performs the most demanding and challenging music available. Major conducted ensemble.

**7510:105 Vocal Choral Ensemble (1 Credit)**

Membership open to those enrolled in applied voice study. Coaching and rehearsal of solo and ensemble literature for voices from operatic, oratorio and lieder repertoires.

**7510:106 Brass Ensemble (1 Credit)**

Membership by audition. Study and performance of literature for brass ensemble from all periods of music history. Frequent public concerts. For advanced brass players.

**7510:107 String Ensemble (1 Credit)**

Membership by audition. In-depth study of performance of chamber music literature with special emphasis on string quartet and piano trio.

**7510:108 Opera/Lyric Theater Workshop (1 Credit)**

Membership by audition. Musical and dramatic group study of excerpts from operatic repertoire. Includes annual production of standard opera and/or contemporary chamber work with staging, costumes and scenery.

**7510:109 Percussion Ensemble (1 Credit)**

Membership by audition. Study and performance of literature for various percussion groups; develops skill in ensemble performance.

**7510:110 Woodwind Ensemble (1 Credit)**

Membership by audition. Study, reading, and performance of major orchestral and serenade repertoire for wind instruments.

**7510:114 Keyboard Ensemble (1 Credit)**

In-depth study of ensemble playing. Eight semesters required for Keyboard majors, six semesters for Keyboard Mus. Ed. majors, and each semester for keyboard scholarship recipients.

**7510:115 Jazz Ensemble (1 Credit)**

Membership by audition. Provides experience in jazz ensemble performance. Student is assumed to have knowledge of rudiments of music and some experience in jazz performance.

**7510:116 Guitar Ensemble (1 Credit)**

Membership by audition. Provides experience in conducted ensemble performance for guitarists. Major conducted ensemble.

**7510:118 Small Ensemble-Mixed (1 Credit)**

Chamber Ensemble, Baroque Ensemble and Contemporary Music Ensemble. Each is a group of diverse instruments which rehearses and performs a selected body of music.

**7510:120 Concert Choir (1 Credit)**

Membership by audition. Highly select mixed choir. Performs classical literature from all periods. Campus, regional, and tour performances. "Major conducted ensemble" for vocal majors.

**7510:121 University Singers (1 Credit)**

Membership by audition. Mixed ensemble devoted to performance of a wide variety of choral literature from classical to popular. "Major conducted ensemble" for vocal majors.

**7510:125 Symphony Band (1 Credit)**

Membership by audition. The Symphony Band is a select ensemble at the University and performs standard and contemporary repertoire for wind bands. Major conducted ensemble.

**7510:126 Marching Band (1 Credit)**

Enrollment is open to all members of the University student body. This organization is noted for its high energy performances at University football games.

**7510:127 Blue & Gold Brass (1 Credit)**

Membership by audition. The official band for Akron home men's basketball games.

**7510:128 Concert Band (1 Credit)**

Membership by audition. Open to all students regardless of academic major. The Concert Band performs standard and contemporary repertoire for wind bands. Major conducted ensemble.

**7510:129 Blue & Gold Brass II (1 Credit)**

Membership by audition. The official band for Akron home ladies basketball games.

**7510:130 Summer Symphonic Band (1 Credit)**

Membership open to UA students and community musicians. Enrollment in course required. Summer Symphonic Band performs standard repertoire for wind band.

**7510:150 Chamber Choir (1 Credit)**

Membership by audition. Premiere and flagship choral ensemble. Highest level of musicianship, vocal technique, and professionalism required. Performs classical literature of all periods and genres.

**7510:421 Guitar Chamber Music (1 Credit)**

Prerequisite: Open to all upper class instrumentalists and vocalists. Guitarists must have taken Guitar Ensemble, 7510:116. Study, coaching, and performance of major works for guitar with other instruments or voice. Major conducted ensemble for guitar majors.

**7510:431 Summer Drum Corps Experience (1 Credit)**

Prerequisite: Permission of instructor. Summer Drum Corps Experience provides one credit for participation in a Junior Level - Division I, II, or III Drum and Bugle Corps as part of the Drum Corps International Summer Music Games.

## New Media (7000)

**7000:100 Introduction to New Media: Creative Mind (3 Credits)**

In addition to an introduction to the history and theory of New Media, students will enhance their creative mind through seminar and simple practices. No prior art or digital media experience is required.

**7000:300 New Media II: Creative Practice (3 Credits)**

Prerequisite or Corequisite: 7000:100. Students practice various New Media technologies. No prior art or digital media experience is required.

**7000:400 New Media III: Creative Projects (3 Credits)**

Prerequisite: 7000:300. Students create their original New Media Art projects through research, proposals, productions and a show.

**7000:401 History of Performance and New Media (3 Credits)**

Prerequisite: 7100:101 or permission. A survey of performance art and "new media," including video art and sound art, this course takes an historical overview of its subjects from the emergence of performance art in the late 19th century (including dance, theater, and music) and video and sound art in the 1960s, through the present moment.

## Nursing (8200)

**8200:100 Introduction to Nursing (1 Credit)**

Introduces students to influences of past, present, and future political, legal, social, and cultural processes on the nursing profession and the roles of nurses.

**8200:211 Foundations of Nursing Practice I (5 Credits)**

Prerequisite: Admission to the School of Nursing. This course focuses on basic concepts and skills needed by novice nursing students in order to care for clients. This course will focus on nurse-client relationships, communication, nursing process, psychomotor skills, and beginning pharmacology. Clinical experiences will reflect these concepts and skills.

**8200:212 Foundations of Nursing Practice II (5 Credits)**

Prerequisite: 8200:211. Builds on Foundations of Nursing Practice I focusing on promoting holistic well being across the lifespan. Clinicals are with children and adults, acute and non-acute settings.

**8200:216 Transition to Baccalaureate Nursing (3 Credits)**

Prerequisite: Admission to School of Nursing. This course emphasizes the transition from Licensed Practical Nurse to professional nurse. The LPN is introduced to the discipline of nursing from the baccalaureate perspective.

**8200:217 Pathophysiology for Nurses (3 Credits)**

Prerequisite: Admission to the School of Nursing. Develop understanding of basic concepts related to pathophysiologic mechanisms of health, illness as applied to nursing. Emphasis on application to nursing using the nursing process.

**8200:225 Health Assessment (3 Credits)**

Prerequisite: Admission to the School of Nursing. The skills of taking health histories and performance of basic physical assessment. Supervised practice in the Learning Resource Center.

**8200:230 Nursing Pharmacology (3 Credits)**

Prerequisite: Admission to the School of Nursing. Emphasis on fundamental concepts of pharmacology as applied to major drug classes, actions and effects. Application of nursing process to drug therapy across the lifespan.

**8200:336 Concepts of Professional Nursing - RN Only (3 Credits)**

Prerequisite: Admission to the RN/BSN sequence. Introduces the RN to baccalaureate nursing. Focuses on the relationship of concepts and theories to the role of the professional nurse.

**8200:337 Health Assessment/RN - RN Only (3 Credits)**

Prerequisite or corequisite: 8200:336. This three hour health assessment course is designed for the registered nurse. The course consists of both theory and independent laboratory practice.

**8200:341 Professional Role Development (3 Credits)**

Prerequisites: Admission to the School of Nursing and all sophomore level courses in the program of study. A professional engagement course designed to expose students to the essentials of the professional role of the baccalaureate generalist nurse.

**8200:350 Nursing of the Childbearing Family (5 Credits)**

Prerequisite: Satisfactory completion of Sophomore level nursing courses. A theoretical and clinical basis for care of the childbearing family in varying degrees of health and in a variety of settings.

**8200:360 Nursing Care of Adults (5 Credits)**

Prerequisite: Satisfactory completion of Sophomore level nursing courses. Acute nursing care of adults with nutrition, elimination, metabolic, sexual, reproductive, and immunological concerns. Includes theory and practice at the advanced beginner level.

**8200:370 Nursing Care of Older Adults (5 Credits)**

Prerequisite: Satisfactory completion of Sophomore level nursing courses. Acute nursing care of older adults with mobility, perception, circulation, and oxygenation concerns. Includes theory and practice at the advanced beginner level.

**8200:380 Mental Health Nursing (5 Credits)**

Prerequisite: Satisfactory completion of Sophomore level nursing courses. Assists students in developing knowledge and skills for providing care to individuals with mental health needs in a variety of settings.

**8200:401 RN Transition (1 Credit)**

Prerequisites: 8200:350, 8200:360, 8200:370, 8200:380 and 8200:341. Corequisites: any two, including 8200:410, 8200:430, 8200:435, 8200:440 and 8200:450. Prepares the Senior nursing student of the professional role by developing a resume, test taking strategies for the NCLEX RN exam and a resume.

**8200:405 Nursing Care of Healthy Individuals/Families - RN Only (3 Credits)**

Prerequisite or Corequisite: 8200:336. Health care concepts across the lifespan with emphasis on health promotion and illness prevention for individuals, families, and groups are discussed.

**8200:406 Palliative Nursing Care - RN Only (3 Credits)**

Prerequisite or Corequisite: 8200:336. Dimensions of end of life nursing care, including family dynamics, grief and loss, ethical considerations, physiologic changes and community resources are examined.

**8200:409 International Health (2-3 Credits)**

Prerequisite: Junior standing. Study in an international location. Focuses on comparisons of education, ethics, government, demography and geography on health care and nursing roles and responsibilities.

**8200:410 Nursing of Families with Children (5 Credits)**

Prerequisites: 8200:341, 8200:350, 8200:360, 8200:370, and 8200:380 with grades of C+ or better. Theoretical and clinical nursing course focused on the child within a family context. Health problems of both acute and chronic nature are explored.

**8200:412 Global Perspectives of Health and Health Care (2-3 Credits)**

Prerequisite: senior status. Cultural, political, educational, and economical perspectives of different regions of the world and the impact of these factors on health will be compared and examined.

**8200:415 Complex Care of Aging Families/RN only (3 Credits)**

Prerequisite or Corequisite: 8200:336. Complex nursing issues related to care of aging individuals and families are explored. The nurse's role in physiological, emotional and psychosocial care is discussed.

**8200:430 Nursing in Complex & Critical Situations (5 Credits)**

Prerequisites: 8200:341, 8200:350, 8200:360, 8200:370, 8200:380. Introduces advanced beginners to the complexity of nursing care in acute complex and critical situations of patients with multi-system failures.

**8200:435 Nursing Research (2 Credits)**

Prerequisite: Completion of 8200:341, 8200:350, 8200:360, 8200:370, 8200:380. Exploration of the effects of nursing research on the profession, become a knowledgeable consumer of research.

**8200:436 Nursing Research/RN Only (3 Credits)**

Prerequisite or Corequisite: 8200:336. Exploration of the effects of nursing research on the profession and becoming a knowledgeable consumer of research.

**8200:440 Nursing of Communities (5 Credits)**

Prerequisite: Completion of 8200:341, 8200:350, 8200:360, 8200:370, 8200:380. A synthesis of nursing skills applied among various community populations. Health and illness care strategies within diverse population groups.

**Gen Ed:** Tier 3 - Complex Systems

**8200:444 Community Engagement/RN (2 Credits)**

Corequisite: 8200:445. Prerequisite or Corequisite: 8200:336. This community engagement course provides experiences related to community health nursing in a variety of traditional and nontraditional community environments.

**8200:445 Nursing of Communities - RN Only (3 Credits)**

Corequisite: 8200:444. Prerequisite or Corequisite: 8200:336. This course provides a theoretical foundation for community, including public health nursing, to individuals and families in a variety of settings to diverse populations.

**Gen Ed:** Tier 3 - Complex Systems

**8200:446 Professional Nursing Leadership - RN Only (3 Credits)**

Corequisite: 8200:447. Prerequisite or Corequisite: 8200:336. Issues related to nursing leadership, management, policy, and economic issues within the healthcare system that influence nursing practice are discussed.

**8200:447 Leadership Engagement/RN (2 Credits)**

Corequisite: 8200:446. Prerequisite or Corequisite: 8200:336. This leadership experience course offers the opportunity to implement leadership and management skills in a health care setting.

**8200:448 Professional Nursing Capstone - RN Only (3 Credits)**

Prerequisite: 8200:336. Prerequisites or Corequisites: 8200:337, 8200:405, 8200:406, 8200:415, 8200:436, 8200:444, 8200:445, 8200:446, and 8200:447. Opportunities to synthesize information and reflect on ethical, legal, cultural, and political dimensions of employment and patient care within the health care system are provided.

**8200:450 Senior Practicum and Nursing Leadership (5 Credits)**

Prerequisites: 8200:341, 8200:350, 8200:360, 8200:370, and 8200:380. This course focuses on the application of leadership and management principles to the practice of nursing. Political, social, cultural, legal and ethical issues are explored.

**8200:453 School Nurse Practicum I (5 Credits)**

Prerequisites: 5570:421/521 and 5570:423/523. Prerequisite or corequisite: 8200:225/650. Emphasis on clinical primary health care nursing to enhance positive health behavior outcomes of well children and adolescents with minor conditions on family, community, school contexts.

**8200:454 School Nurse Practicum II (5 Credits)**

Prerequisite: 5570:421/521, 5570:423/523, 225 or 650, 453/553 or waiver. Emphasis on primary health care nursing to enhance positive health behavior outcomes of children/adolescents with minor common health or behavioral problems and chronic illnesses.

**8200:480 Senior Honors Project (1-4 Credits)**

Prerequisites: Honors Program Student, 8200:435 (Honor's Designated Section) Completion and presentation of an original investigation of a significant topic or creative work which must meet high standards of scholarship.

**8200:489 Special Topics: Nursing (1-4 Credits)**

(May be repeated as new topics are presented) Group studies of special topics in nursing. May not be used to meet requirements for the major in nursing. May be used for elective credit.

**8200:493 Workshop (1-4 Credits)**

(May be repeated as new topics are presented) Selected topics in nursing. May be used to meet undergraduate or graduate major requirements at the discretion of the college.

**8200:497 Independent Study: Nursing (1-3 Credits)**

Prerequisite: Permission of Director of Nursing Education, and good academic standing. Provides opportunity to develop greater depth in an area of nursing through methodology specific to discipline of nursing.

## Nursing: Cooperative Education (8000)

**8000:301 Cooperative Education (0 Credits)**

(May be repeated). For cooperative education students only. Work experience in business, industry, or governmental agency. Comprehensive performance evaluation and written report required.

## Nutrition and Dietetics (7760)

**7760:120 Career Decisions in Nutrition (1 Credit)**

Exploration of the nutrition/dietetics/food industry profession, including academic/internship routes, career opportunities, professional concepts and attributes. Self-assessment and goal setting with beginning portfolio development.

**7760:132 Early Childhood Nutrition (3 Credits)**

Emphasis on nutrition as component of Early Childhood programs. Nutrition principles discussed in relation to self and young children. Prenatal and infant nutrition studied. Food as learning experience, menu planning, purchasing, sanitation, food labeling, storage and parent involvement included. For Family and Child Development Option, and an educational technology student.

**7760:133 Nutrition Fundamentals (3 Credits)**

Study of basic nutrition concepts, contemporary issues, controversies; emphasis on macro/micro nutrient requirements for healthy individuals; analysis of a student's dietary intake. Online section available.

**Gen Ed:** Tier 2 - Natural Science

**7760:141 Food for the Family (3 Credits)**

Prerequisite: Permission of instructor. Application of nutrition to meal planning; problems in selecting, budgeting and preparing food; meal service.

**7760:200 Sustainability, Foods and Environments (3 Credits)**

This course provides an introduction to the basic concepts of environmental sustainability and conservation in food production. A brief history of this issue is followed by an examination of population needs and the management of water, agricultural practices, animal husbandry, fertilizer use, and land management. Global warming, genetically modified plant and animal organisms (GMOs), and carbon footprint/fossil fuel use, are also considered. The demographic and geo-political features of North American populations (urban, suburban, rural) contextualize comparisons of conventional food production practices and sustainable practices, around the world.

**7760:228 Introduction to Medical Nutrition Therapy (3 Credits)**

Prerequisites: 7760:133, 3150:110, 3150:111, 3150:112, and 3150:113. Introduction to Medical Nutrition Therapy will review basic metabolic and pathological conditions with emphasis on medical nutrition therapy strategies.

**7760:250 Food Science Lecture (3 Credits)**

Prerequisites: 7760:133, 7760:320, 3150:110, 3150:111, 3150:112, and 3150:113. Study of the chemical and physical structure of food. Scientific and aesthetic principles involved in the selection, storage and preparation of foods.

**7760:251 Food Science Lab (1 Credit)**

Prerequisites: 7760:133, 3150:110, 3150:111, 3150:112, and 3150:113. Corequisite 7760:250. Application of the scientific and sensory principles involved in the selection, storage and preparation of foods.

**7760:310 Food Systems Management I (4 Credits)**

Prerequisites: 7760:250 and [6200:201 or 2420:211]. Corequisite: 7760:315. Basic theoretical concepts in the management of dietetic food service systems and the practical application of principles and procedures in quantity food production and service.

**7760:314 Food Systems I Field Experience (2 Credits)**

Prerequisites: 6200:201 and 7760:250. Corequisite: 7760:310. Development of quantity food preparation in community and health care agencies; identification of functions and resources involved in the food service systems.

**7760:315 Food Systems Management I Clinical (2 Credits)**

Prerequisite: 7760:250. Corequisite: 7760:310. Development of quantity food preparation and supervisory skills in community agencies; identification of functions and resources involved in the management of food service systems.

**7760:316 Science of Nutrition (4 Credits)**

In-depth characterization of composition, metabolism, physiological functions and interrelationships of nutrients. Analysis and interpretation of current literature; assessment of nutrition counseling techniques.

**7760:321 Experimental Foods (3 Credits)**

Prerequisites: 7760:250, 3150:110, 3150:111, 3150:112, and 3150:113. Theory and methods in the experimental study of foods. Sensory evaluation and instrumental analysis of food quality. Individual research emphasized. Lecture/Laboratory.

**7760:328 Medical Nutrition Therapy I (3 Credits)**

Prerequisites: [7760:133 or 7760:316], 7760:426, and 7760:443. Analysis of health care concepts and the medical nutrition therapy relationship. Consideration of nutritional implications of pathological conditions and alterations to diet for specific health issues or disorders.

**7760:329 Medical Nutrition Therapy I Clinical (2 Credits)**

Prerequisites: [7760:133 or 7760:316], 7760:426, and 7760:443.  
Corequisite: 7760:328. Analysis of therapeutic health-care concepts. Consideration of nutritional implications of pathological conditions; construction of diets for specific disorders.

**7760:340 Meal Management (3 Credits)**

Prerequisites: 7760:250 or 7760:141. Emphasis is on meal design, etiquette, nutritional adequacy, and application of management principles. Resource management is applied to all course activities, including restricted financial and special diet situations.

**7760:400 Nutrition Communication & Education Skills (4 Credits)**

Prerequisites: 7760:228 and [7760:133 or 7760:316]. Theory and development of communication and education skills essential to dietetics practice; interpersonal communication; interviewing; nutrition counseling; education techniques, media, and current technology.

**7760:403 Advanced Food Preparation (3 Credits)**

Prerequisite: 7760:141 or 7760:250. Study of advanced techniques of food preparation. Introduction to and interpretation of classic and foreign cuisines. Emphasis on individualized experiences, skill development and evaluation of procedures and results.

**7760:412 Introduction to Regulatory Affairs (3 Credits)**

Organization and management in administration of food service systems; problems in administration of food service systems; problems in control of labor, time and cost. Field experience in food production. Study of regulations affecting the food industry, such as food labeling, nutrition labeling, food safety, and adulteration. Course includes discussion of regulatory agencies and their impact on the food industry.

**7760:413 Food Systems Management II (3 Credits)**

Prerequisite: 7760:310. Advanced concepts in management of dietetic service systems relating to achievement of nutritional care goals.

**7760:421 Special Problems in Nutrition and Dietetics (1-3 Credits)**

Additional study or apprentice experience in specialized field or preparation; group and individual experimentation.

**7760:424 Nutrition in Life Cycle (3 Credits)**

Prerequisite: 7760:316 or 7760:426. Study of the physiological basis for nutritional requirements; interrelating factors which affect growth, development, maturation and nutritional status from conception through the elderly years.

**7760:426 Human Nutrition (3 Credits)**

Prerequisites: 7760:133, 7760:228, 3100:202, 3100:203, 3150:112, and 3150:113. Application of principles nutrition, metabolism and assessment. Analyses and interpretation of current literature. Open to dietetics majors only.

**7760:428 Medical Nutrition Therapy II (3 Credits)**

Prerequisite: 7760:328. Continuation of 328. Medical Nutrition Therapy I with emphasis on more complex metabolic and pathological conditions with nutrition therapy strategies.

**7760:429 Medical Nutrition Therapy II Clinical (2 Credits)**

Prerequisites: 7760:329 and admission to the Coordinated program. Corequisite: 7760:428. Supervised practice experience in health care facilities with application of principles of medical nutrition therapy learned in 7760:328 and 7760:428.

**7760:430 Computer Assisted Food Service Management (3 Credits)**

Use of computer programs in application of management concepts for food service systems.

**7760:443 Nutrition Assessment (3 Credits)**

Prerequisites: 7760:133, 7760:228, 3100:202, 3100:203, 3150:112, and 3150:113. Application of principles of nutrition and assessment. Analysis and interpretation of current literature. Open to dietetics majors only.

**7760:444 Medical Nutrition Therapy in Long Term Care (2 Credits)**

Prerequisite: CP students only, 7760:328 and 7760:329. Clinical experiences in long term care facilities for application of principles of nutritional care learned in 7760:328.

**7760:447 Senior Seminar (1 Credit)**

Prerequisite: Senior standing. Consideration of the nutrition/dietetic professions and the impact on the health and wellness of individuals, families, and the environment. Analysis of challenges facing the profession.

**7760:470 Food Industry: Analysis & Field Study (3 Credits)**

Prerequisite: 7760:250. Role of technology in extending the food supply. Chemical, physical and biological effects of processing and storage, on-site tours of processing plants.

**7760:474 Cultural Dimensions of Food (3 Credits)**

Prerequisite: 7760:250. An examination of cultural, geographical and historical influences on development of food habits. Emphasis on evolution of diets; effects of religion, education, gender roles, media.

**7760:476 Developments in Food Science (3 Credits)**

Prerequisite: 7760:250. Advanced study of the chemistry and physics of food components affecting characteristics of food. Critical evaluation of current basic and applied research emphasized.

**7760:480 Community Nutrition I (3 Credits)**

Prerequisites: 7760:316 or 7760:426. Corequisite: 7760:481 for CP students only. Major food and nutrition related problems in the community. Emphasis on community assessment, program implementation and evaluation, and rationales for nutrition services.

**7760:481 Community Nutrition I-Clinical (2 Credits)**

Prerequisite: Admission to the Coordinated program. Corequisite: 7760:480. Field placement in area agencies offering nutrition services. Study of the agency's goals, organization, and philosophy of nutritional care.

**7760:482 Community Nutrition II (3 Credits)**

Prerequisite: 7760:480. Corequisite: 7760:483 for CP students only. Activities engaged in by community nutritionist. Emphasis on controversies, cultural differences, educational approaches, grantsmanship, marketing, and working with the media.

**7760:483 Community Nutrition II-Clinical (1 Credit)**

Prerequisite: CP students only; 7760:481. Corequisite: 7760:482. A second field placement in an area agency offering nutrition services. Study of the agency's goals, organization, and philosophy of nutritional care.

**7760:484 Health and Wellness Clinical (4 Credits)**

Prerequisite: (CP Students only) 7760:481. Corequisites: 7760:413 and 7760:482. A field placement in agencies or facilities offering health and wellness services as they related to nutrition. Credit/Noncredit.

**7760:485 Seminar in Health Professions (1-3 Credits)**

Prerequisite: Permission of instructor. Exploration and evaluation of current developments in selected areas.

**7760:486 Staff Relief: Dietetics (2 Credits)**

Prerequisites: 7760:414, CP senior only. Opportunity to function as an entry-level dietitian in area of administrative, therapeutic or community dietetics. The graduating senior CUP student spends three 40-hour weeks in a mutually agreeable agency primarily under direction of staff dietitians or coordinators.

**7760:487 Sports Nutrition (3 Credits)**

Prerequisites: 7760:133, 7760:426, 3100:202, 3100:203, 3150:112, and [3150:113 or 3150:203]. In-depth study of energy metabolism and utilization before, during, and after exercise. Factors affecting nutrient needs and peak performance of different athletic populations are emphasized.

**7760:488 Practicum in Dietetics (1-3 Credits)**

Prerequisite: Approval of advisor/instructor. Practical experience in application of the principles of nutrition.

**7760:489 Professional Preparation for Dietetics (1 Credit)**

Historical aspects of dietetics and where the profession is going. Specialty areas of dietetic practice are explored. Students prepare the application for dietetic internship.

**7760:493 Nutrition for Athletes (3 Credits)**

Study of metabolism before, during, and after exercise. Factors affecting nutrient needs and peak performance of different athletic populations are emphasized.

**7760:499 Senior Honors Project in Nutrition and Dietetics (1-3 Credits)**  
(May be repeated for a total of six credits) Prerequisites: Senior standing in Honors Program and approval of honors preceptor. Individual study supervised by adviser. Student and preceptor develop goals, objectives and methodology.

## Outdoor Education (5560)

**5560:430 Senior Honors Project: Outdoor Education (1-6 Credits)**  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.

**5560:450 Application of Outdoor Education to the School Curriculum (4 Credits)**

Provides knowledge, skills and techniques useful in application of outdoor education to school curriculum.

**5560:452 Resources & Resource Management for Teaching Outdoor Education (4 Credits)**

Methodologies unique to outdoor education which incorporate a multisensory approach to learning. Instructional materials and resources which permit expansion of curriculum beyond the school building.

**5560:454 Resident Outdoor Education (2 Credits)**

Skills, program considerations, and organizational techniques unique to an extended, overnight, resident outdoor education program. Off-campus location for four days and three nights.

**5560:456 Outdoor Pursuits (4 Credits)**

Investigation and participation in practical experiences in outdoor pursuits.

**5560:460 Outdoor Education Practicum (2 Credits)**

Prerequisites: 5560:452 and 5560:454. Closely supervised practical experience in conjunction with regularly scheduled classroom meetings. Laboratory experience consists of active participation with an established outdoor education program.

**5560:464 Wilderness Education Association Outdoor Leadership (3 Credits)**

This is the Wilderness Education Association Standard Program for Outdoor Leadership Certification.

**5560:497 Independent Study (1-3 Credits)**

Prerequisites: Permission of adviser and supervisor of independent study. Provides varied opportunities for a student to gain first-hand knowledge and experience with existing outdoor education programs.

## Pan African Studies (3002)

**3002:201 Introduction to Pan-African Studies (3 Credits)**

Prerequisite: 2020:121 or 3300:112. An interdisciplinary study from an Afrocentric perspective of African and African diaspora experiences. The course will focus on central issues related to the discipline.

**Gen Ed:** Tier 3 - Domestic Diversity

**3002:252 The Black Experience 1619-1918 (3 Credits)**

Prerequisite: 2020:121 or 3300:112. This course explores ideas, people and events which will allow the class to re-think their individual and collective beliefs regarding Africa, Africans, and African-Americans as well as Black people throughout the Diaspora. More specifically, the period of 1619 to 1918 examines the origins of African-Americans beginning with their unwilling departure from West Africa, slavery, abolition, the Civil War, emancipation, reconstruction, historical achievements and striving to achieve first class citizenship in America.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

**3002:253 The Black Experience 1918-Present (3 Credits)**

Prerequisite: 2020:121 or 3300:112. This course explores ideas, people and events which will allow students to re-think their individual and collective beliefs about Africa, Africans and African-Americans as well as Black people throughout the Diaspora. More specifically, the period of 1918 to Present examines the experiences of African-Americans following the Reconstruction. Topics include, but are not limited to, separate but equal doctrine, the civil rights movement, Black nationalism, segregation, desegregation and integration as strategies to ameliorate discrimination and achieve equal opportunity.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

**3002:254 The Black Experience from 1619-1877 (2 Credits)**

Prerequisite: 2020:121 or 3300:112. Examination of the black American including origins, historical achievements and striving to achieve first-class citizenship in America from 1619 to 1877.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

**3002:256 Diversity in American Society (3 Credits)**

Prerequisite: 2020:121 or 3300:112. Survey course covering demographic, social, economic, political, and educational realities of diversity in 21st Century. Focus on diversity and unity, historical overview.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

**3002:257 The Black Experience 1877 - 1954 (2 Credits)**

Prerequisite: 2020:121 or 3300:112. Examines the experiences of Blacks following Reconstruction. Topics to include: Separate but Equal doctrine, segregation, integration, and the achievements of Blacks in American society.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

**3002:258 The Black Experience 1954 - Present (2 Credits)**

Prerequisite: 2020:121 or 3300:112. Examines the relationship of the civil rights movement, Black nationalism, integration, segregation, and desegregation as strategies to ameliorate discrimination and achieve equal opportunity.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity



**3002:301 Civil Rights Movement in America: 1945-1974 (3 Credits)**

Social and political actions, events and environment which produces civil rights movement in America. Legal, political and organizational strategies; philosophical arguments; prominent civil rights activists.

**3002:401 Seminar in Afro-American Studies (3 Credits)**

Prerequisite: 3400:361. Exploration and intensive examination of variety of issues related to role and minority group relations which normally stand outside the compass of any one subject matter area.

**3002:405 African American Men's History and Studies (3 Credits)**

This course will examine the experiences of the African American Men from a historical, socio-economic, philosophical, religious/spiritual, psychological standpoint.

**3002:410 African American Religious Experience (3 Credits)**

This course explores the diversity of African American religious beliefs, experiences, and expressions from the colonial era to the present.

**3002:420 Special Topics in Afro-American Studies (1-3 Credits)**

(May be repeated for a maximum of three semester credits). Prerequisite: Permission of instructor.

**3002:498 Independent Study: Pan-African (1-3 Credits)**

(May be repeated for a maximum of three semester credits). Prerequisites: [3002:201 and 3400:260] or 3400:361 and permission of director. Directed study in a special field of interest chosen by student in consultation with instructor.

## Paraprofessional Education (2650)

**2650:210 Autism (2 Credits)**

Corequisite: 5610:225. Study of school-age children with autism spectrum disorders. Instructional strategies, accommodations, modifications, data collection techniques, and interventions discussed and practiced through class activities and projects.

**2650:290 Special Topics: Paraprofessional Education (1-3 Credits)**

Special topics in subject area of interest for paraprofessional education. (May be repeated for a total of six credits).

**2650:295 Field Experience for Education Paraprofessionals (1-3 Credits)**

Prerequisite: Permission of program coordinator. Supervised field experience in school and/or community settings. One hour per week seminar required. May be repeated to acquire minimum of 300 hours.

## Philosophy (3600)

**3600:101 Introduction to Philosophy (3 Credits)**

Introduction to the methods of philosophy, important leading thinkers, and topics such as free will, consciousness, goodness, truth, and beauty.  
**Gen Ed:** Tier 2 - Humanities; Tier 3 - Critical Thinking

**3600:120 Introduction to Ethics (3 Credits)**

Introduction to problems of moral conduct through readings from the tradition and class discussions; nature of "good," "right," "ought" and "freedom".

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Critical Thinking

**3600:125 Theory & Evidence (3 Credits)**

An investigation of the concept of evidence and the criteria for the evaluation of theories in various areas of study, including natural sciences, social sciences, and philosophy. The role of scientific information in the formation and justification of value judgments.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Critical Thinking

**3600:150 Critical Thinking (3 Credits)**

Examination of good and bad reasoning patterns. Topics may include rational and persuasive arguments, deductive and inductive inference, causal and basic statistical inference, logical fallacies, and moral arguments.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Critical Thinking

**3600:170 Introduction to Logic (3 Credits)**

Introduction to logic and critical thinking. Includes such topics as meaning, informal fallacies, propositional logic, predicate and syllogistic logic and nature of induction.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Critical Thinking

**3600:200 Philosophy of World Religions (3 Credits)**

A philosophical examination of the major religious traditions of the world including Christianity, Judaism, Islam, Buddhism, Hinduism, Taoism, tribal religions, and others.

**Gen Ed:** Tier 3 - Global Diversity

**3600:207 Food Ethics (3 Credits)**

Considers ethical questions about food choices and policies, what individuals eat, and what actions society ought to take regarding food growth, processing, marketing, selling, and consumption.

**Gen Ed:** Tier 3 - Complex Systems

**3600:210 Logic for Lawyers (3 Credits)**

An introduction to applied deductive and inductive logic reasoning skills, concentrating on applications to reasoning in legal contexts, e.g., courtroom argumentation and jury deliberations.

**Gen Ed:** Tier 3 - Critical Thinking

**3600:211 History of Ancient Philosophy (3 Credits)**

History and development of ancient Greek philosophy including Presocratics, Socrates, Plato, Aristotle, and Hellenistic philosophers. Readings of primary sources in translation.

**Gen Ed:** Tier 2 - Humanities; Tier 3 - Critical Thinking

**3600:312 History of Medieval Philosophy (3 Credits)**

History of Western philosophy from end of Roman Empire to Renaissance. Major philosophers studied include St. Augustine, St. Anselm, Peter Abelard, St. Thomas Aquinas, Duns Scotus and William of Ockham. Readings from primary sources.

**Gen Ed:** Tier 3 - Critical Thinking

**3600:313 History of Modern Philosophy (3 Credits)**

Analysis of major philosophical issues of 17th and 18th Centuries from Descartes through Kant. Readings of primary sources in translation.

**Gen Ed:** Tier 3 - Critical Thinking

**3600:323 Advanced Topics in Ethics (3 Credits)**

(May be repeated with change of topic for a total of nine credits). An examination of selected topics in applied ethics and ethical theory, such as the ethics of cloning, evolutionary ethics, history of ethics and ethical issues from the Human Genome Project. Specific topics will be announced in the course schedule.

**3600:324 Social & Political Philosophy (3 Credits)**

An examination of the normative justification of social and political institutions and practices. Analysis of concepts such as rights, justice, equality, and political obligation from historical as well as contemporary points of view. Application to particular social issues covered.

**3600:327 Law and Morality (3 Credits)**

Nature of law examined from the perspective of the law's alleged obligation to be ethical and promote justice.

**3600:329 Philosophy of International Law (3 Credits)**

Inquiry into the theories of utility of international law and the philosophical controversies surround them, e.g., international legal norms vs. international relations.

**3600:331 Philosophy of Religion (3 Credits)**

Discussion and analysis of problems of theology, nature of religious experience, God's nature, existence, immortality, sin, faith, reason, holy revelation, and redemption.

**3600:333 Philosophy of Science and Religion (3 Credits)**

Survey of conflict, independence, and integration models of science and religion. Topics include: origin and nature of the universe, life, mind, value, meaning, science, religion.

**3600:340 Eastern Philosophy (3 Credits)**

Examination and evaluation of philosophical traditions from India, China and Japan, including Hinduism, Buddhism, Taoism and Confucianism.

**Gen Ed:** Tier 3 - Global Diversity

**3600:350 Philosophy of Art (3 Credits)**

An examination of theories of the nature of art and the grounds of aesthetic evaluation. Analysis of such concepts as representation, form, content, expression, institution, convention, meaning and truth as they apply in the context of the arts.

**3600:361 Biomedical Ethics (3 Credits)**

The identification, analysis and evaluation of ethical issues arising most critically in the biomedical setting, e.g., abortion, termination of treatment, definition of death, IVF, AIDS.

**Gen Ed:** Tier 3 - Complex Systems

**3600:362 Business Ethics (3 Credits)**

Basic moral theories, moral principles, and the decision-making process applied to issues in business.

**3600:363 Police Ethics (3 Credits)**

Basic moral concepts and their application to the criminal justice system. Concerned with such issues as punishment, the use of force, and conflict resolution.

**3600:364 Digital Ethics (3 Credits)**

A critical examination of ethical issues arising in connection with digital technology, e.g., data privacy and use, artificial intelligence, censorship, and social media.

**3600:365 Environmental Ethics (3 Credits)**

Examination of the moral relationships among human beings, other species, and their shared environment. Ethical aspects of agriculture, global warming, extinction, and wilderness.

**Gen Ed:** Tier 3 - Complex Systems

**3600:366 Engineering Ethics (3 Credits)**

Addresses the specific ethical issues and problems that arise in the practice and study of engineering as a discipline.

**Gen Ed:** Tier 3 - Complex Systems

**3600:371 Philosophy of Mind (3 Credits)**

Nature of mind and the relationship between mind and body. Specific topics such as the limits of human reason, personal identity, the role of human thought in action and whether machines can think are also considered.

**3600:374 Symbolic Logic (3 Credits)**

Systematic study of various forms of deduction. Techniques and topics include truth-functional analysis and quantification.

**Gen Ed:** Tier 3 - Critical Thinking

**3600:392 Internship in Philosophy (1-3 Credits)**

Prerequisite: Minimum cumulative Grade Point Average of 2.7 or greater. Placement in appropriate public or private sector organization. Written assignments required. May repeat for maximum 6 credits.

**3600:411 Plato (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of C or higher. Detailed study of the origin and development of Plato's theory of forms and the related theories of knowledge, ethics and politics.

**3600:414 Aquinas (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. An in depth examination of the philosophy of St. Thomas Aquinas covering his contributions in metaphysics, epistemology, ethics, political theory, and philosophical theology.

**3600:415 Augustine (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. An in depth examination of the philosophy of St. Augustine covering his contributions in metaphysics, epistemology, ethics, political theory, and philosophical theology.

**3600:418 20th Century Analytic Philosophy (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. Study of ideal and ordinary language movements in 20th century British and American philosophy. Deals with such figures as Russell, Carnap, Ayer, Moore, Wittgenstein, Ryle and Austen.

**3600:421 Philosophy of Law (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. Identification and critical evaluation of classic and contemporary theories and assumptions of law, including legal reasoning, justice, natural law, punishment, etc.

**3600:424 Existentialism (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of C or higher, or permission of instructor. In-depth inquiry into the thought of Kierkegaard, Jaspers, Heidegger, Sartre, Tillich and other existentialists with their concern for the human condition.

**3600:426 Phenomenology (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of C or higher, or permission. Inquiry into methodology of Husserl and Heidegger and their influence upon Western European and American thought.

**3600:432 Aristotle (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of C or higher. Detailed study of Aristotle's metaphysics, philosophy of nature, philosophy of mankind and ethics.

**3600:434 Kant (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of C or higher. Study of Kantian system of thought and its relation to history of philosophy. Includes thorough investigation of one or more of Kant's philosophic works.

**3600:455 Philosophy of Feminism (3 Credits)**

Prerequisite: One course in philosophy with a grade of C or better, or permission of instructor. Introduction to feminist critiques of, and alternatives to, traditional western philosophy, including topics in ethics, metaphysics, epistemology, and religion.

**Gen Ed:** Tier 3 - Domestic Diversity

**3600:461 Neuroethics (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of C or higher. Discussion and evaluation of contemporary theories of moral agency arising from developments in neuroscience.

**3600:462 Theory of Knowledge (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. Examination of nature of knowledge; theories of perception, conception and truth, problem of induction and relation of language to knowledge.

**3600:464 Philosophy of Science (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. Nature of scientific inquiry, types of explanation, laws and causality, theoretical concepts and reality. Also considers critics of hypothetical-deductive view of science, e.g., Hanson and Kuhn.

**3600:471 Metaphysics (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. Theories about ultimate nature and ultimate explanation of reality. Uses readings from classical and contemporary sources.

**3600:480 Seminar in Philosophy (3 Credits)**

(May be repeated, for additional credit, with change of topic).

Prerequisite: Completion of one course in philosophy with a grade of "C" or higher. Varying philosophical topics not covered in regular course offerings.

**3600:481 Philosophy of Language (3 Credits)**

Prerequisite: Completion of one course in philosophy with a grade of C or higher. An examination of contemporary debates in the philosophy of language and various influential views on meaning, reference, truth, and the content of belief.

**3600:490 Senior Honors Project in Philosophy (1-3 Credits)**

Prerequisite: Senior standing in Honors Program or senior honors standing as Philosophy major, and permission of Philosophy Department Honors Preceptor. Research leading to completion of senior honors thesis involving original work under faculty supervision. A maximum of 3 credit hours can be applied towards a philosophy major or minor. (May be repeated for 1-3 credits for a maximum of 6 credits)

**3600:497 Individual Study in Philosophy (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: 3600:101, 3600:120, 3600:170, 3600:211, 3600:312, and 3600:313. Directed independent study of philosopher, philosophy or philosophical problem under guidance of selected faculty member. Subject matter determined by selected faculty member in consultation with student. Graduate credit requires significant additional work which may include additional research paper.

## Physical Education (5550)

**5550:100 Introduction to Sport Studies (3 Credits)**

Introduction to sport studies explores the history, philosophy, and principles of today's sport industry within a practical, career-oriented framework.

**5550:102 Physical Education Activities I: Fitness, Leisure, & Healthy Life Style (3 Credits)**

Introduction to fitness and leisure activities, as well as healthy life style. Knowledge of developing programs that lead to fitness, leisure and healthy life style for individuals as well as groups.

**5550:110 Introduction to Athletic Training (1 Credit)**

Provides an overview of the Sports Medicine team and the components of a comprehensive athletic healthcare program. Introduces the student to the profession of athletic training.

**5550:125 Introduction to Exercise Science (1 Credit)**

Overview for becoming a fitness professional. Information concerning choosing a career, national certification and professional organizations will be provided.

**5550:130 Physical Education Activities for Children (2 Credits)**

For a physical education majors only. Participation in methods, activities and issues relating to pre-K through elementary physical education programs. One lecture and two laboratory periods per week.

**5550:150 Concepts in Health & Fitness (3 Credits)**

Introduction to basic health and fitness concepts and related topics. Attention will be given to individual fitness programs emphasizing such topics as aerobic and anaerobic exercises, nutrition, diet, stress, and assessment methods and procedures.

**5550:160 Introduction to Coaching (3 Credits)**

An introduction to the coaching profession. Discussion of the important technical and tactical elements of coaching athletes.

**5550:193 Orientation to Physical and Health Education (3 Credits)**

Introduction to physical and health education to students who pursuit state license in teaching physical and health education. It's also the required course before the admission to the college of education.

**5550:194 Sports Officiating (2 Credits)**

Knowledge of rules for interscholastic sports and officiating techniques.

**5550:195 Foundations of Physical Education (3 Credits)**

Concepts analysis of games and play and application of these concepts to the teaching/learning process in physical education at all ages.

**5550:200 Aquatic Facility Management (3 Credits)**

This course is designed to explore, acquire, and discuss knowledge and techniques of aquatic facility operation and management.

**5550:201 Kinesiology (3 Credits)**

Prerequisites: 3100:200, [3100:201 or 3100:202], 3100:203. Application of basic principles of anatomy and mechanics to human movement. Three hours lecture with practical application and demonstrations.

**5550:202 Diagnosis of Motor Skills (3 Credits)**

This course introduces athletic trainers and physical education majors to the sciences of diagnosing motor skills.

**5550:203 Measurement & Evaluation in Physical Education (3 Credits)**

Statistical procedures needed for analysis and interpretation of tests. Evaluation procedures, testing instruments, and techniques for administering tests are discussed and practiced. Three hours lecture.

**5550:204 Individual and Team Sports (2 Credits)**

Intro to individual and team sports that are commonly taught in schools. Course presents knowledge, fundamental skill development, psychomotor skills analysis for the content areas.

**5550:205 Team Sports (2 Credits)**

The purpose of this course is to teach students how to teach team sports.

**5550:206 Coaching Basketball (3 Credits)**

An introduction to coaching basketball. Discussion of the important technical and tactical elements of coaching basketball.

**5550:207 Coaching Track and Field (3 Credits)**

An introduction to coaching track and field. Discussion of the important technical, tactical and psychological elements of coaching track and field.

**5550:208 Coaching Football (3 Credits)**

An introduction to coaching football. Discussion of the important technical and tactical elements of coaching football.

**5550:209 Coaching Baseball (3 Credits)**

An introduction to coaching baseball. Discussion of the important offensive, defensive, and technical and tactical elements of coaching baseball.

**5550:211 First Aid & Cardiopulmonary Resuscitation (2 Credits)**

Based on American Red Cross standards for first aid and cardiopulmonary resuscitation. Instruction and skills practice for sudden illness/emergencies is provided. Two hours lecture.

**5550:212 First Aid and CPR for Professional Rescuer (2 Credits)**

Prerequisite: Permission of instructor. First aid and cardiopulmonary resuscitation for health care professionals based upon American Red Cross standards. Instruction and skills practice for sudden illness/emergencies is provided.

**5550:220 Health Promotion and Behavior Change (3 Credits)**

Prerequisite: 5550:150. Course will translate theories of behavioral science for health professionals who are involved in planning, developing, implementing or evaluating physical activity programs.

**5550:235 Concepts of Motor Learning & Development (3 Credits)**

This course will introduce key motor learning concepts and analysis of developing fundamental motor skills. Three hours lecture.

**5550:240 Care & Prevention of Athletic Injuries (3 Credits)**

Prerequisites: 3100:200,201; Corequisite: 3100:202, 203. This course is an introduction to basic athletic training principles and techniques. Includes a laboratory course for practical application of techniques.

**5550:241 Care and Prevention of Athletic Injuries Lab (1 Credit)**

Prerequisites: 3100:200 and 3100:201. Corequisites: 3100:202 and 3100:203, 5550:240. This course is designed to allow students to learn, practice, and become competent and proficient in the psychomotor skills associated basic injury prevention, evaluation, management, and treatment of physically active individuals in the practice of athletic training as defined by the NATA.

**5550:242 Therapeutic Modalities (3 Credits)**

Prerequisites: Accepted into the ATEP Clinical Education Program. Corequisite: 243. This course will promote student medical and technical aspects of therapeutic modalities and pharmacological agents in the treatment and rehabilitation of injured physically active individuals.

**5550:243 Athletic Training Lab I (1 Credit)**

Prerequisites: Accepted into the ATEP Clinical Education Program. Corequisites: 242. This course will meet CAATE standards and allow the students to learn and practice psychomotor skills and clinical proficiencies. Includes clinical rotation.

**5550:245 Adapted Physical Education (3 Credits)**

Identification of atypical movement among various exceptional individuals, with adapted physical education programming experience in a laboratory setting.

**5550:250 Principles of Athletic Training (3 Credits)**

Prerequisites: Students must be accepted into the Clinical Athletic Training Education Program (ATEP). This course will address principles and techniques used in initial evaluation of musculoskeletal injury as defined by CAATE standards and guidelines.

**5550:255 Emergency Care for Athletic Training (3 Credits)**

Prerequisite: Accepted into ATEP Clinical Education program. This course will teach knowledge and skills in handling emergency situations or life-threatening sudden illness or injuries which an athletic training may encounter.

**5550:275 Advanced Athletic Injury Management: Lower Extremity (3 Credits)**

Prerequisites: 5550:242 and 5550:243. Corequisite: 5550:276. This course is designed to meet CAATE standards and guidelines to display knowledge and psychomotor skills in injury evaluation and recognition lower extremity.

**5550:276 Athletic Training Lab II (1 Credit)**

Prerequisites: 5550:242 and 5550:243. Corequisite: 5550:275. This course will meet CAATE standards and allow the students to learn and practice psychomotor skills and clinical proficiencies. Includes clinical rotation.

**5550:300 Physiology of Exercise for the Older Adult (3 Credits)**

Prerequisite: 5550:302. Analysis of physiological effects of exercise on the elderly. Exercise programs adaptable for use by persons working with elderly. Three hours lecture.

**5550:302 Physiology of Exercise (3 Credits)**

Prerequisites: 3100:200 and 3100:202. A course designed to study the physiological effects of exercise relative to physical education activities, athletics and athletic training. Two hours lecture, two hours laboratory. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:305 Clinical Experience I (2 Credits)**

Prerequisite: Permission. Improves the student's psychomotor skills in the following domains of athletic training: injury prevention, injury recognition/evaluation and management, therapeutic exercise and rehabilitation.

**5550:306 PE Act IV: Badminton/Golf (2 Credits)**

Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of badminton and golf. One hour lecture, two hours lab. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:307 Physical Education Activities V (2 Credits)**

Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of tennis and volleyball. One hour lecture, two hours lab. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:308 PE Act IV: Dance & Tumbling (2 Credits)**

Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of dance and tumbling. One hour lecture, two hours lab. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:327 Exercise Leadership (3 Credits)**

Prerequisite: 5550:302. Students learn principles of teaching safe and effective exercises designed to enhance physical fitness. Course will assist students in preparing for a group exercise certification.

**5550:330 Exercise and Weight Control (3 Credits)**

Prerequisite: 5550:302. Course will focus on role of exercise in regard to its positive influences on weight control. The hazards and implications of being overweight are studied.

**5550:332 Therapeutic Exercise & Rehabilitation I Principles (3 Credits)**

Prerequisites: 5550:342 and 5550:343. Corequisite: 5550:333. This course will address CAATE standards and guidelines for competencies and proficiencies using principles in exercise and rehabilitation techniques.

**5550:333 Athletic Training Lab IV (1 Credit)**

Prerequisites: 5550:342 and 5550:343. Corequisite: 5550:332. This course will allow students to learn psychomotor skills associated with therapeutic exercise & rehabilitation techniques. Includes a 250 hour clinical sport rotation.

**5550:335 Movement Experiences for Children (3 Credits)**

Prerequisites: 5550:130, 5550:193, and 5550:235. Course focuses on use of fundamental motor skill analysis to structure movement lessons for children from early childhood through elementary years. One hour lecture, two hours lab. (20 clinical hours, 10 field hours.) Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:336 Motor Learning & Development for Early Childhood (2 Credits)**

Physical fitness, fundamental motor skills, motor development and learning for early childhood, birth to age eight. Creating an environment of motor experiences for young children (10 field hours). Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:342 Advanced Athletic Injury Management: Upper Extremity (3 Credits)**

Prerequisites: 5550:275 and 5550:276. Corequisite: 5550:343. This course designed to meet CAATE standards and guidelines to display knowledge and psychomotor skills in injury evaluation and recognition of the upper extremity.

**5550:343 Athletic Training Lab III (1 Credit)**

Prerequisites: 5550:275 and 276. Corequisite: 5550:342. This course will meet CAATE standards and allow the students to learn and practice psychomotor skills and clinical proficiencies. Includes clinical rotation.

**5550:352 Strength & Conditioning Fundamentals (3 Credits)**

Prerequisite: 3100:200, 3100:201, 3100:202, and 3100:203. This course will address CAAHEP competencies and proficiencies in the area of strength and conditioning of physically active individuals.

**5550:355 Exercise in Special Populations (3 Credits)**

Prerequisites: 5550:302 and 5550:403. Advanced course in clinical exercise testing and prescription relative to disease of the cardiovascular, pulmonary, metabolic, musculoskeletal, neuromuscular, and immunologic systems.

**5550:360 Practicum I (1 Credit)**

Prerequisites: 3100:200, 3100:201, 3100:202, and 3100:203. This is a senior level athletic training course focusing on the refinement of practical skills and preparation for the NATABOC certification examination.

**5550:362 Sport History (3 Credits)**

This course is designed to introduce students to sport in American History. The people, organizations and institutions that shaped the development of sport are examined.

**5550:364 Sport Ethics (3 Credits)**

The focus of this course is the ethical behavior of sport participants and sport administrators studied within the context of the sport environment.

**5550:366 Sport Communication (3 Credits)**

The focus of this course is on the important knowledge that administrators should have related to the field of sport communication.

**5550:368 Sport Facility Management (3 Credits)**

This course has been designed to identify the systems approach for the effective management of the maintenance and operation of sport and recreation facilities.

**5550:370 Financial Aspects of Sport (3 Credits)**

The focus of this course is related to the important knowledge that administrators should have related to the field of the financial aspects of sport.

**5550:375 Sport Performance Principles (3 Credits)**

An introduction to important elements related to the physical aspects of sport performance. Discussion of the important physical elements of coaching athletes.

**5550:395 Field Experience (1-6 Credits)**

Practical experience in an area related to physical education under supervision of faculty member. Student works with current physical education programs or exercise science settings. May be repeated for a maximum of 12 credits. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:400 Musculoskeletal Anatomy I: Upper Extremity (3 Credits)**

Prerequisites: 3100:200 and 3100:202. This course includes lecture/laboratory activities to provide the student a comprehensive learning experience in lower extremity musculoskeletal anatomy.

**5550:401 Musculoskeletal Anatomy II: Lower Extremity (3 Credits)**

Prerequisites: 3100:200, 3100:201, 3100:202, 3100:203 and 5550:201. This course includes lecture laboratory activities to provide the student a comprehensive learning experience in lower extremity musculoskeletal anatomy.

**5550:403 Exercise Testing (3 Credits)**

Prerequisite: 5550:302. This course will cover basic knowledge of exercise testing and interpretation of results. Cardiovascular and muscular fitness aspects will be measured. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:404 Exercise Prescription (3 Credits)**

Prerequisite: 5550:403. This course focuses on how to appropriately prescribe exercise for various populations (young, middle-aged, elderly, pregnant, diseased-states). Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:405 Clinical Experience I (2 Credits)**

Prerequisite: Accepted into ATEP Clinical education program. Enroll by advisor permission only. This course will allow for athletic training students to master CAATE proficiencies and clinical proficiencies associated with the course.

**5550:406 Advanced Strength and Conditioning (3 Credits)**

Prerequisite: 5550:352. Strength and conditioning programs for heterogeneous populations. The course covers high-level sport specific exercise prescriptions that aids injury prevention and performance enhancement.

**5550:409 Sport Behavior (3 Credits)**

The focus of this course is the behavior of athletes and sport participants studied within the context of play, games, and sport.

**5550:410 Introduction to Sport Sociology (3 Credits)**

Provides information to students about the sociological aspects of sport.

**5550:412 General Medical Aspects (3 Credits)**

Prerequisites: 3100:200 and 3100:201. Covers various topics related to sports medicine and general medical conditions. Students will gain perspectives and exposure to a variety of allied health care professionals.

**5550:415 Seminar in Athletic Training (2 Credits)**

Prerequisites: 3100:200, 3100:201, 3100:202, and 3100:203. To meet CAAHEP standards and guidelines and incorporate an even distribution of competencies and proficiencies throughout all athletic training for sports medicine courses.

**5550:418 Cardiorespiratory Function (3 Credits)**

Prerequisite: 5550:302. This course is designed to study the normal structure and function of the respiratory system and how it is affected by different types of disease.

**5550:420 Fundamentals of Management Strategies in Sport (3 Credits)**

This course seeks to explore, acquire, and discuss knowledge within the theoretical and applied management practices of sport, fitness, and instructional programs. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:422 Sport Planning/Promotion (3 Credits)**

Analysis of marketing/promotions from a sport manager's perspective. Emphasis on marketing strategy, tactics and development in sport delivery systems.

**5550:424 Sports Leadership (3 Credits)**

Introduces students to current issues related to leadership, management, and supervision. Examines current sport leadership research and governance structure of amateur and professional sport organizations.

**5550:426 Nutrition for Sports (3 Credits)**

This course will provide an explanation of the consumption, absorption, and recommendation for diet of athletes and the physically active individual.

**5550:428 Nutrition for Teachers and Coaches (3 Credits)**

Covers nutritional basics and topics related to teaching physical education/health and coaching athletes, including basic nutrition, eating disorders, meal preparation, and trends in nutrition.

**5550:430 Senior Honors Project:Physical Education (1-6 Credits)**

(May be repeated for a total of six credits) Prerequisites: Senior standing in Honors Program. Carefully defined individual study demonstrating originality and sustained inquiry. \*Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:436 Foundations & Elements of Adapted Physical Education (3 Credits)**

Principles, components, and strategies necessary in providing motor activities for handicapped students via application of a neuro-developmental model and alternate methods. Three hours lecture. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:438 Cardiac Rehab Principles (3 Credits)**

Prerequisite: 5550:302. This course will teach students the core competencies for cardiac rehab professionals, based upon the American Association of Cardiovascular and Pulmonary Rehabilitation Specialists (AAVCP).

**5550:440 Injury Management for Teachers & Coaches (2 Credits)**

Prerequisites: 5550:211. This course challenges the student to understand ways to provide and care for the safety of individual they teach or coach.

**5550:444 Athletic Training Lab V (1 Credit)**

Prerequisites: 5550:332 and 5550:333. Corequisite: 5550:445. This course will meet CAATE standards and allow the students to learn and practice psychomotor skills and clinical proficiencies. Includes clinical rotation.

**5550:445 Therapeutic Exercise & Rehabilitation II Applications (3 Credits)**

Prerequisites: 5550:332 and 5550:333. Corequisite: 5550:444. This course will address CAATE standards and guidelines for competencies and proficiencies using principles in exercise and rehabilitation techniques.

**5550:446 Instructional Techniques in Secondary Physical Education & Health (3 Credits)**

Prerequisites: 5550:102, 5550:193, 5550:204, and 5550:205. Instructional strategies for teaching secondary students in physical and health education. A variety of instructional models will be introduced appropriate to the learners' age and development. It is a required course for the physical education licensure. Two hours lecture, two hours lab (30 clinical hours). Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:447 Instructional Techniques for Children in Physical Education & Health Education (3 Credits)**

Prerequisites: 5550:130 and 5550:193. Instructional strategies for teaching children in physical and health education. A variety of instructional models will be introduced appropriate to the learners' age and development. Required for the physical education licensure. (30 clinical hours). Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:449 Organization & Administration for Health Care Professionals (3 Credits)**

Prerequisites: senior level status and permission only. This class is a requirement for Athletic Trainers and Exercise Science majors. This class presents the skills necessary for supervising a health care facility.

**5550:450 Organization & Administration of Physical Education, Intramural and Athletics (3 Credits)**

Prerequisite: Admission to the Sport Science and Wellness Program or instructor's permission. Investigation of procedures for conducting physical education, intramural, and athletic programs. Includes tournament designs, supplies and equipment, liability, curriculum, and general administration. Three hours lecture. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:451 Assessment & Evaluation in Adapted Physical Education (3 Credits)**

Investigation, analysis, and selection of appropriate assessment instruments, as well as methodology for determining instructional objectives and activities for handicapped students. Three hours lecture. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:452 Foundations of Sport Science, Physical and Health Education (3 Credits)**

Prerequisite: Admission to the Sport Science and Wellness Program. Overview of the emergence of sport science, physical and health education as a profession and the supporting role of underlying scholarly and scientific disciplines. Three hours lecture. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:453 Principles of Coaching (3 Credits)**

Prerequisite: Admission to the Sport Science and Wellness Program. Basics for becoming a successful coach. Discussion of principles applying to most sports, players and coaches. Ten clinical hours required. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:456 Evidence Based Practice and Research Applications (3 Credits)**

Prerequisite: Permission of advisor. This course is designed to provide students an opportunity to review current research, create, implement, and present original research in an allied health related field.

**5550:459 Practicum Seminar (1 Credit)**

Prerequisite: Permission of instructor. This course will focus on the professional development process, including practicum preparation, resume development, interview skills and job search strategies.

**5550:460 Practicum in Physical Education (1-6 Credits)**

Prerequisites: Senior standing in the Sport Science and Wellness Program. Practical work experience with certified personnel in a discipline or profession related to physical education or sport and exercise science. May be repeated for a maximum of 12 credits. \*Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:462 Legal Aspects of Physical Activity (2 Credits)**

Overview legal and ethical elements of greatest concern to specialists in sport and physical activity. Cases used to illustrate specific points. Topics vary.

**5550:465 Psychology of Injury Rehabilitation (2 Credits)**

Prerequisites: 3100:200, 3100:201, 3100:202, and 3100:203. This course will address the cognitive and affective aspects of injury and rehabilitation of injury. Specifically the stages of rehabilitation and techniques to aid in the rehabilitation process.

**5550:467 Practicum II (1 Credit)**

Prerequisites: 3100:200, 3100:201, 3100:202, and 3100:203. This course will allow the students to practice psychomotor skills in the high school setting while being supervised by a certified athletic trainer.

**5550:470 Injury Pathology & Therapeutic Interventions (3 Credits)**

Prerequisites: 3100:200, 3100:201, 3100:202, and 3100:203. This course will discuss common musculoskeletal pathology and surgical procedure associated with a physically active population.

**5550:480 Special Topics: Physical Education (1-4 Credits)**

(May be repeated with a change in topic) Prerequisite: Permission of instructor. Group study of special topics in physical education. May be repeated with change in topic. \*Students must be in the College of Education to take 300/400 level courses.

**5550:485 Exercise Science Capstone (2 Credits)**

Prerequisites: 5550:302 and 5550:403. Designed to familiarize students with current issues in exercise physiology. Students will be expected to obtain a professional certification during this course.

**5550:490 Workshop in Physical Education (1-3 Credits)**

Practical, intensive and concentrated involvement with current curricular practices in areas related to physical education. Students must be in the College of Education to take 300/400 level courses.

**5550:494 Student Teaching Colloquium for Physical & Health Education (2 Credits)**

Corequisite: 5550:495. Students meet during student teaching to discuss concerns about student teaching and analyze previous learning as it relates to their future as a professional educator. Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

**5550:495 Student Teaching for Physical & Health Education (11 Credits)**

Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing OAE subject test, and approved portfolio. Corequisite 5550:494. Planned teaching experience in schools selected and supervised by the Office of Student Teaching.

**5550:497 Independent Study: Physical Education (1-6 Credits)**

Prerequisite: Permission of adviser. Analysis of specific topic related to a current problem in physical education or sport and exercise science. May be repeated for a maximum of 12 credits. \*Students must be in the Sport Science and Wellness Program to take 300/400 level courses.

## Physics (3650)

**3650:130 Descriptive Astronomy (4 Credits)**

Qualitative introduction to astronomy, intended primarily as a first science course for non-science majors. Includes laboratory and observational activities.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3650:133 Music, Sound & Physics (4 Credits)**

Qualitative introduction to the physics of sound, its properties, perception and reproduction, including acoustical principles of musical instruments. Laboratory and observational activities included.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3650:137 Light (4 Credits)**

Introductory, qualitative course dealing with the nature of light and the interaction of light with various materials to produce common visual effects. Laboratory activities provide experience in scientific investigation.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3650:150 Manufacturing Physics (4 Credits)**

Prerequisite: Admission to the Manufacturing Engineering Technology program. Corequisite: 2030:154. Applications of physics to manufacturing including two dimensional motion, vectors, forces, statics, torque and simple electronic circuits. Laboratory.

**3650:160 Technical Physics: Mechanics (4 Credits)**

Corequisite: 2030:154. Applications of mechanics which include one and two dimensional motion, vectors, forces, equilibrium, work, power, conservation of energy, rotational motion & torque. Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3650:161 Technical Physics: Mechanics I (2 Credits)**

Corequisite: 2030:153. Principles of mechanics that include motion, vectors, forces, equilibrium; also significant figures and unit conversions. Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3650:162 Technical Physics: Mechanics II (2 Credits)**

Prerequisites: 2030:153 and 3650:161. Principles of mechanics that include work, power, conservation of energy, rotational motion, torque. Laboratory.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3650:163 Technical Physics: Electricity & Magnetism (2 Credits)**

Prerequisites: 2030:154 and 3650:160 with a grade of C- or better in both. Principles and applications of electricity and magnetism. Electrostatics, DC circuits, magnetism, electromagnetism, and AC circuits. Laboratory.

**Gen Ed:** Tier 2 - Natural Science

**3650:164 Technical Physics: Heat & Light (2 Credits)**

Prerequisites: [3650:160 with a grade of C- or better] and 2030:154. Principles and applications of heat and light: heat energy, thermodynamics, electromagnetic waves, geometric and physical optics, introduction to quantum mechanic, and radiation.

**Gen Ed:** Tier 2 - Natural Science

**3650:261 Physics for Life Sciences I (4 Credits)**

Prerequisites: high school algebra, trigonometry or placement test or appropriate AP score or 3450:149 as corequisite. Introductory course for professional work in biology and health professions and services. Emphasizes life science applications. Mechanics: laws of motion, force, torque, work, energy, power; properties of matter: gases, liquids, solids, fluid mechanics. Includes laboratory activities.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3650:262 Physics for Life Sciences II (4 Credits)**

Prerequisite: 3650:261. Laws of thermodynamics, kinetic theory. Wave phenomena: sound, light, optics; electricity and magnetism; atomic and nuclear physics; radioactivity. Includes laboratory activities.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3650:267 Life Science Physics Computations I (1 Credit)**

Corequisites: 3650:261. Optional companion courses to 3650:261 and 3650:262 provides additional computational experience in applications of physics to life sciences, emphasizing use of algebra and trigonometry. Particularly recommended for student with modest mathematical preparation.

**3650:268 Life Science Physics Computations II (1 Credit)**

Corequisites: 3650:262. Optional companion courses to 3650:261 and 3650:262 provides additional computational experience in applications of physics to life sciences, emphasizing use of algebra and trigonometry. Particularly recommended for student with modest mathematical preparation.

**3650:291 Elementary Classical Physics I (4 Credits)**

Prerequisite: Completion of 3450:221 with a grade of "C-" or better, or AP Calculus AB, or BC test score of 3 or better. Introductory physics for students of science and engineering. Classical kinematics and dynamics as related to contemporary physics. Oscillations, thermodynamics. Vectors and some calculus introduced as needed. Includes laboratory activities.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3650:292 Elementary Classical Physics II (4 Credits)**

Prerequisite: 3650:291. Fluid mechanics, mechanical and electromagnetic waves and wave phenomena, basic laws of electromagnetism, interference and diffraction, coherence, geometrical and physical optics. Includes laboratory activities.

**Gen Ed:** Tier 2 - Natural Science w/LAB

**3650:293 Physics Computations I (1 Credit)**

Corequisite: 3650:291. Optional companion courses to 3650:291 and 3650:292 provides experience in problem solving, and elaborates application of calculus to simple physical phenomena. Particularly recommended for a freshman and for student with modest preparation in mathematics or physical sciences.

**3650:294 Physics Computations II (1 Credit)**

Corequisite: 3650:292. Optional companion courses to 3650:291 and 3650:292 provides experience in problem solving, and elaborates application of calculus to simple physical phenomena. Particularly recommended for a freshman and for student with modest preparation in mathematics or physical sciences.

**3650:301 Elementary Modern Physics (3 Credits)**

Prerequisite: 3650:292. Special relativity, introduction to quantum physics, hydrogen atom and complex atoms, atomic spectra, topics in nuclear and solid-state physics.

**3650:322 Intermediate Laboratory I (3 Credits)**

Prerequisite: 3650:262 or 3650:292. Laboratory course stressing measurement techniques with contemporary laboratory apparatus. Experiment design, instrument calibration and reporting emphasized. Modern physics experiments and measurement of fundamental natural constants.

**3650:323 Intermediate Laboratory II (3 Credits)**

Prerequisite: 3650:262 or 3650:292. Laboratory course stressing measurement techniques with contemporary laboratory apparatus. Experiment design, instrument calibration and reporting emphasized. Modern physics experiments and measurement of fundamental natural constants.

**3650:340 Thermal Physics (3 Credits)**

Prerequisite: 3650:262 or 3650:292. Basic principles of thermal and statistical physics. Ensembles, laws of thermodynamics, equilibrium, irreversibility, equipartition theorem, canonical distribution, Maxwell distribution, phase changes, cyclic processes, transport processes.

**3650:350 Modeling & Simulation (4 Credits)**

Prerequisites: [3650:262 or 3650:292] and [3460:208 or 3460:209]. Interdisciplinary course stressing modeling of natural phenomena using fundamental principles and their simulation. Topics may include growth phenomena, fault propagation, kinetics, chemical reactions, wave phenomena.

**3650:399 Undergraduate Research (1-6 Credits)**

(May be repeated) Prerequisite: Permission of instructor. Participation in current research project in department under supervision of faculty member.

**3650:401 Everyday Physics (4 Credits)**

Prerequisite: Permission of instructor. College-level physics content for future teachers. Inquiry, discovery, activities, discussion, and experiential learning take place in a laboratory/embedded-lecture environment.

**3650:406 Optics (3 Credits)**

Prerequisites: 3650:291, 3650:350 and 3450:335. Propagation, reflection and refraction of electromagnetic waves, superposition, polarization, interference and interferometry, Fresnel and Fraunhofer diffraction, Fourier optics, coherence theory and quantum optics.

**3650:431 Mechanics I (3 Credits)**

Prerequisites: 3650:291, and 3650:350, and 3450:335. Mechanics at intermediate level. Newtonian mechanics, motion of a particle in one dimension, central field problem, system of particles, conservation laws, rigid bodies, and gravitation.

**3650:432 Mechanics II (3 Credits)**

Prerequisite: 3650:431. Advanced mechanics at the senior or beginning graduate level, moving coordinate systems, mechanics of continuous media, Lagrange's equations, tensor algebra and stress analysis, rotation of rigid bodies, vibration theory.

**3650:436 Electromagnetism I (3 Credits)**

Prerequisites: 3650:291, and 3650:350, and 3450:335. Electricity and magnetism at intermediate level. Electrostatics and magnetostatics, electric field, scalar potential, dielectrics, Laplace's and Poisson's equations, currents, magnetic field, vector potential, magnetic materials, inductance.

**3650:437 Electromagnetism II (3 Credits)**

Prerequisite: 3650:436. Special relativity, four vectors, Maxwell's equations in covariant form; propagation, reflection and refraction of electromagnetic waves; multipole radiation.

**3650:441 Quantum Physics I (3 Credits)**

Prerequisites: 3650:301, and 3650:350, and 3450:335. Introduction to quantum theory, Schrödinger equation, observables, angular momentum, perturbation theory, variational principle, bound states, scattering theory, radiative interactions, spin and the Pauli Principle.



**3650:442 Quantum Physics II (3 Credits)**

Prerequisite: 3650:441. Applications of quantum mechanics to atomic, nuclear and solid state physics. Tunneling and alpha decay, periodic potential, hydrogen and helium atoms, interatomic forces, quantum statistics.

**3650:451 Advanced Laboratory I (3 Credits)**

Prerequisite: 3650:323. Experimental techniques, applicable to research-type projects in contemporary physics. FT-IR spectroscopy, optical spectroscopy, lasers and thin-film growth and characterization.

**3650:452 Advanced Laboratory II (3 Credits)**

Prerequisite: 323 or permission of instructor. Experimental projects applicable to contemporary physics. Diode and dye lasers, NMR, SPM, chaos, electron tunneling and fiber optics.

**3650:470 Introduction to Solid-State Physics (3 Credits)**

Prerequisite: 3650:441. Account of basic physical processes occurring in solids, with emphasis on fundamental relation between these processes and periodicity of crystalline lattice.

**3650:481 Methods of Mathematical Physics I (3 Credits)**

Prerequisites: 3650:292, 3650:350, 3450:335 and senior or graduate standing in a physical science or engineering. Vectors, generalized coordinates, tensors, calculus of variations, vector spaces, linear transformations, matrices, eigenvalues, Hilbert space, boundary value problems, transcendental functions, complex variables, analytic functions, Green's functions, integral equations.

**3650:482 Methods of Mathematical Physics II (3 Credits)**

Prerequisites: 3650:292, 3450:335 and senior or graduate standing in a physical science or engineering. Vectors, generalized coordinates, tensors, calculus of variations, vector spaces, linear transformations, matrices, eigenvalues, Hilbert space, boundary value problems, transcendental functions, complex variables, analytic functions, Green's functions, integral equations.

**3650:488 Selected Topics: Physics (1-4 Credits)**

(May be repeated) Prerequisite: Permission. Consideration of selected topics, procedures, techniques, materials or apparatus of current interest in physics.

**3650:490 Workshop: Physics (1-4 Credits)**

(May be repeated) Group studies of special topics in physics. May not be used to meet undergraduate or graduate major requirements in physics. May be used for elective credit only.

**3650:497 Independent Study: Physics (1-4 Credits)**

(May be repeated) Prerequisite: Permission. Further investigations of various selected topics in physics, under guidance of faculty member.

**3650:498 Physics Colloquium (1 Credit)**

Lectures on current research topics in physics by invited speakers. May be repeated but only one credit counts toward the M.S. Degree. Offered on a credit/noncredit basis only.

## Political Science (3700)

**3700:100 Government & Politics in the United States (3 Credits)**

Examination of American political system with emphasis on fundamental principles, ideas, institutions and processes of modern government. Lecture and discussion sections (day classes only).

**Gen Ed:** Tier 2 - Social Science

**3700:150 World Politics & Government (3 Credits)**

Introduction to international politics and an examination of the governments and foreign policies of selected states from a comparative perspective.

**Gen Ed:** Tier 2 - Social Science

**3700:210 State & Local Government & Politics (3 Credits)**

Examination of institutions, processes and intergovernmental relations at state and local levels.

**3700:300 Comparative Politics (3 Credits)**

Introduction to comparative political analysis; description of political systems of Great Britain, France, Germany and Soviet Union; contrast between democracy and totalitarianism.

**Gen Ed:** Tier 3 - Global Diversity

**3700:301 Introduction to Political Research (3 Credits)**

Introduction to the research process in political science through an introduction to the logic of social science inquiry and contemporary techniques of analysis.

**3700:302 American Political Ideas (3 Credits)**

Study of major thinkers and writers of American political thought.

**3700:303 Introduction to Political Thought (3 Credits)**

Survey of major ideas and concepts of Western political theory from pre-Socrates through period of Enlightenment.

**3700:304 Modern Political Thought (3 Credits)**

Examination of central concepts of political thought from 19th Century to present. Modern liberalism, communism, fascism and totalitarianism emphasized.

**3700:310 International Politics & Institutions (3 Credits)**

Relations among nations examined in political context.

**3700:311 Developing States in World Politics (3 Credits)**

Examines how developing states are conditioned by the global system and how they attempt to modify it.

**3700:313 International Law (3 Credits)**

Prerequisite: 3700:150 or 3700:310. This course explores law at the international level and will focus on diplomacy, treaties, covenants, laws of war, and the legal role of international organizations.

**3700:321 European Politics (3 Credits)**

Description and analysis of government and politics of France, Germany, Italy, the United Kingdom, and Russia, with appropriate references to the European Union.

**3700:326 Politics of Developing Nations (3 Credits)**

General introduction to concepts and theories of political development and political institutions, elite-recruitment and political processes of selected emerging nations.

**3700:328 American Foreign Policy Process (3 Credits)**

Examination of American foreign policy-making process; public opinion and other limitations on policy; specific contemporary problems in selected foreign policy areas.

**3700:333 Social Entrepreneurship (3 Credits)**

Scholarly analysis of successful social and political entrepreneur's efforts to address real world problems and an interdisciplinary analysis of the strategies and skills they deploy.

**3700:334 Law, Mediation, and Violence (3 Credits)**

A critical analysis of the practical challenges central to learning to better prevent, resolve, or reduce the harms associated with conflict.

**3700:335 Law & Society (3 Credits)**

This course will examine how law constructs and constrains political conflict, and how legal institutions mediate, reinforce, and challenge existing power relationships.

**3700:336 Homeland Security Policy and Process (3 Credits)**

The course will focus on the topic of homeland security, an area that has received a great deal of attention following the tragic events of September 11, 2001.

**3700:337 Terrorism: Perpetrators, Politics and Response (3 Credits)**

Survey of terrorist organizations, political implications of terrorism, and governmental response to terrorism.

**3700:339 Terrorism and the Constitution (3 Credits)**

Primary goals include learning about the balance courts try to strike in safeguarding public safety and respect for personal freedom in a constitutional republic.

**3700:341 The American Congress (3 Credits)**

Examination of structure and function of Congress, with comparative materials on legislative process on all levels. Presidential and congressional conflict examined.

**3700:345 World Politics in Film (3 Credits)**

This course examines the political meaning and content of films. Themes investigated include war, the nuclear age and its consequences, postindustrial society, the future, and unemployment.

**3700:346 American Politics in Film (3 Credits)**

Examines the portrayal and representation of American politics through cinema. Emphasis on the positive and negative roles that movies play in educating the public.

**3700:350 The American Presidency (3 Credits)**

The presidency as focal point of politics, policy and leadership in American political system.

**3700:351 Inside the White House (3 Credits)**

The course looks behind the curtain at the inner-workings of the White House. Topics include: physical structure of the White House, travel, protection, and staff.

**3700:352 Weapons of Mass Destruction (3 Credits)**

An exploration of the various weapons of mass destruction available to terrorists and other potential enemies with an emphasis on the challenge America faces in responding to such threats.

**3700:353 Future International Threats (3 Credits)**

A study of future threats through the use of scenario construction and future projections.

**3700:360 The Judicial Process (3 Credits)**

Role of police, lawyers, courts and judges in context of American political process. Structure and process of judicial policy making and limitations on judicial power.

**3700:361 Politics of the Criminal Justice System (3 Credits)**

Examines the impact of the political process and political institutions on criminal law and policy.

**3700:363 Crime, Punishment, Politics: A Comparative Perspective (3 Credits)**

Comparative study of the structures, practices, power relationships, and politics in various criminal justice systems.

**3700:370 Public Administration: Concepts & Practices (4 Credits)**

Examines current administrative theories and their application in public bureaucracies. Emphasis is placed on practices to improve the quality of public sector administration.

**3700:375 Women in Politics (3 Credits)**

Course examines the past, present, and future role of women in politics.

**3700:381 State Politics (3 Credits)**

Analysis of the state political process in terms of its capacity to deal with a wide range of socioeconomic problems. Special emphasis on legislators, administrators, parties and interest groups.

**3700:391 Honors in Political Science (3 Credits)**

Prerequisites: at least 17 credits and a 3.25 average in political science and permission of adviser.

**3700:392 Selected Topics in Political Science (1-3 Credits)**

(May be repeated, but no more than three credits can be applied to major in political science) Topics of substantial current importance, specialized topics within political science or experimental courses.

**3700:395 Internship in Government & Politics (2-9 Credits)**

(May be taken twice for a total of nine hours. No more than four credits may be applied toward major in political science.) Prerequisite: Completion of 3 courses with a 2.20 GPA in political science. Supervised individual placement with political office holders, party groups, governmental agencies, law firms and other organizations providing professional-level work.

**3700:397 Independent Study: Political Science (1-4 Credits)**

(May be repeated for a total of four credits) Prerequisites: Minimum academic standing of a Senior and a 3.00 GPA.

**3700:400 Political Extremism & Violence (3 Credits)**

This course examines the causes and consequences of political extremism and political violence in democracies and failed democracies.

**3700:401 Advanced Topics in Research Methods (3-6 Credits)**

Prerequisite: 3700:301 or 3850:301. Special advanced topics of interest in research methods. This course can be taken twice if topics are different, for six credits total.

**3700:402 Politics and the Media (3 Credits)**

Examination of relationships between the press, the news media and political decision makers.

**3700:403 Media, Crime and Public Opinion (3 Credits)**

Examines the social construction of crime in mass media and how it impacts public, including fear of crime, beliefs about crime causation, and crime policy.

**3700:405 Politics in the Middle East (3 Credits)**

The rise of the state system in the Middle East after World War I; an analysis of the socio-cultural, ideological forces influencing the political behavior of the people of the Middle East. In-depth study of selected political systems.

**3700:406 Comparative Constitutional Law (3 Credits)**

This course will explore the essential principles and theories of law and constitutionalism and then apply them, comparatively, to several different constitutional traditions from various regions of the world.

**3700:410 International Security Policy (3 Credits)**

Prerequisite: 3700:310 or 3400:461. Introduction to political uses of military forces. Major focus on methodological, conceptual, and ethical dilemmas confronted in developing and implementing security policy.

**3700:413 Global Public Health Threats (3 Credits)**

An introduction to comparative global biological and public health security policy. Topics include: infectious disease outbreaks, bioterrorism, and potential "nano-terrorism."

**3700:414 Wealth and Power Among Nations (3 Credits)**

Studies relationship between politics and economy; mesh theoretical perspectives with exploration of key empirical issues. Topics: trade, relations, unions, finance, development, aid, sanctions.

**3700:417 Environmental Security: Policy & Politics (3 Credits)**

Prerequisite: 3700:100. Examines the politics, economics, science, security, and policy changes behind global warming/climate change, peak oil (looming energy shortages), and related governmental and resource security.

**3700:422 Understanding Racial and Gender Conflicts (3 Credits)**

This is the core course the Certificates in Racial and Gender Conflict, providing students with an opportunity to intensively examine racial and gender conflict.

**3700:428 Ohio Politics (3 Credits)**

Prerequisite: 3700:100. This course focuses on factors that make Ohio economically competitive. Material focuses on recent election results, public opinion polling and influence of socioeconomic factors.

**3700:437 Government Versus Organized Crime (3 Credits)**

The course gives a history of organized crime and the government's responses to fight it. Newly emerging international crime groups are also discussed.

**3700:440 Survey Research Methods (3 Credits)**

Prerequisites: 3700:100. Study of survey research methods as applied to the analysis of public opinion, political behavior, and public policy formation.

**3700:441 The Policy Process (3 Credits)**

Prerequisites: eight credits in political science. Intensive study of policy-making process, emphasizing roles of various participants in executive and legislative branches as well as private individuals and groups.

**3700:442 Methods of Policy Analysis (3 Credits)**

Prerequisite: 3700:201. Examines variety of methods available for analyzing public policies. Techniques of cost benefit analysis, evaluation research quasi-experimentation are covered as well as consideration of ethical questions in policy analysis, the practical problems facing policy analysts.

**3700:443 Political Scandals & Corruption (3 Credits)**

This course will provide information on major political scandals, including media coverage, public opinion, the role of special prosecutors, and the impacts of scandals.

**3700:445 Al Qaeda and ISIS (3 Credits)**

This course explores the causes and consequences of Al Qaeda and ISIS ideologies and tactics around the world.

**3700:446 National Security Intelligence (3 Credits)**

The aim of this course is to familiarize students with the politics and policy of national security intelligence in the US.

**3700:447 Counterterrorism (3 Credits)**

The course introduces students to the federal national security agencies, polices, politics, and methods of containing and defeating terrorism abroad and within the United States.

**3700:448 Intelligence Analysis (3 Credits)**

This course is intended to for students who seek a career in the field of government or private sector intelligence or who just have an interest in how intelligence analysis is done.

**3700:450 Administering Prisons, Probation, and Parole (3 Credits)**

Prerequisite: 3700:100. Analysis of the administrative, electoral, and community conflicts central to understanding, resolving, and preventing these conflicts in a correctional environment.

**3700:461 The Supreme Court & Constitutional Law (3 Credits)**

Prerequisite: 3700:100. Interpretation of the Constitution by the Supreme Court with emphasis on federal judicial, legislative and executive power; separation of powers; and federalism.

**3700:462 The Supreme Court & Civil Liberties (3 Credits)**

Prerequisite: 3700:100. Interpretation of the Constitution by the Supreme Court with emphasis on freedom of speech and press, freedom of religion, criminal rights and right to privacy.

**3700:463 Human Rights in World Politics (3 Credits)**

An introduction to human rights from a comparative perspective; topics include: definition and development of human rights with attention paid to government interaction and wartime.

**3700:470 Campaign Management I (3 Credits)**

Reading, research and practice in campaign management decision making.

**3700:471 Campaign Management II (3 Credits)**

Prerequisite: 3700:470. The second course in campaign management. The focus is on timing, coalition building, candidate positioning, event planning, internal organization, and other elements of campaign strategy.

**3700:472 Campaign Finance (3 Credits)**

Reading and research in financial decision making in political campaigns.

**3700:473 Voter Contact & Elections (3 Credits)**

Theoretical and practical approaches to communication in all types of campaigns.

**3700:474 Political Opinion, Behavior & Electoral Politics (3 Credits)**

Prerequisite: 3700:100 or 3700:301. Advanced analysis of psychological, cultural, and group processes of opinion formation and change. Attention given to the effect of opinion change on electoral outcomes.

**3700:475 American Interest Groups (3 Credits)**

Prerequisite: Completion of six or more political science credits. Reading and research on the development, structure and function of interest groups in the United States.

**3700:476 American Political Parties (3 Credits)**

Prerequisites: Completion of six or more political science credits. Reading and research on the development, structure and function of parties in the United States.

**3700:477 Lobbying (3 Credits)**

Examines the lobbying profession in the political process. Topics include theories of lobbying, tools of lobbying, the lobbying process, and types of lobbying.

**3700:480 Policy Problems in Political Science (3 Credits)**

Intensive study of selected problems in public policy.

**3700:481 The Challenges of Police Work (3 Credits)**

Prerequisite: 3700:100. Analysis of the neighborhood, bureaucratic, electoral, and operational conflicts central to police work, with a focus on efforts and obstacles to improving police work.

**3700:482 Criminal Justice Topic: Current Issues (3 Credits)**

(May be repeated for a maximum of six credits) Prerequisite: 3700:100. Critical analysis of current issues relating to political science and criminal justice. No more than three credits can be applied to the major.

**3700:483 Constitutional Problems in Criminal Justice (3 Credits)**

Prerequisite: 3700:100. Analyzes Supreme Court policy-making regarding problems of criminal justice, including search and seizure, self-incrimination, right to counsel, jury selection, and post-appeal prisoner rights.

**3700:492 Selected Topics in Political Science (3 Credits)**

Topics of substantial current importance or specialized topics within political science (May be repeated for a total of 6 credits).

**3700:497 Senior Honors Project in Political Science (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission. Open only to a political science major in Honors Program. Independent study leading to completion of senior honors thesis or other original work.

## Polymer Engineering (9841)

**9841:321 Polymer Fluid Mechanics (3 Credits)**

Prerequisite: 4600:310 or equivalent. Rheological properties and flow characteristics of polymer fluid systems; non-Newtonian viscosity, viscoelasticity.

**9841:422 Polymer Processing (3 Credits)**

Prerequisites: [4200:321 and 4200:351] or [4600:310 and 4600:315]. Polymer processing technology. Basic studies of flow in extrusion, molding, and other processing methods.

**9841:425 Introduction to Blending & Compounding Polymers (3 Credits)**

Prerequisites: 4200:321 or 4600:310 or permission. Nature of polymer blends and compounds and their applications. Preparation and technology using batch and continuous mixers, mixing mechanisms.

**9841:427 Mold Design (3 Credits)**

Prerequisites: 4200:321 or 4600:310 or permission. Molding methods to manufacture polymeric products. Machinery, materials, molds, equipment, computer-aided design.

**9841:450 Engineering Properties of Polymers (3 Credits)**

Prerequisites: 4200:408 or 4300:202 or 9821:301. Mechanical behavior of solid polymers including elastic and plastic deformation, viscoelasticity, fatigue and failure.

**9841:451 Polymer Engineering Laboratory (2 Credits)**

Prerequisite: 4200:408 or 9821:202. Laboratory experiments on the rheological characterization of polymer melts, fabrication of engineering products, structural investigation of polymeric parts.

**9841:497 Honors Project (2 Credits)**

Prerequisite: Senior standing in the Honors Program. Individual creative project in mechanical polymer engineering, supervised by faculty member of the department. This course must be designed oriented if used in place of 4700:499.

**9841:498 Research Problems in Polymer Engineering (1-9 Credits)**

Prerequisite: Permission of Department Chair. Faculty-supervised undergraduate research problems in polymer engineering culminating in a written report.

**9841:499 Polymer Engineering Design Project (2 Credits)**

Corequisite: 4600:400. Analysis and design of mechanical polymer systems.

## Polymer Science (9871)

**9871:313 Physics of Living Systems (3 Credits)**

Introduction to the interdisciplinary study of biological systems through the lens of the physical sciences. Learn how discovery-driven research between biology and physics leads to biomimetic advances and applications.

**9871:401 Introduction to Elastomers (3 Credits)**

Prerequisites: 3150:314 (or equivalent) or permission. An introduction to the science and technology of elastomeric materials and gels, including hydrogels. Lecture and laboratory.

**9871:402 Introduction to Plastics (3 Credits)**

Prerequisite: 3150:314 (or equivalent) or permission. An introduction to the science and technology of plastic materials. Lecture and laboratory.

**9871:403 Polymer Chemistry (3 Credits)**

Prerequisites: 3150:263 and 3150:313 or permission. Mechanisms of polymerization reactions of monomers and molecular mass distributions of products; principles of molecular mass determination; relationship of physical properties/applications to structure and composition.

**9871:404 Polymer Physics (3 Credits)**

Prerequisites: 4200:408 or 9821:301 or [3150:313 and 3450:223]. Advanced overview of polymer physics including scaling theories, chain dynamics, rubber elasticity, glassy polymers and crystallization.

**9871:405 Polymer Science Laboratory (3 Credits)**

Prerequisites: 4200:408 or 9821:301 or 9871:403 or permission. Laboratory course with experiments on the synthesis and characterization of polymers.

**9871:407 Polymer Science (4 Credits)**

Prerequisite: 3150:314 or 3650:301 or permission. Principles of polymerization processes and relationships between molecular structures and physical behavior of polymers. Molecular weight distributions of macromolecules discussed and methods of determining molecular weights utilized.

**9871:497 Honors Project in Polymer Science (1-3 Credits)**

Prerequisites: Sophomore, junior, or senior standing in Honors College and permission of honors preceptor in the home department. Independent research leading to completion of honors thesis under guidance of project adviser. May be repeated for a total of 10 credits.

**9871:499 Research Problems in Polymer Science (1-9 Credits)**

Prerequisite: Permission. Faculty-supervised undergraduate research problems in polymer science, culminating in a written report.

## Psychology (3750)

**3750:100 Introduction to Psychology (3 Credits)**

Introduction to scientific study of behavior, survey of physiological basis of behavior, sensation and perception, development, learning and cognition, personality, social interaction and other selected topics.

**Gen Ed:** Tier 2 - Social Science

**3750:105 Professional & Career Issues in Psychology (1 Credit)**

Corequisite: 3750:100. An overview of the field of psychology including educational requirements, career opportunities and professional issues for students considering a psychology major.

**3750:110 Quantitative Methods in Psychology (4 Credits)**

Prerequisite or corequisite: 3750:100. Presentation of data, descriptive statistics, correlation, hypothesis testing and introduction to statistical methodologies in psychology, including computer applications.

**Gen Ed:** Tier 3 - Critical Thinking

**3750:220 Introduction to Experimental Psychology (4 Credits)**

Prerequisites: 3750:100 and 3750:110. Lectures and laboratory experience in the scientific bases of psychology such as experimental design, methods and apparatus, collection and analysis of data and interpretation of results.

**Gen Ed:** Tier 3 - Critical Thinking

**3750:230 Developmental Psychology (4 Credits)**

Prerequisite: 3750:100. Determinants and nature of behavioral change from conception to death.

**3750:250 Psychology of Diversity (4 Credits)**

Prerequisite: 3750:100. Psychology of Diversity encompasses macro-level issues and micro-level experiences. To live effectively in the emerging global community, one must be able to understand the diversity among human beings and relate effectively to non-majority group members. Issues of diversity are not only individual and personal, but also collective and social.

**Gen Ed:** Tier 3 - Domestic Diversity

**3750:320 Biopsychology (4 Credits)**

Prerequisite: 3750:100. Relationship between behavior and its biological/physiological foundations including brain structure and function, sensation, behavior genetics, learning and memory, and other topics.

**3750:330 Emotion Across the Lifespan (4 Credits)**

Prerequisites: 3750:100 & 3750:230. We read and discuss primary writings on theoretical and empirical research in emotional development in adulthood. Topics include emotion perception and emotion regulation.

**3750:335 Dynamics of Personality (4 Credits)**

Prerequisite: 3750:100. An overview of theory and research involving the development, maintenance and assessment of personality and individual differences.

**3750:340 Social Psychology (4 Credits)**

Prerequisite: 3750:100. The examination of an individual's response to social environment and social interaction processes. Social perception, attitude formation and change, affiliation and attraction, altruism, group processes and nonverbal behavior.

**3750:345 Cognitive Processes (4 Credits)**

Prerequisite: 3750:100. Survey of the basic phenomena, concepts and theories in the areas of human perception, learning, memory and cognition.

**3750:380 Industrial/Organizational Psychology (4 Credits)**

Prerequisite: 3750:100. Survey of the application of psychology to the workplace including an emphasis on organizational (e.g., motivation) and personnel issues (e.g., selection).

**3750:400 Personality (4 Credits)**

Prerequisites: 3750:100 and 3750:335. Consideration of current conceptualizations of the normal personality with emphasis on methods of measurement, experimental findings and research techniques.

**3750:405 Sensation & Perception (4 Credits)**

Prerequisite: 3750:100. Reviews the basic psychological and neural components of sensation and perception involving visual, auditory, cutaneous, and chemical sensory systems.

**3750:410 Psychological Tests & Measurements (4 Credits)**

Prerequisites: 3750:100 and 3750:110. Consideration of the nature, construction and use of tests and measurements in industry, government and education. Includes aptitude and achievement tests, rating scales, attitude and opinion analysis.

**3750:415 Cognitive Neuroscience (4 Credits)**

Prerequisite: 3750:100. A review of neuroimaging studies addressing contemporary themes in human behavior, including consciousness, learning and memory, neuropathology, and emotion.

**3750:420 Abnormal Psychology (4 Credits)**

Prerequisite: 3750:100. Survey of syndromes, etiology, diagnoses and treatments of major psychological conditions ranging from transient maladjustments to psychoses.

**3750:425 Psychology of Hate (4 Credits)**

Prerequisites: Junior or higher standing and 3750:100. The primary objective of this course is to understand the psychology behind hate. Topics include racism, sexism, heterosexism, religious intolerance, classism and ageism.

**Gen Ed:** Tier 3 - Complex Systems

**3750:430 Psychological Disorders of Children (4 Credits)**

Prerequisites: 3750:100 and 3750:230. Survey of syndromes, etiologies and treatments of behavioral disorders in children from the standpoint of developmental psychology. Behavioral data and treatment approaches emphasized.

**3750:435 Cross-Cultural Psychology (4 Credits)**

Prerequisites: 3750:100. Influence of culture and ethnicity upon development of individual psychological processes including functioning, identity, social motives, sex roles and values.

**Gen Ed:** Tier 3 - Domestic Diversity

**3750:440 Personnel Psychology & the Law (4 Credits)**

Prerequisite: 3750:380 or 6500:301. The implications of equal employment law on the practice of personnel psychology.

**3750:441 Clinical & Counseling Psychology I (4 Credits)**

Prerequisites: 3750:100 and 3750:335. Overview of the fields of clinical and counseling psychology with a major focus on psychotherapeutic approaches, including cultural considerations, legal/ethical issues, and outcome research.

**Gen Ed:** Tier 3 - Critical Thinking

**3750:442 Clinical & Counseling Psychology II (4 Credits)**

Prerequisite: 3750:441. Overview of individual counseling and psychotherapy, group counseling, personality and ability testing, marriage and family counseling, hypnosis, sex therapy, psychopharmacology and related specialties. Specific topics in clinical and counseling practice including professional trends, ethics, various therapeutic and diagnostic procedures, and specialty areas.

**3750:443 Human Resource Management (4 Credits)**

Prerequisites: 3750:100 and 3750:380. The application of psychological theory to the effective management of human resources in an organization, including recruitment, selection, training and retention of personnel.

**3750:444 Organizational Theory (4 Credits)**

Prerequisites: 3750:100 and 3750:380. The application of psychological theory to macro-level processes in organizations including leadership, motivation, task performance, organizational theories and development.

**3750:445 Psychology of Small Group Behavior (4 Credits)**

Prerequisites: 3750:100. Intensive investigation of factors affecting behavior and performance in small groups including effects of personality, social structures, task, situational and social-cognitive variables.

**3750:450 Cognitive Development (4 Credits)**

Prerequisites: 3750:100 and 3750:345. Theory and research on life-span changes in cognitive processes including concept formation/categorization, information processing and Piagetian assessment tasks.

**3750:460 History of Psychology (3 Credits)**

Prerequisite: 3750:100. Psychology in pre-scientific period and details of developmental or systematic viewpoints in 19th and 20th Centuries.

**3750:474 Psychology of Women (4 Credits)**

Prerequisites: 3750:100 or 3001:200. Reviews theory and research in the psychology of women and gender and encourages students to use these in their everyday lives.

**Gen Ed:** Tier 3 - Domestic Diversity

**3750:475 Psychology of Adulthood & Aging (4 Credits)**

Prerequisites: 3750:100 and 3750:230. Psychological aspects of human development from adolescence to older adulthood including age-related changes in socialization, personality, intelligence, sensation, perception, learning, memory and clinical applications.

**3750:480 Special Topics in Psychology (1-4 Credits)**

(May be repeated to a maximum of 8 credits) Prerequisite: 3750:100 and 64 credits completed. Junior standing. Comprehensive survey of contemporary status of specialized topics and issues in psychology. Emphasis on original source materials, critical analysis and synthesis of empirical and theoretical aspects.

**3750:488 Honors Project in Psychology (4 Credits)**

Prerequisites: Psychology major and departmental permission, and 3750:100, 3750:105, 3750:110, 3750:220, and [3750:320 or 3750:335 or 3750:340 or 3750:345]. Selection of research topic, review of relevant literature, research design, and proposal.

**3750:489 Honors Project in Psychology (4 Credits)**

Prerequisites: Psychology major and departmental permission, and 100 and 105 and 110 and 220, and 320 or 335 or 340 or 345. Data collection, analysis, and preparation of the final research report in journal style.

**3750:495 Field Experience in Psychology (1-4 Credits)**

(May be repeated to a maximum of 6 credits). Prerequisites: 3750:100, 3750:105, 3750:110 and eight additional credits in psychology. On-site supervised individual placements in appropriate settings. The academic component of the experience will be under the supervisor of a selected faculty member.

**3750:497 Independent Reading/Research in Psychology (1-3 Credits)**

(May be repeated to a maximum of 6 credits). Prerequisites: 3750:100, 3750:105, 3750:110, 3750:220 and four additional credits in psychology. Independent reading and/or research in an area of psychology under the supervision and evaluation of a selected faculty member.

**3750:498 Honors Research in Psychology (1-3 Credits)**

Prerequisites: Psychology major and approval of honors advisor. Individual research with a faculty advisor leading to the completion of a research project satisfying departmental and university requirements.

## Public Administration and Urban Studies (3980)

**3980:375 Intro to Public Sector Mgmt (3 Credits)**

Prerequisite: Sophomore standing. Introduces the principles, structures and people in the public sector. Addresses responsibilities and management of public services by government and civic non-profit agencies.

**3980:380 Budget Politics (3 Credits)**

Prerequisite: Sophomore standing. Introduces the politics and history of public budgeting for federal, state and local governments. Considers legislative and executive practices and democratic aspects of budgeting.

**3980:412 National Urban Policy (3 Credits)**

Prerequisite: Sophomore standing. Examines major federal policies that relate to urban problems in regard to policy-making processes, implementation, and impact on local governments.

**3980:416 Personnel Management in the Public Sector (3 Credits)**

Prerequisite: 42 credit hours or Sophomore standing. Fundamental issues and principles of public sector personnel administration, including recruitment, selection, training, motivation, supervision, evaluation, labor relations and affirmative action.

**3980:417 Leadership and Decision-Making (3 Credits)**

Prerequisite: 42 credit hours of Sophomore standing. Examines the context of public sector management including relevant organizational theories, strategic management and planning for leading local government and non-profit organizations.

**3980:418 Citizen Participation (3 Credits)**

Prerequisite: Sophomore standing. This course considers the fundamental theory background, techniques and issues of citizen participation in urban management and policy making.

**3980:419 Community Organizing (3 Credits)**

Prerequisite: 42 credit hours or Sophomore standing. The course examines the evolution and influence of neighborhood, community and "grass-roots" organizations on public policy-making in urban areas.

**3980:426 Grantsmanship (3 Credits)**

Prerequisite: Sophomore standing. Considers the process and techniques of the grant-seeking and awarding processes. Emphasizes public funding opportunities for local government and nonprofit agencies.

**3980:427 Cultural Competence in the Public Sector (3 Credits)**

Prerequisite: 42 credit hours or Sophomore standing. Considers how public and non-profit managers can effectively communicate and provide services to culturally diverse individuals. Addresses management issues related to social stratification system.

**3980:443 Introduction to Public Policy (3 Credits)**

Prerequisite: Sophomore standing. Considers how public managers need to understand models of public policy formulation. Covers major policy issues and the analysis of policy implementation and policy impacts.

**3980:451 Introduction to City Management (3 Credits)**

Prerequisite: 42 credit hours or Sophomore standing. Examines the historic role of city management in professionalizing local government operations; examines current responsibilities and trends in the practice of city management and leadership.

**3980:462 Fundraising and Resource Management (3 Credits)**

Prerequisites: 3980:463 and sophomore standing. Examines alternative methods of fundraising and unique resource management challenges and opportunities of non profit organizations.

**3980:463 Non-profit Management (3 Credits)**

Prerequisite: Sophomore standing. Examines fundamental principles of non-profit organizations. Considers unique concerns of their operation environment, resource development, leadership, and management processes and aspects of volunteerism.

**3980:473 Computer Applications in Public Organizations (3 Credits)**

Prerequisite: Sophomore standing. Introduces microcomputer applications used in public organizations and includes data bases, data entry, web pages, report writing, graphical presentation and spreadsheets.

**3980:480 Special Topics in Public Management (3 Credits)**

Prerequisite: Sophomore standing. Opportunity to study current issues and specialized topics in public management, non-profit management or public policy analysis. May be repeated with change in topic for a total of 9 credits.

# Radiologic Technology (2760)

## 2760:141 Anatomy & Positioning I (3 Credits)

Prerequisites: 2780:206, 2780:207, and admission to the program. Radiographic anatomy and positioning of skeletal systems, including introductory cross-sectional anatomy. Identification of correct & incorrect positioning including remedies.

## 2760:142 Anatomy & Positioning II (3 Credits)

Prerequisite: 2760:141. Radiographic anatomy and positioning of various body systems in all planes, including cross-sectional anatomy. Identification of correct & incorrect positioning, including remedies.

## 2760:151 Methods of Patient Care I (2 Credits)

Prerequisite: Admission to the program. Covers basic radiologic patient care and professionalism issues. Includes surgical aseptic training for performing radiographic images in the operating room.

## 2760:152 Methods of Patient Care II (1 Credit)

Prerequisite: 2760:151. Addresses patient care considerations for medical emergencies, patients receiving contrast media, alternative medical treatments. Overview of pharmacology and drug administration.

## 2760:161 Radiologic Physics and Principles I (3 Credits)

Prerequisites: 2780:206, 2780:207, and admission to the program. Orientation to radiologic sciences. Introduction to systems of measurement, physics, electromagnetism, and components of the x-ray tube. Also includes electricity, radiation physics, and radiation protection.

## 2760:162 Radiologic Physics and Principles II (3 Credits)

Prerequisite: 2760:161. Discussion of radiologic factors involved in producing quality radiographs. Review of various radiographic components and their influences on photographic technique. Includes quality assurance testing. Sequential.

## 2760:171 Clinic Class I (1 Credit)

Prerequisite: Admission to the program. Corequisite: 2760:181. Review of the clinical site-specific radiographic positioning of the skeletal system. Also includes mobile & surgical radiography.

## 2760:172 Clinic Class II (1 Credit)

Prerequisite: 2760:171. Corequisite: 2760:182. Review of the clinical site-specific radiographic positioning of various body systems. Includes mobile & surgical radiography.

## 2760:181 Clinical I (3 Credits)

Prerequisite: Admission to the program. Hands-on application of didactic anatomy & positioning lessons in learning how to image the skeletal system. Includes mobile & surgical radiography.

## 2760:182 Clinical II (3 Credits)

Prerequisite: 2760:181. Hands-on application of didactic anatomy & positioning lessons in learning how to image the various body systems. Includes mobile & surgical radiography.

## 2760:192 Radiobiology (2 Credits)

Prerequisite: 2760:161. Corequisite: 2760:162. History and development of federal and state radiation standards. Identifying natural vs. artificial radiation sources. Includes applications of diagnostic imaging and therapeutic radiation modalities.

## 2760:221 Clinical Experience (0 Credits)

Prerequisite: Admission to the Radiologic Technology program. Off-campus clinical course. May be repeated as needed.

## 2760:252 Imaging Obstacles and Solutions (1-2 Credits)

Prerequisite: 2760:142. Introduction problem solving skills, using case studies and role-playing situations. Includes comprehensive image analysis of proper technique, positioning, & the use of radiation protection principles.

## 2760:261 Radiologic Physics and Principles III (3 Credits)

Prerequisite: 2760:162. Review of radiation physics and radiographic principles that are included with advanced imaging concepts, and radiation protection techniques for both the patient and the radiographer.

## 2760:262 A&P Registry Review (2 Credits)

Prerequisite: 2760:271. Comprehensive review of anatomical structures and positioning to prepare for the ARRT Registry examination. A global perspective on positioning, using critical thinking skills.

## 2760:271 Special Imaging I (3 Credits)

Prerequisite: 2760:142. Review of anatomy and advanced radiologic procedures for the following anatomical systems: Cardiac & Circulatory System, Respiratory & Lymphatic Systems, GI System, & Skeletal Articulations.

## 2760:272 Special Imaging II (3 Credits)

Prerequisite: 2760:271. Review of anatomy and advanced procedures for the following anatomical systems: Genitourinary System, Nervous System, Muscular System, and computer based imaging.

## 2760:281 Clinical III (4 Credits)

Prerequisite: 2760:182. Competency level skills are refined radiographing the vertebral column, skull, facial bones, surgical & mobile Radiography, special procedures, and other infrequently seen radiologic procedures.

## 2760:282 Clinical IV (3-4 Credits)

Prerequisite: 2760:281. Competency level skills are refined in all radiologic areas.

## 2760:291 Pathophysiology (2 Credits)

Prerequisite: 2760:142. Review of disease processes of the various body systems related to the effect pathology produces on radiographic images. Extensive discussion of optimum techniques used.

## 2760:292 Cross Sectional Anatomy (2 Credits)

Prerequisite: 2760:271. Reorientation of anatomical structures and their relationships to axial, coronal, and sagittal planes. These structures are then identified on cadaver, CT, and MRI images.

# Respiratory Care (2790)

## 2790:100 Concepts in Respiratory Therapy (3 Credits)

Prerequisites: 2030:152 and 2030:153. Introductory concepts regarding the practice and application of the theories employed in respiratory therapy, including career information, equipment (lecture/discussion)

## 2790:210 Respiratory Therapy Procedures I (3 Credits)

Prerequisites: [2790:100, 2750:120, and 2780:206] or [3100:200 and 3100:201]. Application of oxygen and aerosol therapy equipment. Lecture/laboratory.

## 2790:215 Respiratory Therapy Pharmacology (3 Credits)

Prerequisites: 2790:100, 3150:110, and 3150:111. Pharmacologic actions and effects of medications delivered by respiratory therapists, and routes of administration.

## 2790:290 Special Topics: Respiratory Care (1-3 Credits)

Prerequisite: Permission. Selected topics or subject areas of interest in respiratory therapy technology. (May be repeated for a maximum of three credits)

**2790:301 Cardiopulmonary Assessment Techniques (2 Credits)**

Prerequisites: 2780:207 or [3100:202 and 3100:203]. Overall patient assessment, with concentration on the cardiopulmonary systems. Overview of common illness and related clinical manifestations. Lecture/laboratory.

**2790:302 Cardiopulmonary Anatomy and Physiology (3 Credits)**

Prerequisites: [2790:210 and 2780:207] or [3100:202 and 3100:203]. Corequisite: 2790:301. Study of normal anatomy and physiology of cardiopulmonary systems.

**2790:303 Cardiopulmonary Pathology (4 Credits)**

Prerequisites: 2790:301 and 2790:302. Discussion of diseases of the heart and lungs, and their relationship to the role of the respiratory therapist.

**2790:311 Respiratory Therapy Procedures II (3 Credits)**

Prerequisites: [2790:210 and 2780:207] or [3100:202 and 3100:203]. Airway Care and Lung Inflation Techniques. Lecture/laboratory.

**2790:312 Diagnostics I (3 Credits)**

Prerequisite: 2790:210. Corequisites: 2790:301, 2790:302, and 2790:311. Bedside screening studies for the evaluation of cardiopulmonary diseases. Lecture/laboratory.

**2790:313 Diagnostics II (3 Credits)**

Prerequisites: 2790:311 and 2790:312. Corequisite: 2790:303. Laboratory diagnostic studies for the evaluation of cardiopulmonary diseases. Lecture/laboratory.

**2790:315 Advanced Pharmacology for Respiratory Therapy (3 Credits)**

Prerequisite: 2790:215. Pharmacologic actions and effects of Cardiopulmonary Medications.

**2790:320 Neonatal/Pediatrics for Respiratory Therapy I (3 Credits)**

Prerequisite: 2790:301. In depth coverage of neonatal & pediatric respiratory care concepts. Emphasis placed on anatomy and physiology, assessment, and therapeutics.

**2790:325 Mechanical Ventilation (4 Credits)**

Prerequisites: 2790:303, 2790:312, 2790:315, 2790:320, and 2790:341. Introduction to mechanical ventilation and equipment. Lecture/lab.

**2790:340 Application of Clinical Concepts (2 Credits)**

Prerequisite: 2790:210. Corequisite: 2790:301. Introduction to basic respiratory therapy in a hospital setting, and hands-on practice with respiratory therapy equipment, including CPR for the professional. Lecture/clinical.

**2790:341 RT Clinical Experience I (3 Credits)**

Prerequisites: 2790:215, 2790:311, and 2790:340. Application of clinical procedures in a hospital setting, with emphasis on basic therapeutic interventions. Clinical. 225 clinical hours.

**2790:342 RT Clinical Experience II (2 Credits)**

Prerequisites: 2790:315, 2790:325, and 2790:341. Application of clinical procedures in a hospital setting, with emphasis on mechanical ventilation techniques. 150 clinical hours.

**2790:413 Respiratory Therapy in Alternate Settings (3 Credits)**

Prerequisite: 2790:313. Pulmonary rehabilitation and home care, as well as care in alternate settings. Lecture/lab.

**2790:420 Neonatal/Pediatrics for Respiratory Therapy II (3 Credits)**

Prerequisite: 2790:320. Detailed study of airway management, pathophysiology and treatment modalities as they relate to neonatal/pediatrics.

**2790:421 ACLS & PALS (3 Credits)**

Prerequisites: 2790:303, 2790:315, 2790:320, and 2790:340. Advanced Cardiac Life Support and Pediatric Advanced Life Support, with mega codes and case studies.

**2790:430 Problems in Respiratory Therapy (4 Credits)**

Prerequisites: 2790:313, 2790:420, and 2790:443. Capstone course, applies the concepts from clinical situations, using computer simulations and cases and evaluates research in Respiratory therapy.

**2790:443 RT Clinical Experience III (4 Credits)**

Prerequisite: 2790:342. Rotation to a variety of Health care facilities to practice specialty procedures in each institution. 300 clinical hours.

**2790:444 RT Clinical Experience IV (4 Credits)**

Prerequisite: 2790:443. Rotation to a variety of health care facilities to practice specialty procedures from each institution. Clinical (total of 300 hours).

## Russian (3570)

**3570:101 Beginning Russian I (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3570:102 Beginning Russian II (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3570:201 Intermediate Russian I (3 Credits)**

Sequential. Prerequisite: 102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3570:202 Intermediate Russian II (3 Credits)**

Sequential. Prerequisite: 3570:102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3570:497 Individual Reading in Russian (1-3 Credits)**

Prerequisite: 3570:202 and permission of the department chair.

## School Psychology (5620)

**5620:490 Workshop: School Psychology (1-2 Credits)**

Prerequisite: Permission of instructor. Opportune topical experience provided periodically as needed and/or as resources become available.

**5620:491 Workshop: School Psychology (1-3 Credits)**

Prerequisite: Permission of instructor. Opportune topical experience provided periodically as needed and/or as resources become available.

**5620:492 Workshop: School Psychology (1-3 Credits)**

Prerequisite: Permission of instructor. Opportune topical experience provided periodically as needed and/or as resources become available.

**5620:494 School Psychology Institutes (1-4 Credits)**

Prerequisite: Permission of instructor. Specifically designed learning experience for program graduate focusing on critical topics.



## Secondary Education (5300)

### 5300:100 Orientation to the AYA/P-12 Multi-Age Programs (0 Credits)

Prerequisite: admission to the Teacher Education Program. Corequisite: 5100:200. Orientation to the information and strategies necessary for a student to be successful in the program, including portfolio development.

### 5300:303 Global Education & Technology (3 Credits)

This course focuses on theories, materials, and methods for teaching global education through e-learning and web-based tools.

### 5300:316 Methods in Teaching Art (3 Credits)

Prerequisites: Completion of required course for art teachers and grade-point average of 2.50 in the field. Study of trends and procedures in teaching and supervision; relation of art to home, school and community; observation in selected schools required.

### 5300:317 Instructional Techniques: Modern Languages-Secondary (3 Credits)

Focus on theories of language acquisition, models of instruction for teaching foreign languages/cultures and strategies that promote levels of proficiency/competency for adolescent learners.

### 5300:320 Introduction to Teaching in the Content Area (3 Credits)

Prerequisite: 5500:308. This course introduces secondary teacher candidates to trends, issues, and challenges as it relates specifically to curriculum and instruction in the content areas in secondary schools.

### 5300:325 Content Reading in Secondary Schools (3 Credits)

Instructional principles and practices for helping secondary school youth and adults learn subject matter through application of reading and study skills.

### 5300:330 Teaching Adolescent/Middle Level Literature (3 Credits)

Student develops skills for selection of literature that is well-suited for adolescent/middle level children. Student develops, uses, and experiences methods for teaching adolescent/middle level literature in the classroom. (30 clinical experience hours)

### 5300:335 Language Learning in Secondary Schools (3 Credits)

Prerequisite: Admission to the Teacher Education program. Introduces English teachers to the issues of language learning and techniques required to teach language skills.

### 5300:395 Field Experience: Secondary Education (1-3 Credits)

Supervised work with youngsters, individually and in groups in school and/or community settings.

### 5300:420 Instructional Techniques in Secondary Education (3 Credits)

Prerequisite: 5500:308. Corequisite: 5300:421. Open to student who has completed certification requirements in all content fields. Techniques of planning, instruction and evaluation in various secondary teaching fields.

### 5300:421 Instructional Techniques in Secondary Education - II (3 Credits)

Prerequisites: 5300:420 and 5500:430. Corequisite: 5500:431. Continuation of teaching strategy and assessment implementation based on research and theory.

### 5300:430 Honors Research Project: Secondary Education (1-6 Credits)

(May be repeated for a total of six credits) Prerequisite: Permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.

### 5300:480 Special Topics: Secondary Education (1-4 Credits)

(May be repeated with a change in topic) Prerequisite: Permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

### 5300:490 Workshop: Secondary Education (1-3 Credits)

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

### 5300:491 Workshop: Secondary Education (1-3 Credits)

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

### 5300:492 Workshop: Secondary Education (1-3 Credits)

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

### 5300:493 Workshop: Secondary Education (1-3 Credits)

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

### 5300:494 Educational Institutes: Secondary Education (1-4 Credits)

Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.

### 5300:495 Student Teaching: Secondary Education (6-11 Credits)

Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, and passing state licensure exam(s). Planned teaching experience in schools selected and supervised by the Office of Field Experiences. Co-requisite: 5300:496.

### 5300:496 Student Teaching Colloquium in Secondary Education (1 Credit)

Concurrent with Student Teaching; emphasis on applied decision making, group problem solving, and commitment to life-long learning.

### 5300:497 Independent Study (1-3 Credits)

Specific area of curriculum investigation pertinent to secondary education as determined by student's academic needs.

## Social Sciences - Associate Studies (2040)

### 2040:230 Technical Career Search Skills (1 Credit)

Students will develop specific skills in resume writing, interviewing, self-directed job search, networking, researching employers, as well as learning the fundamentals of the job market.

### 2040:241 Technology & Human Values (3 Credits)

Examines impact of scientific and technical change upon individuals and society and associated values. Topics include digital and work life, biomedical technologies and the environment.

**Gen Ed:** Tier 3 - Complex Systems

### 2040:242 American Urban Society (3 Credits)

Multidisciplinary treatment of urban processes and problems. Concerns historical, political, social, economic and other environmental forces which impact the individual in an urban setting.

**Gen Ed:** Tier 2 - Social Science

### 2040:243 Contemporary Global Issues (3 Credits)

Multidisciplinary approach to global social problems. Examines cultural, political, and economic issues in developed and developing nations. Emphasizes technology's impact and global interrelationships.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Global Diversity

### 2040:247 Survey of Basic Economics (3 Credits)

Introduction to economic analysis and issues designed for the student taking only one course in economics. Coverage includes economic systems, exchange, money and banking, national income, employment, fiscal policy and current domestic economic problems.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Critical Thinking

**2040:290 Special Topics: Associate Studies Social Sciences (1-4 Credits)**  
(May be repeated with a change in topic) Prerequisite: Permission.  
Selected topics on subject areas of interest in the social sciences.

## Social Work - School of (7750)

### **7750:230 Human Relations (3 Credits)**

Examination of principles and methods which aid in understanding the individual's response to society and the relationship between society and individuals.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Critical Thinking

### **7750:240 Substance Use and Abuse (3 Credits)**

Introduction to pharmacology of drugs of misuse; physiological factors of alcohol/drug-using behavior; effect of psychoactive drugs on the brain; intervention and treatment measures.

### **7750:244 Death & Dying (3 Credits)**

Examination of a wide range of topics related to death and dying. Emphasis is placed on understanding and coping with death and dying.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

### **7750:260 Introduction to Addiction (3 Credits)**

An overview of the continuum of use, abuse and dependency; theories of addiction; the impact of addiction on society; and the implications for professional practice.

### **7750:265 Women & Addiction (3 Credits)**

Exploration of the social, psychological, physical and family aspects of addiction in women.

### **7750:268 Co-Occurring Disorders (3 Credits)**

Key concepts and evidence-based practices in the provision of services to people suffering from substance abuse as well as mental illness and behavioral disorders.

### **7750:269 Criminal Justice & Addiction (3 Credits)**

An introduction to the problems that exist with the treatment of the alcohol/drug offenders and issues relating to their transition back to the community.

### **7750:270 Diversity and Social Work (3 Credits)**

Introductory course explores issues related to poverty and minority issues as they relate to at-risk populations.

**Gen Ed:** Tier 3 - Domestic Diversity

### **7750:271 Behavioral Addictions (3 Credits)**

Introduction to understanding human behavior and physiological responses to compulsive behaviors other than dependencies on psychoactive chemicals. Several behavioral addictions will be explored.

### **7750:275 Introduction to Social Work Practice (3 Credits)**

Introduces students to concepts, settings, and vulnerable populations related to the field of social work. Emphasis placed on purposes, values, ethics, knowledge, and skills that characterize the professional social worker. Provides an overview of theoretical and practical knowledge about the social work profession needed for entry levels of practice in social work.

### **7750:276 Introduction to Social Welfare (3 Credits)**

Survey of field of social welfare; place of social work profession within human services institutions of United States. Introduction of basic concepts relating social welfare institutions and social work to society.

### **7750:286 Addiction Services Internship (2 Credits)**

Prerequisite: Permission of instructor. Integrates counselor assistant experience with fundamental concepts and skills from academic studies. Students are required to complete 200 hours of supervised field experience.

### **7750:300 The Resilient Child (3 Credits)**

Corequisite: 7750:301. Course content includes typical and atypical development in children affected with health related issues in a variety of clinical settings.

### **7750:301 The Resilient Child Lab (1 Credit)**

Corequisite: 7750:300. Course content applies typical and atypical development in children affected with health related issues in a lab setting.

### **7750:302 Assessment, Play and Therapeutic Interventions with Children (3 Credits)**

An overview of the theoretical framework of play and assessment of children's developmental and emotional needs. Therapeutic interventions and activities explored.

### **7750:303 National Health and Safety Performance Standards in Child Care (1 Credit)**

Course content includes safety and performance standards for health care providers working with children in a clinical setting.

### **7750:344 Death & Dying (3 Credits)**

Examination of a wide range of topics related to death and dying. Emphasis is placed on understanding and coping with death and dying.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

### **7750:345 Death and Dying for Health Care Professionals (3 Credits)**

Examination of loss, death, and dying in health care professions. Theory-driven course emphasizing development of practical skills to address death-related issues and experiences.

### **7750:349 Integrated Human Behavior and Health (3 Credits)**

Examination of the reciprocal nature of physical and mental health factors related to disease course/progression. Emphasis on application of theory-driven conceptualization and interventions.

**Gen Ed:** Tier 3 - Critical Thinking

### **7750:401 Social Work Practice I (3 Credits)**

Prerequisite: Social Work major. Corequisite: 7750:405. Basic concepts and methods of Generalist social work practice, with an emphasis on understanding and working with individuals.

### **7750:402 Social Work Practice II (3 Credits)**

Prerequisite: 7750:401, 7750:405; or permission of instructor. Concepts and methods of social work practice particularly relating to understanding and working with groups in various settings in our society.

### **7750:403 Social Work Practice III (3 Credits)**

Prerequisite: 7750:401, 7750:405, or permission of instructor. Development of understanding and practice methods for utilization of community organization and social planning as social work process in assessing problems and developing program to meet needs.

### **7750:404 Social Work Practice IV (3 Credits)**

Prerequisite: 7750:401 and 7750:405. Professional social work practice with families in social services; the dynamics of family systems, assessment of family function and dysfunction, professional helping processes.

**7750:405 Practice I Skills Lab (3 Credits)**

Prerequisites: 7750:270, 7750:276, 7750:427, 3100:103, 3700:100, 3750:100, 3850:100 and 3250:100 or 7750:200 or 2040:247; corequisite: 7750:401. Prepares students for beginning generalist social work practice and proves a context to apply and evaluate generic knowledge base, values, ethics, and skills common to practice with client systems.

**7750:411 Women's Issues in Social Work Practice (3 Credits)**

Prerequisite: 7750:401 or permission of instructor. Social work practice, knowledge and skill, social welfare institutions and social policy in relation to women's issues and concerns in the United States.

**7750:421 Field Experience Seminar I (2 Credits)**

Prerequisites: 7750:401 and permission of the instructor. Corequisite: 7750:493. The first of two consecutive courses that assists students in making the transition from classroom learning to experiential learning in the field practicum.

**7750:422 Field Experience Seminar II (2 Credits)**

Prerequisites: 7750:421 and 7750:493; Corequisite: 7750:494. The second of two consecutive courses, this course assists students in integrating, synthesizing, and applying classroom learning to field experiences and assignments.

**7750:425 Social Work Ethics (3 Credits)**

Prerequisite: Social Work major, permission of instructor. Social Worker's code of ethics as applied to practices, problems and issues in social work.

**7750:427 Human Behavior & Social Environment I (3 Credits)**

Social work perspective on human development across the life cycle. Human diversity approach consistent with the needs of social work students preparing for practice.

**7750:430 Human Behavior & Social Environment II (3 Credits)**

Prerequisites: Social Work major and 7750:427. Examination of larger social systems including families, groups, neighborhoods, and organizations. Focuses on the unique systemic characteristics of each system and its development.

**7750:442 Social Work Research (3 Credits)**

Prerequisite: Acceptance into the social work major. Overview of scientific inquiries in the research process as it applies to social work. Emphasis is placed on various social worker roles in relation to research. The focus will be on research concepts including contents on the evaluation of practice outcomes and data analyses.

**7750:445 Social Policy Analysis for Social Workers (3 Credits)**

Prerequisite: Social Work major, permission of instructor. Description, analysis and construction of social policy in social services; to understanding forces and processes which establish or change social policies, to predict consequences of social policies and to establish goals for social policy development; integrated into effective social work methodology.

**7750:450 Social Needs & Services: Aging (3 Credits)**

Prerequisite: 7750:401 or permission of instructor. Application of knowledge and principles of professional social work practice to understanding, development and provision of social services to meet needs of aging and later mature individuals, families and communities and institutions serving them and their relatives.

**7750:451 Social Work in Child Welfare (3 Credits)**

Prerequisite: 7750:401. In-depth exploration of structure and functioning of social services designed to help children, and of practice of social work in child-welfare settings. Consideration of supportive, supplementary and substitutive services.

**7750:452 Social Work in Mental Health (3 Credits)**

Prerequisite: 7750:401 or permission of instructor. Issues, organization, development and methodologies of current professional social work practice in mental-health settings.

**7750:454 Social Work in Juvenile Justice (3 Credits)**

Prerequisite: 7750:401. The theory and practice of social work in the juvenile justice systems of the United States. Traditional procedures and recent developments, prevention, diversion and community outreach, legal concerns, case management, institutional functioning.

**7750:455 Social Work Practice with African American Families (3 Credits)**

Prerequisite: 7750:401 or permission of instructor. Contemporary problems facing African American families; male-female relationships, single parent households, African American teens and elderly, public policy, theoretical models, explaining development of the African American family.

**7750:456 Social Work in Health Services (3 Credits)**

Prerequisite: 7750:401. Policies, programs and practice in health-care settings: short-term, intermediate and long-term hospitals, out-patient services, emergency services, clinics, visiting nurse services, nursing homes, pediatric services, self-help organizations.

**7750:459 Social Work with People with Developmental Disabilities (3 Credits)**

Prerequisite: Permission of instructor. Application of social work principles in the provision of social services to meet the needs of the mentally retarded and developmentally disabled and their families.

**7750:467 Addiction Screening, Assessment and Treatment Planning (3 Credits)**

Prerequisite: 7750:260. Overview of screening, diagnosis and assessment procedures in the addiction field, including review of the most commonly used testing instruments. Implication for treatment planning is explored.

**7750:468 Addiction Prevention, Treatment and Recovery (3 Credits)**

Evidence-based practices in addiction prevention, treatment, and recovery management. Treatment approaches include, but are not limited to, motivational interviewing, contingency management, cognitive behavioral therapy, and family approaches.

**7750:469 Group and Relationship Counseling in Addictions (3 Credits)**

Models and dynamics of groups and families struggling with substance use disorders. Emphasis on strategies and techniques to improve functioning and interpersonal relationships in the maintenance of recovery.

**7750:470 Law for Social Workers (3 Credits)**

Prerequisite: 7750:401. Basic terminology, theories, principles, organization and procedures of law will be explored along with the relationships between social work and law and comparisons of the theoretical bases of the two professions.

**7750:471 Crisis Intervention (3 Credits)**

This elective course focuses on knowledge/skills required by social workers dealing with people in crisis. Impact of crises on the human personality will be discussed.

**7750:472 Child Welfare II (3 Credits)**

This course is the second in a series of two child welfare courses. Child Welfare II, addresses the developmental and permanence needs of children in the welfare system.

**7750:473 Social Work with Adolescence (3 Credits)**

This course provides students with an in-depth knowledge of adolescent development and an understanding of how the biological, psychological, social, cultural, and spiritual aspects of an adolescent impact their overall functioning and quality of life issues.

**7750:475 Addiction & Social Work Practice (3 Credits)**

Prerequisite: 7750:401. Provides students with the essential knowledge and skill for successful social work practice with people involved in substance abuse.

**7750:480 Special Topics: Social Work & Social Welfare (1-3 Credits)**

Prerequisite: Permission of instructor. Analysis of current social work and social welfare theory and policy, settings, innovative interventions, and trends in delivery systems in relation to selected areas of concern. Topics and credits variable.

**7750:493 Field Experience: Social Agency I (3 Credits)**

Prerequisites: 7750:401, 7750:402, 7750:427, and permission of instructor. Corequisite: 7750:421. First of two consecutive courses of supervised internship in a social service setting. Facilitates acquisition of generalist practice skills. Student must receive permission to take the course with the Field Coordinator during early part of semester preceding enrollment. For senior social work majors.

**7750:494 Field Experience: Social Agency II (3 Credits)**

Prerequisites: 7750:493, 7750:421 and permission of instructor; corequisite: 7750:422. Second of two consecutive courses of supervised internship in a social service setting. Facilitates the continued acquisition of generalist practice skills. For senior social work majors only.

**7750:497 Individual Investigation in Social Work (1-3 Credits)**

Prerequisites: Permission and prearrangement with instructor. Individual readings, research or projects in area of interest in social welfare theory or institutional operations or in social work practice under guidance of social work faculty member. Preparation of report paper appropriate to nature of topic. For social work major.

**7750:499 Senior Honors Project in Social Work (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and approval of honors preceptor in department. Open only to social work major enrolled in Honors Program. Independent study leading to completion of senior honors thesis or other original work resulting in writing of research paper in proper scholarly form, supervised by student's honors project adviser within the department.

## Sociology (3850)

**3850:100 Introduction to Sociology (3 Credits)**

Basic terminology, concepts and approaches in sociology, including introduction to analysis of social groups and application of sociological concepts to the understanding of social systems. Required of majors. Lecture/discussion.

**Gen Ed:** Tier 2 - Social Science; Tier 3 - Domestic Diversity

**3850:301 Methods of Social Research I (3 Credits)**

Prerequisites: 3850:100 and 3 credits of Mathematics (3450) or Statistics (3470) courses. The basis of this course is learning to apply course material to improve thinking, problem solving, and decisions in conducting research design and data gathering techniques. Required of all majors.

**Gen Ed:** Tier 3 - Critical Thinking

**3850:302 Methods of Social Research II (3 Credits)**

Prerequisites: Completion of [3700:301 or 3850:301], and 3850:100, and 3 credits of Mathematics (3450) or Statistics (3470) courses. Essential objectives of this course are developing expression skills in writing and learning fundamental principles in statistics. Other key topics include quantitative techniques and application to sociological data. Required of all majors.

**3850:310 Social Problems (3 Credits)**

Prerequisite 3850:100 or permission. Study of selected contemporary problems in society; application of sociological theory and research to understand the social construction of and response to these problems.

**3850:315 Sociological Social Psychology (3 Credits)**

Prerequisite: 3850:100. The reciprocal influence of individuals and groups. How interpersonal processes produce and affect group structure. How groups affect the development and behavior of the social person.

**3850:320 Social Inequalities (3 Credits)**

Prerequisite: 3850:100 or permission. This course covers local, regional, national, and global dimensions of social inequalities. Structural and interactionist approaches to relations of power in society frame the course.

**Gen Ed:** Tier 3 - Complex Systems

**3850:321 Population (3 Credits)**

Prerequisite: 3850:100 or permission. An introduction to world and national population trends, related demographic and social characteristics. Topics include fertility, mortality, morbidity, migration, abortion, birth control, population policy in relation to societal problems. Lecture.

**Gen Ed:** Tier 3 - Global Diversity

**3850:324 Social Movements (3 Credits)**

Prerequisite: 3850:100 or permission. Social movements as distinguished from other forms of collective behavior; analysis of social situations which produce social movements; focus on development of social movements and their role in social change. Lecture.

**3850:325 Sociology of Women in Global Society (3 Credits)**

Prerequisite: 3850:100 or permission. Examination of research and theories pertaining to women's status in global society, including economic conditions, the relationship between structure and experience, and global/local linkages.

**3850:330 Criminology (3 Credits)**

Prerequisite: 3850:100 or permission. Major focus on interrelationships and analysis of crimes, criminals, criminal justice systems and society. Lecture.

**Gen Ed:** Tier 3 - Complex Systems

**3850:336 Sociology of Work & Occupations (3 Credits)**

Prerequisite: 3850:100 or permission. Survey of theory and empirical research in areas such as the structure of occupations and professions, occupational attainment, work force characteristics, work values and orientations, the nature of work. Lecture.

**3850:340 The Family (3 Credits)**

Prerequisite: 3850:100 or permission. Analysis of family as a social system; historical, comparative and contemporary sociological approaches examined in relation to family structure and functions. Lecture.

**3850:341 Political Sociology (3 Credits)**

Prerequisite: 3850:100 or permission. Survey of theory and empirical research dealing with relationship between political phenomena and the larger network of social processes in human societies. Lecture.

**3850:342 Sociology of Health & Illness (3 Credits)**

Prerequisite: 3850:100 or permission. General survey of sociological perspectives, concepts and research on health, illness and health-care delivery systems. Lecture.

**Gen Ed:** Tier 3 - Complex Systems

**3850:343 Sociology of Aging (3 Credits)**

Prerequisite: 3850:100 or permission. Examination of process of aging from perspective of behavioral and sociological aspects. Lecture.

**3850:350 Drugs in Society (3 Credits)**

Prerequisite: 3850:100 or permission. This course is a survey, from a sociological perspective, of drug abuse, of the relationship between drugs and crime, and of various treatment strategies.

**3850:360 Social Effects of Crime in the Media (3 Credits)**

Prerequisite: 3850:100. Sociological examination of the consequences of images of crime in the media. Focus on issues of stereotypes and discrimination by race, sex and class.

**3850:365 Special Topics in Sociology (1-3 Credits)**

(May be repeated) Prerequisite: Permission. Special topics of interest to sociology major and non-major not covered in regular course offerings.

**3850:397 Sociological Readings & Research (1-3 Credits)**

Prerequisite: Permission. Individual study of problem area of specific interest to individual student under guidance of department member. Preparation of a research paper.

**3850:401 Advanced Topics in Research Methods (3-6 Credits)**

Prerequisites: 3700:201 or 3850:301. Special topics of interest in advanced methods not covered in regular course offerings.

**3850:410 Social Structures & Personality (3 Credits)**

Prerequisite: 3850:100 or permission. Interrelationships between position in society, personality characteristics. Personality treated as both result and determinant of social structure and process. Lecture.

**3850:411 Social Interaction (3 Credits)**

Prerequisite: 3850:100 or permission. Intensive study of advanced theory and research in social psychology, particularly how social interaction and self-conception affect one another. Lecture.

**3850:412 Socialization: Child to Adult (3 Credits)**

Prerequisite: 3850:100 or permission. Theoretical and empirical analysis of process by which infant, child, adolescent and adult learn social and cultural requirements necessary to function in new roles, changing roles and society in general.

**3850:415 Women in Prison (3 Credits)**

Prerequisite: 3850:100 or permission of instructor. In depth examination of women's experiences in prison. Includes processes involved in the movement into prison, experiences while in institutions, and transitioning out of prison.

**3850:416 Women and Crime (3 Credits)**

Prerequisite: 3850:100 or permission. An overview of women's experiences with crime, including women as offenders, victims, and workers in the criminal justice system.

**3850:421 Race & Ethnic Relations (3 Credits)**

Prerequisite: 3850:100 or permission. Analysis of structure and dynamics of race and ethnic relations from a variety of perspectives emphasizing both historical and contemporary issues. Lecture.

**3850:425 Sociology of Urban Life (3 Credits)**

Prerequisite: 3850:100 or permission. Emergence and development of urban society. Examination of urban social structure from neighborhood to metropolis, the problems and prospects. Emphasis on various life styles of urban subcultures. Lecture/discussion.

**3850:428 Victim in Society (3 Credits)**

Prerequisite: 3850:100 or permission. Study of the nature, causes, and consequences of victimization with special focus on crime victimization.

**3850:430 Juvenile Delinquency (3 Credits)**

Prerequisite: 3850:100 or permission. Analysis of social structure and process from which delinquency develops. Emphasis on current and past research. Lecture/discussion.

**3850:431 Corrections (3 Credits)**

Prerequisite: 3850:330 or 3850:430. Theories, beliefs and practices of community and institutional corrections systems, including past and current social research. Course taken prior to 3 credit hour Field Placement in Corrections (3850:471).

**3850:433 Sociology of Deviant Behavior (3 Credits)**

Prerequisites: 3850:100 and at least six additional credits of sociology courses or permission. Survey of theories of deviant behavior and relevant empirical research. Special emphasis given to interaction processes and social control. Lecture.

**Gen Ed:** Tier 3 - Complex Systems

**3850:435 Sociology of Love (3 Credits)**

Prerequisite: 3850:100 or permission. Study of the relation of love to the social order. Coverage includes diverse types, such as romantic, familial, religious, and altruistic love.

**3850:441 Sociology of Law (3 Credits)**

Prerequisite: 3850:100 or permission of department. Social origins and consequences of law and legal processes. Emphasis on uses of law, social change and aspects of legal professions.

**3850:447 Sociology of Sex and Gender (3 Credits)**

Prerequisite: 3850:100 or permission. Review of research and theories of sex and gender. Examination of gender as structure, process and experience in society.

**3850:450 Sociology of Mental Illness (3 Credits)**

Prerequisite: 3850:100 or permission. The social history of the mental hospital, theories and epidemiology of mental illness, community-based treatment models, the organization of mental health services, the role of personal social networks and mutual support groups.

**3850:455 Family Violence (3 Credits)**

Prerequisite: 3850:100. Family violence with a focus on child abuse, courtship violence, spouse/partner abuse, and elder abuse. Theories, methodologies, and strategies to end family violence are explored.

**3850:460 Sociological Theory (3 Credits)**

Prerequisite: 3850:100 or permission. An overview and examination of theoretical issues in sociology through the study of both classical and contemporary theoretical work.

**3850:470 Research Methods for the Social Sciences Pro-seminar (3 Credits)**

Prerequisite: Completion of required coursework for the Research Methods Certificate Program or Permission of Instructor. Application of qualitative and/or quantitative research methods and analysis, and preparation of a scholarly research paper for presentation and/or publication. Seminar.

**3850:490 Organizations, Community, and Social Action (3 Credits)**

Survey of organizational and community issues that affect the achievement of shared goals. Emphasis on the evidence-based approaches at both the organizational and community levels.

**3850:495 Field Internship (2-4 Credits)**

Prerequisites: permission of a faculty supervisor and a minimum of 64 hours of undergraduate coursework of which 12 hours must be in sociology. Placement in community organization for supervised experience related to degree requirements. Student must submit an application to the intern coordinator during semester prior to enrollment.

**3850:496 Senior Honors Project (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: enrollment in Honors College, Senior standing, and major in sociology. Thesis or original creative work appropriate to student's area of interest. Requirements and evaluation of project determined by departmental honors preceptor and student's honors project adviser.

## Somatics and World Dance (7915)

**7915:403 Special Topics in Dance Somatic (1-3 Credits)**

(Repeatable with a change in topic for a total of six credits) Prerequisite: 7900:120 or 7900:125, or higher levels of ballet or modern dance technique. Projects or classes in Somatic Dance not covered by present course offerings.

## Spanish (3580)

**3580:101 Beginning Spanish I (4 Credits)**

Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3580:102 Beginning Spanish II (4 Credits)**

Sequential. Prerequisite: 3580:101. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

**3580:103 Intensive First Year Spanish-Hybrid (4 Credits)**

Prerequisites: Permission of Department of Modern Languages. First year elementary Spanish in hybrid format for those who have some experience learning Spanish.

**3580:104 Beginning Medical Spanish I (3 Credits)**

Development of basic Spanish medical oral expression by studying health terminology and practicing conversational skills. Development of an awareness of Hispanic cultures. Conducted in Spanish.

**3580:105 Beginning Medical Spanish II (3 Credits)**

Prerequisites: Completion of 3580:104 with a C+ or better. Development of basic Spanish medical written expression by studying health terminology and practicing writing. Development of an awareness of Hispanic cultures. Conducted in Spanish.

**3580:106 Beginning Medical Spanish III (3 Credits)**

Prerequisites: Completion of 3580:105 with a C+ or better. Development of Spanish medical written expression by studying health terminology and practicing writing. Development of an awareness of Hispanic cultures. Conducted in Spanish.

**3580:111 Intensive Beginning Spanish I (4 Credits)**

Sequential. Prerequisite: Minimum of two years of prior study of Spanish at the secondary level or the equivalent, or a satisfactory score on the UA Spanish Placement Examination, or permission of the instructor. Acquisition of basic reading, speaking, writing, and listening comprehension skills, with emphasis on development of self-expression. Sequence covers the entire first year in one semester.

**3580:112 Intensive Beginning Spanish II (4 Credits)**

Sequential. Prerequisite: 3580:101 with a grade of B or better, or 3580:111 with a grade of C or better, or a minimum of three years of prior study of Spanish at the secondary level and/or a satisfactory score on the UA Spanish Placement Examination, or permission of the instructor. Acquisition of basic reading, speaking, writing, and listening comprehension skills, with emphasis on development of self-expression. Sequence covers the entire first year in one semester.

**3580:201 Intermediate Spanish I (3 Credits)**

Sequential. Prerequisite: 3580:102 or placement test. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3580:202 Intermediate Spanish II (3 Credits)**

Sequential. Prerequisite: 3580:201 or placement test. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and self-expression in a wide range of situations.

**3580:211 Intensive Intermediate Spanish I (3 Credits)**

Prerequisites: 3580:102 with a grade of B or better, or 3580:112 with a grade of C or better, or minimum of three years of prior study of Spanish at the secondary level or the equivalent and/or a satisfactory score on the UA Spanish Placement Examination, or permission of the instructor. Continuing acquisition of reading, speaking, writing, and listening comprehension skills, with emphasis on development of self-expression. Sequence covers entire year in one semester.

**3580:212 Intensive Intermediate Spanish II (3 Credits)**

Prerequisites: 3580:201 with a grade of B or better, or completion of 3580:211 with a grade of C or better, or minimum of three years of prior study of Spanish at the secondary level or the equivalent and/or a satisfactory score on the UA Spanish Placement Examination, or permission of the instructor. Continuing acquisition of reading, speaking, writing, and listening comprehension skills, with emphasis on development of self-expression. Sequence covers entire second year in one semester.

**3580:250 Hispanic Literature in Translation (3 Credits)**

(May not be taken for credit toward the Spanish major or minor.) Reading, discussion of novels, short stories of major Hispanic authors. Texts and discussion in English.

**Gen Ed:** Tier 2 - Humanities

**3580:301 Spanish Conversation (3 Credits)**

Prerequisite: 3580:202, or 3580:212, or equivalent, or placement test. Development of oral expression, listening comprehension and conversational ability. May be repeated for a total of six credits.

**3580:302 Spanish Composition (3 Credits)**

Prerequisite: 3580:202, or 3580:212, or equivalent, or placement test. Development of writing skills through intensive practice and study of written expression in Spanish. Conducted in Spanish. May be repeated for a total of six credits.

**3580:303 Spanish Grammar (3 Credits)**

Prerequisite: 3580:202, or 3580:212, or equivalent, or placement test. Post-intermediate review and study of grammar and basic principles of grammatical analysis. Conducted in Spanish.

**3580:307 Spanish Conversation: Health Professions & First Responders (3 Credits)**

Prerequisites: 3580:202. Students will gain intermediate to advanced level oral competency in Spanish in order to conduct interviews and communicate in Spanish with Spanish-speakers.

**Gen Ed:** Tier 3 - Domestic Diversity

**3580:308 Spanish Composition: Health Professions & First Responders (3 Credits)**

Prerequisites: 3580:202. Students will gain intermediate to advanced level written competency in Spanish, write and translate documents so to communicate with Spanish-speaking patients in the medical setting.

**Gen Ed:** Tier 3 - Complex Systems

**3580:311 Spanish/Spanish-American Cultural Experience (1-6 Credits)**

Student's residence and study in a Spanish-speaking country. Repeatable once with different content, 12 credits maximum. Only 9 credits may be applied to Spanish minor.

**3580:322 Special Topics: Spanish (3 Credits)**

Prerequisite: 3580:202. Development of specialized language and/or cultural skills for special purposes. Repeatable for up to 9 credits.

**3580:330 Spanish Undergraduate Professional Internship (1-6 Credits)**

Prerequisites: Completion of 3580:202 or equivalent with a minimum 3.0 GPA in Spanish and students will need to notify a faculty advisor in the Spanish section to seek permission and approval for the enrollment in the internship course the semester prior to the experience. Students will participate in cooperating local, regional, national and international professions of community organizations to apply their proficiency in Spanish in a real-world setting.

**3580:340 Introduction to Spanish & Spanish-American Literature (3 Credits)**

Prerequisite: Two of the group 3580:301, 3580:302, and 3580:303. Reading and discussion of Spanish and Spanish-American literature of all genres. Introduction to the fundamentals of literary criticism and literary movements. Conducted in Spanish.

**3580:351 Spanish for Business (3 Credits)**

Prerequisite: 3580:202 or instructor permission. Study of business terminology as well as cultural factors affecting the conduct of business with Hispanic nations and populations. Conducted in Spanish.

**3580:360 Hispanic Culture through Film (3 Credits)**

Prerequisite: Completion of two of the following courses: [3580:301 or 3580:302 or 3580:303]. An articulation and analysis of important themes in contemporary Hispanic culture presented through film. An introduction to film criticism. Conducted in Spanish.

**Gen Ed:** Tier 3 - Global Diversity

**3580:401 Advanced Spanish Conversation (3 Credits)**

Prerequisites: 3580:301 and [3580:302 or 3580:303]. Development of speaking skills at a level beyond that achieved in 3580:301. Conducted in Spanish. Repeatable for up to 6 credits.

**3580:402 Advanced Spanish Composition (3 Credits)**

Prerequisite: 3580:302 and [3580:301 or 3580:303]. Development of writing skills at a level beyond that achieved in 3580:302. Conducted in Spanish. Repeatable for up to 6 credits.

**3580:403 Advanced Grammar (3 Credits)**

Prerequisites: 3580:303 and 3580:301 or 3580:302. Advanced study of Spanish syntax and grammatical analysis. Conducted in Spanish.

**3580:404 Introduction to Spanish Linguistics (4 Credits)**

Prerequisites: 3580:401, 3580:402, and 3580:403. This course provides a detailed overview of the structure of Spanish and areas of inquiry within linguistics: phonetics, phonology, morphology, syntax, semantics and applied fields.

**3580:405 Spanish Linguistics: Phonology (4 Credits)**

Prerequisite: 3580:401, 3580:402, and 3580:403. Descriptive study of Spanish phonetics and morphology, comparison of Spanish and English sounds, historical aspects, regional accents and sociolinguistic variation. Conducted in Spanish.

**3580:406 Spanish Linguistics: Syntax (4 Credits)**

Prerequisite: 3580:401, 3580:402, and 3580:403. Descriptive study of Spanish syntax; introduction to theories of grammar; overview of Spanish semantics and pragmatics. Conducted in Spanish.

**3580:407 Survey of Hispanic Literature: Spain (4 Credits)**

Prerequisites: 3580:340 and two of the group [3580:401, 3580:402, 3580:403]. Study of the most representative works and literary movements in Spain from the Middle Ages to the present. Conducted in Spanish.

**3580:408 Survey of Hispanic Literature: Spanish-America (4 Credits)**

Prerequisites: 3580:340 and two of the group [3580:401, 3580:402, 3580:403]. Study of the most representative works and literary movements in Spanish-America from the Discovery to the present. Conducted in Spanish.

**3580:409 Cultural Manifestations in Medieval & Renaissance Spain (4 Credits)**

Prerequisite: 3580:407 or 3580:408. Comparative study of representative artistic and literary works of the Medieval and Renaissance periods. Conducted in Spanish.

**3580:410 Spanish Applied Linguistics (4 Credits)**

Prerequisites: 3580:401, 3580:402, and 3580:403. This course discusses current theories of second language acquisition and their implications for the learning of problematic Spanish structures.

**3580:411 Spain During the Baroque Period (4 Credits)**

Prerequisite: 3580:407 or 3580:408. A comparative study of the different cultural manifestations during the 17th century in Spain. Conducted in Spanish.

**3580:412 Cervantes: Don Quijote (4 Credits)**

Prerequisite: 3580:407 or 3580:408. Reading and analysis of Don Quijote as the first modern novel in the historical context of Renaissance and Baroque esthetics. Conducted in Spanish.

**3580:413 Don Juan Myth in Spanish Culture (4 Credits)**

Prerequisite: 3580:407 or 3580:408. Study of the evolution of the Don Juan myth from its origins to its latest versions in the 20th century.

**3580:414 Cultural Politics in the River Plate (4 Credits)**

Prerequisite: [3580:407 or 3580:408] or permission of instructor. This course will examine the military dictatorships of the seventies and eighties in Argentina and Uruguay by looking at how these regimes affected culture.

**3580:416 Representing Reality in 19th Century Spain (4 Credits)**

Prerequisite: 3580:407 or 3580:408. A comparative study of the major literary and artistic movements in Spain from Realism to Modernism. Conducted in Spanish.

**3580:417 Spanish/Spanish American Study Abroad Experience (3-6 Credits)**

Credit for student's course work at an accredited university in Spain or Latin America.

**3580:418 20th Century Spain: The Avant-Garde in Literature & Art (4 Credits)**

Prerequisite: 3580:407 or 3580:408. A comparative study of the major literary and artistic movements in Spain which illustrate the primary cultural changes of the century. Conducted in Spanish.

**3580:419 Spanish Civil War & its Cultural Impact (4 Credits)**

Prerequisite: 3580:407 or 3580:408. Study the impact of the Civil War on Spanish culture.

**3580:422 Special Topics in Specialized Language Skills, Culture, Literature (1-4 Credits)**

Prerequisite: 3580:407 or 3580:408. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

**3580:425 20th Century Spanish-American Novel (4 Credits)**

Prerequisite: [3580:407 or 3580:408] or permission of instructor. Reading and discussion of representative contemporary Latin American novels. Conducted in Spanish.

**3580:427 Latino Cultures in the USA (4 Credits)**

Prerequisite: [3580:407 or 3580:408] or permission of instructor. Inquiry into the Latino experience of displacement and marginality through the analysis of cultural manifestations in the U.S.A. Conducted in Spanish.

**3580:430 Women in 20th Century Hispanic Literature (4 Credits)**

Prerequisite: 3580:407 or 3580:408. Reading and analysis of selected works from the 20th Century that depict women in Hispanic countries. Methodologies of feminist criticism will be studied. Conducted in Spanish.

**3580:431 Hispanic Culture: Spain (4 Credits)**

Prerequisite: Two of the group [3580:401, 3580:402, 3580:403]. Study of society, customs, history, art, music, etc. of Spain, from a Hispanic perspective. Conducted in Spanish.

**3580:432 Hispanic Culture: Spanish America (4 Credits)**

Prerequisite: Two from the group [3580:401, 3580:402, 3580:403]. Overview and historical survey of Spanish American civilization and culture. Taken as 532, does not count toward the M.A. in Spanish. Conducted in Spanish.

**3580:497 Individual Reading in Spanish (1-3 Credits)**

Prerequisite: 3580:407 or 3580:408 and departmental permission.

## Special Education (5610)

**5610:100 Orientation to Intervention Specialist (0 Credits)**

Prerequisite: admission to Intervention Specialist teacher education program; corequisite: 5100:200. Orientation to the information and strategies necessary for a student to be successful in the program, including portfolio development.

**5610:206 Special Problems: Gifted (1 Credit)****5610:225 Introduction to Exceptionalities (3 Credits)**

Prerequisite: 13-15 sem. hrs. with a 'C' or better in specific GenEd courses; 5100:200 (may be taken as prerequisite or corequisite); FBI/BCI background checks. Survey course covering the identification, developmental characteristics and intervention strategies for children and youth with exceptionalities across educational and community settings.

**5610:380 Math Methods: Special Education (3 Credits)**

Prerequisite: Admission to the Teacher Education Program. Ensure the understanding of mathematics and to promote the prospective special education teacher's confidence in his/her own ability to teach mathematics.

**5610:395 Field Experience: Special Education (1-3 Credits)**

Supervised work with youngsters, individually and in groups in school and/or community settings.

**5610:403 Student Teaching Colloquium: Special Education (1 Credit)**

An examination of problems, issues, and practices encountered during the student teaching experience.

**5610:430 Honors Research Project: Special Education (1-6 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.

**5610:439 Collaboration with Families and Professionals in Early Childhood (3 Credits)**

This course prepares early childhood professionals for engaging in collaborative home/school consultation and teamwork in serving the educational needs of young children.

**5610:440 Developmental Characteristics of Exceptional Individuals (3 Credits)**

Prerequisite: Admission to a School of Education Teacher Preparation Program or permission of the instructor. A survey course covering the identification, developmental characteristics, and intervention strategies for exceptional children and youth across education and community settings. (1 field hour)

**5610:444 Developmental Characteristics of Intellectually Gifted Individuals (3 Credits)**

See department for course description.

**5610:447 Individuals with Mild/Moderate Educational Needs: Characteristics and Implications (4 Credits)**

Prerequisite: 5610:225. Survey of the etiology, identification, classification, developmental characteristics of, and intervention strategies for individuals with mild/moderate educational needs.

**5610:448 Individuals with Moderate/Intensive Educational Needs: Characteristics and Implications (3 Credits)**

Prerequisites: 5610:225 and admission to a teaching education program. Survey of the etiology, identification, classification, and developmental characteristics of individuals with moderate/intensive educational needs. 10 Field Hours.

**5610:450 Special Education Programming for Primary Teachers (3 Credits)**

Prerequisites: 5610:225 and admission to Teacher Preparation Program. Corequisite: 5200:454. The focus of this course is on students with disabilities from preschool through grade 5. The course combines detailed information about specific disability categories with evidenced-based practices for instruction and behavioral support. The course prepares teacher candidates with the knowledge, skills and dispositions to incorporate best practices to create and maintain productive PK-5 learning environments for diverse populations of students including those with special education needs (40 hours field).

**5610:451 Special Education Programming: Mild/Moderate I (3 Credits)**

Prerequisites: 5610:225, 5610:447. Educational implications regarding assessment, teaching strategies, and adaptive materials necessary to meet the needs of school age students with mild/moderate educational needs. (20 field hours)



**5610:452 Special Education Programming: Secondary/Transition (3 Credits)**

Study of diagnostic prescriptive service delivery systems designed to accommodate developmental patterns of secondary-level students with exceptionalities. (20 field hours)

**5610:453 Special Education Programming: Moderate/Intensive I (3 Credits)**

Prerequisite: 5610:448. Development of the programming strategies including assessment, inter/transdisciplinary models, family involvement, IFSP/IEP/IP development, instructional practices based upon legal/ethical principles for individuals with moderate/intensive educational needs.

**5610:454 Special Education Programming: Moderate/Intensive II (3 Credits)**

Prerequisites: 5610:448 and 5610:453. Advanced program for providing educational planning and intervention for individuals with moderate to intensive educational needs. Focus is on developing a comprehensive educational program which will facilitate optimum functioning and independence. (20 field hours)

**5610:456 Inclusive Field Experience: Moderate/Intensive (1 Credit)**

Corequisite: 5610:454. In this 50-hour inclusive field experience, teacher candidates explore the challenges and best practices in providing quality educational services for all learners.

**5610:457 Special Education Programming: Mild/Moderate II (4 Credits)**

Corequisite: 5500:458. Special educational implications regarding assessment, teaching strategies, and adaptive materials necessary to meet the needs of school age students with mild/moderate educational needs.

**5610:459 Collaboration & Consultation in Schools & Community (3 Credits)**

Prerequisite: 5610:225. Provides professional educators/intervention specialists with skills in collaboration and consultation for working with parents of exceptional individuals and other professionals within school/community settings.

**5610:460 Family Dynamics & Communication in the Educational Process (3 Credits)**

Prerequisite: 5610:225. A study of family theory and structure along with beginning techniques for working with families of students with exceptionalities, in educational and community settings.

**5610:461 Special Education Programming: Early Childhood Moderate/Intensive (3 Credits)**

Prerequisites: 5610:440, 5610:448. Developmental patterns of young children with moderate/intensive needs (ages 3-8) and developmentally appropriate practices in programming and adaptations. (20 field hours)

**5610:462 Collaboration with Families and Professionals (3 Credits)**

Prerequisite: 5610:225. This course provides pre-service teacher candidates with the knowledge, skills, and dispositions in communication, collaboration and team processes that facilitate a collaborative culture in schools.

**5610:463 Assessment in Special Education (3 Credits)**

Prerequisite: 5610:225. Prepares student to select, administer and interpret formal and informal assessment procedures and use resulting data in planning educational programs for exceptional individuals.

**5610:464 Assessment & Evaluation in Early Childhood Special Education (3 Credits)**

Prerequisites: 5610:225, 5610:448. The assessment of children three to eight and their environment who are at risk for disabilities or currently in special education.

**5610:467 Management Strategies in Special Education (3 Credits)**

Prerequisite: 5610:225. Content emphasizing the development of application strategies with a variety of behavior management models to mediation of behaviors with exceptional individuals.

**5610:469 Inclusive Education for English Learners (2 Credits)**

This class prepares teachers to use evidence based strategies, accommodations, and instruction to enhance the curriculum for the English Learners with special education needs.

**5610:470 Clinical Practicum in Special Education (3 Credits)**

Prerequisite: Permission; Corequisites: 5610:403 and [5610:486 or 5610:487]. Provides a pre-student teaching experience for students in the areas of assessment, program planning, instructional planning and presentation, classroom management, adaptations, and collaboration with parents and other educational professionals.

**5610:479 Seminar: Invitational Studies in Special Education (1-2 Credits)**

(May be repeated for a total of four credits) Topical study with a varied array of disciplinary input. Staffing will be invited members of allied and contributing professions active in management of exceptional children.

**5610:485 Student Teaching: Early Childhood Intervention Specialist (11 Credits)**

Prerequisites: Approval of the Student Teaching Committee, based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio. Corequisite: 5610:403. Planned teaching experience in schools selected and supervised by the Office of Field Experience.

**5610:486 Student Teaching: Mild/Moderate Educational Needs (9 Credits)**

Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing Ohio Assessment For Educators (OAE) subject test, and approved portfolio. Corequisite: 5610:403. Planned teaching experience in schools selected and supervised by the Office of Field Experience.

**5610:487 Student Teaching: Moderate/Intensive Educational Needs (11 Credits)**

Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio. Corequisites: 5610:403 and 5610:470. Planning teaching experience in schools selected and supervised by the office of Field Experience.

**5610:488 Student Teaching: Early Child/Early Child Interven. Spec (6 Credits)**

Approval of the Student Teaching Committee, based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio. Corequisites: 5200:495, 5610:403, 5610:470. Planned teaching experience in schools selected and supervised by the Office of Field Experience.

**5610:490 Workshop: Special Education (1-3 Credits)**

(May be repeated for a total of six credits) Designed to explore special topics in in-service or preservice education on a needs basis.

**5610:491 Workshop: Special Education (1-3 Credits)**

(May be repeated for a total of six credits) Designed to explore special topics in in-service or preservice education on a needs basis.

**5610:492 Workshop: Special Education (1-3 Credits)**

(May be repeated for a total of six credits) Designed to explore special topics in in-service or preservice education on a needs basis.

**5610:493 Workshop: Special Education (1-3 Credits)**

(May be repeated for a total of six credits) Designed to explore special topics in in-service or preservice education on a needs basis.

**5610:497 Independent Study: Special Education (1-3 Credits)**

Specific area of investigation determined in accordance with student's needs.

## Special Educational Programs (5800)

**5800:492 Workshop in Reading (1-3 Credits)**

Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.

**5800:493 Workshop on Exceptional Children (1-3 Credits)**

Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.

**5800:494 International School Study (3-6 Credits)**

On-the-scene study of education in foreign countries, usually by concentrating on the study of schools in one restricted geographical area.

## Speech-Language Pathology and Audiology (7700)

**7700:101 American Sign Language I (3 Credits)**

Introduction to American Sign Language: vocabulary building, beginning development of fingerspelling skills, receptive/expressive conversational skills.

**7700:102 American Sign Language II (3 Credits)**

Prerequisite: 7700:101 or equivalent. Continued development of skills in American Sign Language: vocabulary building, further development of fingerspelling skills, receptive/expressive conversational skills.

**7700:110 Introduction to Disorders of Communications (3 Credits)**

Overview of various types of speech disorders; their incidence, etiology and characteristics. Basic concepts and principles underlying speech pathology.

**7700:201 American Sign Language III (3 Credits)**

Prerequisite: 7700:102 or equivalent. Continued development of skills in American Sign Language: vocabulary building, fingerspelling skills, receptive/expressive conversational skills, and linguistic features of ASL.

**7700:202 American Sign Language IV (3 Credits)**

Prerequisite: 7700:201. Further fluency development of expressive/receptive communication, fingerspelling, and linguistic features of ASL.

**7700:210 Introduction to Clinical Phonetics (4 Credits)**

Introduction to International Phonetic Alphabet. Transcription of normal speech. Overview of articulatory and acoustic phonetics. Introduction to distinctive features.

**7700:215 Introduction to Hearing and Speech Science (4 Credits)**

Introductory course covering the human hearing system and acoustics of hearing as well as principles involved in the production, transmission, and reception of the speech signal.

**7700:222 Survey of Deaf Culture in America (2 Credits)**

The deaf experience in America including historical, educational, legal, social, and occupational developments.

**7700:230 Language Science & Acquisition (4 Credits)**

An introduction to language science and the study of the language acquisition process. The characteristics and explanations of language development will be presented.

**7700:245 First Responders to the Deaf Community (4 Credits)**

Prerequisites: Completion of 7700:201 with C or better. This course is required for the HSHS Manual Communication Certificate. It will emphasize ASL skills practical to first responders' needs.

**7700:295 Direct Experiences in the Hospital (3 Credits)**

Prerequisite: Permission of advisor. Individual learning experiences for students with patients, their families and the hospital personnel in various hospital settings under the direction of hospital and University staff.

**7700:321 Articulatory & Phonologic Disorders (4 Credits)**

Prerequisites: 7700:110, 7700:210. Study of disorders of articulation/phonology, including normal phonological developments, and assessment and remediation of phonological disorders.

**7700:330 Language Disorders (4 Credits)**

Prerequisite: 7700:230. Etiology, identification, evaluation, intervention, remediation of symbolic, cognitive, interpersonal language disorders of children. Disorders viewed as correlates or sequelae of central nervous system dysfunction or emotional disturbance.

**7700:335 Principles of Audiology (4 Credits)**

Prerequisite: 7700:215. Introduction to basic audiometric tests, principles of speech audiometry, masking, and impedance audiometry, "test battery" approach.

**7700:345 Audiologic Treatment (4 Credits)**

Prerequisite: 7700:215. Introduction to philosophy and methods of aural rehabilitation for children and adults. Includes methods of speech reading, auditory training, speech conservation, hearing aid use and combined visual and auditory approaches.

**7700:365 Anatomy & Physiology of Speech & Hearing (3 Credits)**

Prerequisites: 3100:200, 3100:201, 3100:202 and 3100:203. Study of the anatomy and physiology of organs directly and indirectly responsible for production of speech and perception of acoustical signals.

**7700:366 Anatomy & Physiology Laboratory (1 Credit)**

Corequisites: 7700:365. Laboratory to accompany lecture, includes hands-on experience with a variety of laboratory materials, primarily models and virtual dissection.

**7700:401 Professional Practice and Communications in Child Life (1 Credit)**

Provide knowledge in the area of child life professional practice. Exploration of the tenets of the child life profession and identify essential professional concepts and attributes.

**7700:403 Professional Practice and Communications in Child Life (3 Credits)**

Provide the knowledge of child life professional practice, standards of clinical practice, competencies and ethics. Skills related to therapeutic communication with patients, families and staff will be explored and practiced.

**7700:422 Organic Disorders of Communication (4 Credits)**

Prerequisites: 7700:230 and 7700:365. Surveys communication disorders that accompany acquired neurological impairments and neurodevelopmental syndromes. Introduces neurological models, classification systems, diagnostic and treatment procedures.

**7700:430 Aspects of Normal Language Development (3 Credits)**

(Not open to speech-language pathology and audiology majors) Introduction to acquisition and development of comprehension and production of language phonologically, semantically and syntactically. Relates language acquisition to perceptual development of child and looks at function of language in individual, family and school.

**7700:445 Multicultural Considerations for Audiologists & Speech-Language Pathologists (3 Credits)**

Prerequisites: 7700:110 or graduate standing. This course introduces the multicultural considerations faced by audiologists and speech-language pathologists providing services to families and individuals with communication disorders.

**7700:446 Observation and Clinical Techniques (4 Credits)**

Prerequisites: 7700:110, 700:210, 7700:215, and 7700:230. Introduction to concepts and processes of clinical practice in speech-language pathology and audiology. Includes clinical observation and case study.

**7700:452 Child, Illness and Loss (3 Credits)**

Prerequisite: senior level standing. This course examines the phenomena of illness, loss and bereavement in modern society with a special emphasis on children and families.

**7700:453 Facilitating Support Groups (3 Credits)**

Prerequisite: senior level standing. Theories, strategies and skills needed to facilitate support groups for children and for adults are studied using a variety of approaches including participation in a support group.

**7700:454 Child in the Hospital (6 Credits)**

Prerequisite: 3760:265, comparable course or permission of instructor. Seminar dealing with special needs and problems of hospitalized/ill child and family. Literature related to effects, separation, illness and stress. Examination of strategies for coping.

**7700:455 Practicum Experience in Child-Life Program (3 Credits)**

Prerequisite: 7700:454. Field experience in a child-life program and classroom activities including critical analysis of a currently functioning program and program administration.

**7700:480 Seminar in Speech-Language Pathology and/or Audiology (2 Credits)**

Prerequisite: senior standing. Provides a vehicle for detailed study and discussion of various communicative disorders.

**7700:481 Special Projects: Speech-Language Pathology & Audiology (1-3 Credits)**

(May be repeated for a total of four credits) Prerequisite: Permission of instructor. Individual or group projects related to any of the problems of communicative disorders.

**7700:484 Hospital Settings, Children and Families (5 Credits)**

Prerequisite: 3760:265, comparable course or permission of instructor. Focuses on hospital as a major social institution; introduces procedures and functions of the hospital; roles played by various hospital personnel plus cursory knowledge of medical terminology, common childhood diseases, illnesses and injuries.

**7700:485 Teaching & Learning Strategies in Speech-Language Pathology (2 Credits)**

Current practice related to clinical intervention designed for individuals with developmental disabilities. Explores the use of the natural environment and the computer as intervention tools.

**7700:494 Internship: Guided Experiences in Child Life Program (8 Credits)**

Prerequisite: 7700:455. Field experience in a child-life program at an approved pediatric facility under the supervision of Child Life Specialists.

**7700:496 Senior Honors Project: Speech-Language Pathology & Audiology (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisites: enrollment in the Honors Program, senior standing and major in speech-language pathology and audiology.

## Statistics (3470)

**3470:250 Statistics for Everyday Life (4 Credits)**

Prerequisite: placement test. Conceptual approach to the basic ideas and reasoning of statistics. Topics include descriptive statistics, probability (uncertainty), statistical inference (estimation and hypothesis testing). Computer applications laboratory.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3470:260 Basic Statistics (3 Credits)**

Prerequisite: placement test. Applied approach to data description and statistical inference (hypothesis testing, estimation). Analysis of ratios, rates, and proportions. Computer applications. Laboratory.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3470:261 Introductory Statistics I (2 Credits)**

Prerequisite: placement test. Descriptive statistics, tabular and graphical data displays; probability, probability distributions. Introduction to statistical inference (hypothesis testing, estimation); one-sample parametric and nonparametric methods. Computer applications.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3470:262 Introductory Statistics II (2 Credits)**

Prerequisite: 3470:261 or equivalent. Parametric and nonparametric methods of statistical inference for paired data and two-sample problems; one-way ANOVA, simple linear regression and correlation. Computer applications.

**Gen Ed:** Tier 1 - Quantitative Reasoning

**3470:289 Selected Topics in Statistics (1-3 Credits)**

Prerequisite: Permission. Selected topics of interest in statistics.

**3470:360 Statistical Investigations (3 Credits)**

Prerequisites: 3470:250 or 3470:260 or 3470:262. This course provides practical statistical methods beyond the introductory course. The topics include design of experiments, data analysis, multiple regression and modern software use.

**3470:401 Probability and Statistics for Engineers (2 Credits)**

Prerequisite: 3450:222. Introduction to probability, statistics, random variables, data descriptions, statistical inference, confidence intervals, hypothesis testing, design of experiments, and applications of statistics to engineering.

**3470:450 Probability (3 Credits)**

Prerequisite: 3450:221. Introduction to probability, random variables and probability distributions, expected value, sums of random variables, Markov processes.

**3470:451 Theoretical Statistics I (3 Credits)**

Sequential. Prerequisite: 3450:223. Elementary combinatorial probability theory, probability distributions, mathematical expectation, functions of random variables, sampling distributions, point and interval estimation, tests of hypotheses, regression and correlation, introduction to experimental designs.

**3470:452 Theoretical Statistics II (3 Credits)**

Sequential. Prerequisite: 3470:451. Elementary combinatorial probability theory, probability distributions, mathematical expectation, functions of random variables, sampling distributions, point and interval estimation, tests of hypotheses, regression and correlation, introduction to experimental designs.

**3470:461 Applied Statistics (4 Credits)**

Prerequisite: 3450:222. Applications of statistical theory to natural and physical sciences and engineering, including probability distributions, interval estimation, hypotheses testing (parametric and nonparametric), and simple linear regression and correlation.

**3470:462 Applied Regression and ANOVA (4 Credits)**

Prerequisite: 3470:262 or 3470:461. Applications of the techniques of regression and multifactor analysis of variance.

**3470:465 Design of Sample Surveys (3 Credits)**

Prerequisite: 3470:262 or 3470:461 or equivalent. Design and analysis of frequently used sample survey techniques.

**3470:469 Reliability Models (3 Credits)**

Prerequisite: 3470:461. Selected topics in reliability modeling including parametric and nonparametric models, competing modes of failure, censored data and accelerated life models.

**3470:470 Biostatistics and Epidemiology (3 Credits)**

Prerequisite: 3470:261 and 3470:262 or 3470:461, or equivalent. Biostatistics and Epidemiological methods for biological and medical studies, including ANOVA, analysis of repeated measures, disease-related measures, log-linear models, and clinical trials.

**3470:471 Introduction to Actuarial Science (3 Credits)**

Prerequisite: 3470:221 or equivalent. Pre/Corequisite: 3470:222 or equivalent. Interest theory and financial mathematics used in actuarial science. Topics include value of money, annuities, loans, bonds, cash flows and immunization, interest rate swaps.

**3470:472 Actuarial Models (3 Credits)**

Prerequisite: 3470:451. Study of severity, frequency and aggregate models used in actuarial applications. Calibration and evaluation. credibility procedures, fundamental principles of pricing in short-term insurance coverage.

**3470:473 Survival Analysis (3 Credits)**

Prerequisite: 3470:262 or 3470:461. Basic concepts in survival analysis, censoring and data truncation, estimation of survival models, nonparametric hazard and survival function estimation, comparing survival times between groups.

**3470:475 Foundations of Statistical Quality Control (3 Credits)**

Prerequisite: 3470:461 or equivalent. Course provides a solid foundation in the theory and applications of statistical techniques widely used in industry.

**3470:476 Bayesian Statistics (3 Credits)**

Prerequisite: 3470:262 or 3470:461 or equivalent. Basic concepts in Bayesian theory, sampling methods, MCMC, and hierarchical modeling. Computer applications of Bayesian statistics to natural; and physical; sciences and engineering.

**3470:477 Time Series Analysis (3 Credits)**

Prerequisite: 3470:262, 3470:450, 3470:451, or 3470:461. Stationarity. ARIMA modeling with seasonality. Parameter estimation, model diagnostics and forecasting. Regression with autocorrelated errors. Cointegration and multivariate ARMA models. Heteroscedasticity and long-memory models.

**3470:480 Statistical Data Management (3 Credits)**

Prerequisite: 3470:262 or 3470:461. Students learn data organization and structures, design of statistical data bases, statistical software analysis, importing and exporting data between software, and missing data analysis.

**3470:483 Advanced Statistical Computing (3 Credits)**

Prerequisite: 3470:262 or 3470:461 or equivalent. Topics include data management, random number generation, resampling methods, numerical optimization, Markov Chain Monte Carlo, smoothing methods, data mining: clustering and classification.

**3470:484 Introduction to Machine Learning (3 Credits)**

Prerequisite: 3470:262 or 3470:461 or equivalent. Methodologies for statistical learning, including generalized logistic regression, ridge regression, neural networks, support vector machines, principal components analysis, and K-means and hierarchical clustering.

**3470:485 Applied Analytics-Decision Trees (3 Credits)**

Prerequisite: 3470:262 or 3470:461. Selected topics in predictive modeling using CHAID, Classification and Regression Trees, Logistic Regression and Neural Networks.

**3470:486 Spatial-temporal Statistics (3 Credits)**

Prerequisite: 3470:262 or 3470:461 or equivalent. Basic concepts of geostatistics, point pattern, area unit. Spatial-temporal modeling in high dimensional data. Computer applications to natural and physical sciences and engineering.

**3470:489 Topics in Statistics (1-3 Credits)**

(May be repeated for a total of six credits) Prerequisite: Permission. Selected topics in advanced statistics, including quality control, reliability, sampling techniques, decision theory, advanced inference, stochastic processes and others.

**3470:491 Workshop in Statistics (1-3 Credits)**

(May be repeated with change of topic) Group studies of special topics in statistics. May not be used to meet undergraduate or graduate major requirements in mathematics and statistics. May be used for elective credit only.

**3470:495 Statistical Consulting (1-3 Credits)**

Prerequisite: 3470:462 or 3470:480 or permission. Students will learn about various aspects of statistical consulting and will work on current projects of the Center for Statistical Consulting. May be repeated for a total of 4 credits.

**3470:497 Individual Reading: Statistics (1-2 Credits)**

(May be repeated for a total of four credits) Prerequisites: senior standing and permission. Directed studies in statistics designed as introduction to research problems under guidance of selected faculty member.

**3470:498 Senior Honors Project (1-3 Credits)**

Prerequisite: 3470:489 (honors). Directed study for senior student in the University Honors Program who has completed 3450:489 (honors). An introduction to research problems in the mathematical sciences under the guidance of selected faculty.

## Surgical Assisting (2770)

**2770:100 Introduction to Surgical Technology (4 Credits)**

Prerequisite: Admission to the program. Study of basic principles which underlie patient care in the operating room. Role of operating room technician and legal and ethical responsibilities defined.

**2770:221 Surgical Technology Procedures I (4 Credits)**

Prerequisite: Admission to the program. Corequisite: 2770:100. Covers principles and practices of surgical asepsis, surgical patients, procedures, maintenance of equipment and materials, immediate postoperative responsibilities and emergency situations in the operating room.

**2770:222 Surgical Technology Procedures II (4 Credits)**

Prerequisite: 2770:221. Corequisite: 2770:232. Principles of surgical asepsis, surgical patients, surgical procedures, maintenance of equipment and materials, immediate postoperative responsibilities and emergency situations in the operating room.

**2770:231 Clinical Application I (2 Credits)**

Prerequisite: Admission to the Surgical Assisting Technology Program. Corequisites: 2770:100 and 2770:121. Student assigned to surgical service of affiliated hospitals. Emphasis on aseptic techniques and skills associated with their implementation.

**2770:232 Clinical Application II (5 Credits)**

Prerequisite: 2770:231. Corequisite: 2770:222. Student assigned to surgical service of affiliated hospitals. Emphasis on "scrubbing" on general surgery and gynecology procedures.

**2770:233 Clinical Application III (5 Credits)**

Prerequisites: 2770:232 and 2770:222. Student assigned to surgical service of affiliated hospitals. Emphasis on "scrubbing" in the specialty areas.

**2770:248 Surgical Anatomy I (3 Credits)**

Prerequisites: 2750:120 and 2780:207. Corequisite: 2770:100. Emphasis on human anatomy and understanding the body in its three dimensions and the relationships of parts to one another in the various surgical specialties.

**2770:249 Surgical Anatomy II (3 Credits)**

Prerequisite: 2770:248. Emphasis on human anatomy and understanding the body in its three-dimensions and the relationships of parts to one another in the various surgical specialties.

**2770:290 Special Topics: Surgical Assisting (1-2 Credits)**

Prerequisite: Permission. Selected topics or workshops of interest in surgical assisting technology.

## Surveying and Mapping (2980)

**2980:100 Introduction to Geomatics (2 Credits)**

An introductory course into the field of surveying and mapping technology. Integrated topics include: types of surveys, cartography, and geographic information systems.

**2980:101 Basic Surveying (3 Credits)**

Corequisite: 2030:153. Care and use of basic surveying field instruments and the basic computations and adjustments necessary to post process the field survey measurements. Field Practice.

**2980:102 Topographic Surveying (2 Credits)**

Prerequisites: 2980:101 and 2030:153. Computations and adjustments of field survey measurements using both conventional and computer methods. Development of maps and plans stressed. Field Practice.

**2980:122 Elementary Surveying (3 Credits)**

Elementary surveying for non-surveying and construction majors. Basic tools and computations. Field practice.

**2980:123 Surveying Field Practice (2 Credits)**

Prerequisite: 2980:102 or equivalent. Practical experience in use of surveying equipment and methods of surveying. Provides students with responsibility for making decisions and planning and directing complete project.

**2980:155 Computer Applications in Surveying (3 Credits)**

Use of current surveying software to solve typical problems/projects in surveying technology.

**2980:170 Surveying Drafting (3 Credits)**

Corequisite: 2030:152 or permission. Drafting procedures, techniques, and tools required for the various phases of survey office work. Projects include topographic maps, plan and profile drawings, and cross-section drawings. Laboratory.

**2980:222 Construction Surveying (3 Credits)**

Prerequisite: 2980:101. Methods and procedures for establishing line and grade for construction. Circular and parabolic curves. Cross-sectioning methods and earthwork. Communication and plan reading.

**2980:223 Geospatial Technologies (3 Credits)**

Introduction to current and emerging geospatial technologies, such as Geographic Information Systems, remote sensing and global positioning systems, and exploring mapping data sources. Laboratory required.

**2980:225 Advanced Surveying (3 Credits)**

Prerequisite: 2980:228. Introduction to topographic mapping, flood maps, and ALTA surveys. Advanced topics in control surveys, State Plane Coordinates, and bearings from celestial observations. Field practice.

**2980:228 Boundary Surveying (3 Credits)**

Prerequisite: 2980:101 or equivalent. Analysis of evidence and procedures for boundary location; establishing and/or locating points for boundary and mortgage location surveys; plat preparation. Ohio survey minimum standards.

**2980:251 CST Seminar (1 Credit)**

Prerequisite: 2980:222. Prepares students for the National Society of Professional Surveyors Certified Surveying Technician (CST) Level I Examination. Examination is given at the end of the review sessions.

**2980:310 Survey Computations & Adjustments (2 Credits)**

Prerequisite: 2980:225. Concepts relating to measurement error, probability, and reliability. Computation and adjustment of horizontal and vertical networks.

**2980:315 Boundary Control & Legal Principles (3 Credits)**

Prerequisite: 2980:228. Historical development of boundaries, rectangular system of public land surveys, systems to describe property, surveyor's responsibility to understand and properly apply legal principles to boundary.

**2980:325 OSHA Safety Requirements for Surveyors (1 Credit)**

To provide OSHA safety training and certification required for surveying companies.

**2980:330 Applied Photogrammetry (3 Credits)**

Prerequisite: 2980:155. An introduction to metrical and quantitative photogrammetry using both hard- and soft-copy systems. Laboratory.

**2980:335 The Business of Surveying (2 Credits)**

A course focused on the business aspects of surveying, including development of business plan components for a company offering professional surveying and mapping services.

**2980:340 Cadastral Surveying (2 Credits)**

Prerequisites: 2980:101. A study of the official surveys of the United States. Cadastral surveys establish or recreate boundaries and /or tracts of land.

**2980:410 LiDAR and Laser Scanning (2 Credits)**

Prerequisite: 2985:101. Introduction to LiDAR (aerial and terrestrial) scanning as it applies to surveying and mapping. The course will discuss the collection and dissemination methods of the data.

**2980:415 Legal Aspects of Surveying (3 Credits)**

Prerequisite: 2980:315. A study of statute and common law related to land surveying. Evidence and the surveyor's role in the judicial process. Interpreting and writing land descriptions.

**2980:420 Route Surveying (3 Credits)**

Prerequisite: 2980:225. Surveying for long but narrow strips of land such as highways, railroads, and pipe lines. Course includes all requisite calculations and drawings.

**2980:421 Subdivision Design (3 Credits)**

Prerequisites: 2980:155, 2980:222, and 2980:315. Site analysis, land use controls, and plotting procedures. Laboratory includes preparation of various types of projects leading to a complete subdivision.

**2980:422 Global Positioning System Surveying (3 Credits)**

Prerequisites: 2980:225 and 2985:101 or permission. Introduction to the Global Positioning System (GPS). Course includes the planning, data collection, and processing of GPS data.

**2980:425 Land Navigation (3 Credits)**

Interpretation and use of topographic maps. Study of basic map elements with emphasis on identification of features and coordinate systems. Map use for land navigation.

**2980:426 History of Surveying To 1785 (2 Credits)**

A history of land surveying. Emphasis on the development of survey procedures through history. Part I (to 1785) covers the ancient world to the colonial period.

**2980:427 Ohio Lands (2 Credits)**

Study of the history of the original Ohio Land Subdivisions.

**2980:428 History of Surveying Since 1785 (2 Credits)**

A history of land surveying. Emphasis on the development of survey procedures through history. Part II (Since 1785) covers the history of the United States to date.

**2980:430 Surveying Project (3 Credits)**

Prerequisite: Senior or greater standing and permission. Provides opportunity to research and develop a specific surveying project within chosen area of surveying. Oral, written and graphical presentation of completed project(s).

**2980:431 Senior Seminar (2 Credits)**

Prerequisite: Senior or greater standing. Students demonstrate knowledge and skills acquired as surveying majors through assessment testing and review of professional licensure laws. Preparation for national exams.

**2980:445 Applications in GIS using GPS (3 Credits)**

Prerequisite: 2985:101. Advanced instruction in GIS applications using GPS as well as other surveying and mapping methods. Laboratory.

**2980:450 Topics in Professional Practice (2 Credits)**

Prerequisite: Junior or greater standing. Topics in applicational areas of surveying from the point of view of the practitioner and the consumer of land-related data.

**2980:489 Special Topics in Surveying (1-3 Credits)**

Prerequisite: Permission. Special lecture/laboratory courses offered once or only occasionally in areas where no formal course exists. (May be repeated for a maximum of six credits.)

**2980:490 Workshop in Surveying (1-3 Credits)**

Prerequisite: Permission. Group study of special topics in surveying. May not be used to meet undergraduate major requirements in surveying. May be used for elective credit only. (May be repeated for a maximum of six credits.)

**2980:495 Internship: Surveying and Mapping (3 Credits)**

Prerequisites: 64 hours in program and permission. Supervised work experience in surveying and mapping to increase student understanding of surveying and mapping technology.

**2980:497 Surveying Honors Project (3 Credits)**

Prerequisites: Senior Studies as an honor student. Provides opportunities to research and develop a specific surveying project within chosen area of surveying. Oral, written, and geographical presentation of completed projects.

**2980:498 Independent Study (1-3 Credits)**

Prerequisite: Permission or instructor. Directed study in a special field of interest chosen by student in consultation with instructor. (May be repeated for a total of six credits).

## Technical Education (5400)

**5400:400 Adult Learning (3 Credits)**

Describes characteristics of the adult learner and examines issues, factors, and strategies pertinent to successful facilitation of learning in a variety of training environments.

**5400:401 Learning with Technology (3 Credits)**

Application of learning technologies to situations encountered by academic and professional learners. Addresses foundational concepts of computer literacy, ethics, security, collaboration, and learning design.

**5400:413 Instructional Design Profession (3 Credits)**

Examination of the Instructional Design profession, its history, trends, issues and impact on Instruction Design's future. Research on best practice in the field are explored.

**5400:415 Talent Development and Training (3 Credits)**

Prerequisites: 5400:401 or permission from instructor. Examine the training function within talent development from a global perspective. Explore best practices for today's workforce. Identify emerging trends and training solutions.

**5400:420 eLearning by Design (3 Credits)**

Experiences in using, developing and evaluating learning technologies and media used for instructional design and training.

**5400:430 Program Planning (3 Credits)**

Process of program planning and evaluation for instructional design and training for a variety of adult learning organizations.

**5400:435 Systematic Instructional Design in Postsecondary Education (3 Credits)**

Prerequisites or corequisites: 5400:401, 5400:420, 5400:430, admission to program, or permission of instructor. Examination of instructional design models with particular emphasis of the ADDIE model. Study of applications to Instructional Design Technology.

**5400:475 Instructional Delivery (3 Credits)**

Prerequisite: Permission of department. Implementation of instructional design principals in the proposal, design, development, implementation, assessment and evaluation (ADDIE) of eLearning and other delivery of training courses.

**5400:480 Globally Diverse Workforce (3 Credits)**

Study of cultural pluralism and disability in the workplace and the best practices, as related to training in adult learning organizations.

**5400:481 Special Topics: Technical Education (1-4 Credits)**

See department for course description.

**5400:490 Workshop: Technical Education (1-3 Credits)**

Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units. Delivered in a totally on-line format and face to face format with web enhancements.

**5400:495 Postsecondary Education Practicum (3 Credits)**

Prerequisites: 5400:400, 5400:401, 5400:405, 5400:415, 5400:420, 5400:430, 5400:435, and admission to the Postsecondary Technical Education program with a "C" or better in each 5400 course and a 2.5 or better overall GPA in 5400 courses, and an overall GPA of 2.5 or better. Directed instruction under the supervision of directing instructor and university supervisor, and development of instructional portfolio.

**5400:497 Independent Study: Technical Education (1-3 Credits)**

Area of study determined by student's need.

## Theatre (7800)

**7800:100 Experiencing Theatre (3 Credits)**

Experience the theatre as a live, dynamic art form through an exposure to and participation in University productions.

**Gen Ed:** Tier 2 - Arts

**7800:103 Theatre Orientation (0 Credits)**

Orientation to the information and strategies necessary to aid new theatre students in their understanding of the field of theatre.

**7800:108 Introduction to the Visual Arts of World Theatre (3 Credits)**

Introduction to the theories and styles of scenic, costume, and lighting design from around the world, including the application of these principles to various media.

**7800:145 Ensemble Theatre Lab (3 Credits)**

An introduction to the techniques of collaborative creation and physical theatre especially space awareness, movement training, and storytelling.

**7800:151 Vocal Dynamics (3 Credits)**

This course is concerned with the various techniques and principles of vocal production in their practical application providing a structure to discover your vocal potential.

**7800:172 Acting I (3 Credits)**

Introductory fundamentals of acting through the investigation of the body as an instrument for the stage, improvisation and basic scene study.

**7800:264 Playscript & Performance Analysis (3 Credits)**

An introduction to various methods of how to read and analyze a play script for theatre production, utilizing theories and tools from Aristotle to today.

**Gen Ed:** Tier 2 - Arts

**7800:265 Basic Stagecraft (3 Credits)**

Basic stagecraft including equipment, construction and handling of two-dimensional scenery and theatrical hardware. Laboratory required.

**7800:274 Digital Technology for Theatre (3 Credits)**

Hands-on exploration of theories and methods used in electronic development of promotional and creative materials. Activities include still and motion image capture, editing and distribution.

**7800:301 Introduction to Theatre Through Film (3 Credits)**

Prerequisite: 3400:210 or 3400:221. A study of the Theatre with emphasis on its cultural and social influences on our society. Does not meet the Humanities requirement for Theatre majors.

**7800:306 Costume Design for the Performing Arts and Media (3 Credits)**

Prerequisites: 7800:108. Costume design and construction techniques, organization and maintenance of wardrobe for stage performance and other types of production. Lab required.

**7800:335 History of Theatre and Dramatic Literature: Origins through 18th Century (3 Credits)**

The history and theory of dramatic literature and theatre practices from their origins through the 18th Century, including select non-western theatre traditions.

**Gen Ed:** Tier 3 - Global Diversity

**7800:336 Scenic Design for Performing Arts & Media (3 Credits)**

Prerequisites: 7800:108. The theory, principles, and practice of scene design for the theatre and other media. Lab required.

**7800:351 Advanced Ensemble Theatre Lab (3 Credits)**

Prerequisites: 7800:145. Advanced training in the techniques and principles of collaborative creation and physical theatre leading toward performance of a devised solo and/or group performance.

**7800:355 Lighting Design and Technology (3 Credits)**

Prerequisites: 7800:108 The art and technique of lighting design for the stage and other media: light plotting, color theory, and special effects. Lab required.

**7800:370 Directing I (3 Credits)**

Prerequisites: 7800:100, 7800:172, and 7800:264. Emphasizes fundamentals of play directing, including responsibilities of director, stage nomenclature, play selection, analysis, and rehearsal techniques.

**7800:373 Acting II (3 Credits)**

Prerequisite: 7800:172. Continuation of 7800:172. Further emphasis on the psychology of the actor and development of performing techniques through scene study.

**7800:374 Acting III (3 Credits)**

Prerequisite: 7800:373. Further in-depth actor training with emphasis on the language and interpretation of classic plays including Shakespeare.

**7800:403 Special Topics: Theatre Arts (1-3 Credits)**

Prerequisite: Permission. Traditional and nontraditional topics in theatre arts. (May be repeated, only 3 credits may apply to Theatre major and on 9 credits toward B.A degree).

**7800:433 Theatre Organization & Production Management (3 Credits)**

Study of successful methods of theatre organization and production stage management of professional and non-professional performing arts operations.

**7800:435 History of Theatre and Dramatic Literature: 1800 to Present (3 Credits)**

The history and theory of dramatic literature and theatre practices from the nineteenth century through the present, including select non-western theatre traditions.

**Gen Ed:** Tier 3 - Global Diversity

**7800:436 Styles of Scenic Design for the Performing Arts and Media (3 Credits)**

Prerequisite: 7800:336. Theatrical and practical exploration of the styles and periods of production design and designers for stage and media. Lab required.

**7800:455 Creating Performance (3 Credits)**

(May be repeated for a total of six credits.) This course introduces devising processes, improvisation, ensemble work, and physical theatre techniques appropriate to the preparation of practical performance projects from sources other than a conventional play.

**7800:461 Directing II (3 Credits)**

Prerequisite: 7800:370. Emphasizes fundamentals of play directing, including responsibilities of director, stage nomenclature, play selection, analysis, and rehearsal techniques.

**7800:467 Multi-Cultural Theatre (3 Credits)**

A detailed examination of contemporary performances, performance texts, and theoretical writings that reference the history and experience of diverse communities of America and the world.

**Gen Ed:** Tier 3 - Domestic Diversity

**7800:471 Senior Seminar (1 Credit)**

Prerequisites: 7800:274, upper class standing, and permission from the theatre advisor. A forum to develop professional skills to make the transition to a theatre career: artistic, academic, business and professional.

**7800:476 Theatre and Community Action (3 Credits)**

This course will explore civic engagement strategies and situations linking theatre and community in which students tackle community issues and concerns utilizing various performative techniques.

**7800:480 Independent Study: Theatre (1-3 Credits)**

Practice, study, and/or research in selected elements of theatre arts and production including preparation and presentation of creative and technological projects..

**7800:490 Workshop in Theatre Arts (1-3 Credits)**

(May be repeated for a total of 6 credits) Prerequisite: advanced standing or permission. Group study or group projects investigating particular phases of theatre arts not covered by other courses in curriculum.

**7800:495 Honors Research Project in Theatre (1-3 Credits)**

Prerequisite: Approval of department preceptor. Creative project or research supervised by theatre preceptor.

## Theatre Organizations (7810)

**7810:100 Production Laboratory-Design/Technology (1 Credit)**

Prerequisite: Permission of instructor. (May be repeated for a total of 12 credits) Provides student with practical experience in technical aspects of theatre. \*Required of all theatre majors. Majors are required to enroll in at least one credit production lab every semester they are in residence.

**7810:110 Performance Laboratory (1 Credit)**

(May be repeated for a total of 12 credits) Prerequisites: Permission of instructor. Provides student with practical performance experience theatre productions. \*Required of all theatre majors.

**7810:200 Production Laboratory-Design/Technology (1 Credit)**

Prerequisite: Permission of instructor. (May be repeated for a total of 12 credits) Provides student with practical experience in technical aspects of theatre. \*Required of all theatre majors. Majors are required to enroll in at least one credit production lab every semester they are in residence.

**7810:210 Performance Laboratory (1 Credit)**

(May be repeated for a total of 12 credits) Prerequisites: Permission of instructor. Provides student with practical performance experience in theatre productions. \*Required of all theatre majors.

**7810:300 Production Laboratory-Design/Technology (1 Credit)**

Prerequisite: Permission of instructor. (May be repeated for a total of 12 credits) Provides student with practical experience in technical aspects of theatre. \*Required of all theatre majors. Majors are required to enroll in at least one credit production lab every semester they are in residence.

**7810:310 Performance Laboratory (1 Credit)**

(May be repeated for a total of 12 credits) Prerequisites: Permission of instructor. Provides student with practical performance experience in theatre productions. \*Required of all theatre majors.

**7810:400 Production Laboratory-Design/Technology (1 Credit)**

Prerequisite: Permission of instructor. (May be repeated for a total of 12 credits) Provides student with practical experience in technical aspects of theatre. \*Required of all theatre majors. Majors are required to enroll in at least one credit production lab every semester they are in residence.

**7810:410 Performance Laboratory (1 Credit)**

(May be repeated for a total of 12 credits) Prerequisite: Permission of instructor. Provides student with practical performance experience in theatre productions. \*Required of all theatre majors.

## University Orientation/General Education Special Topics (1100)

**1100:99 Independent Education Abroad (0 Credits)**

Academic study at an unaffiliated institution outside the continental United States.

**1100:100 UA Education Abroad (0 Credits)**

Academic study at an affiliated institution outside the continental United States.

**1100:101 The Akron Experience: University 101 (2 Credits)**

Acquisition of the skills, techniques, information, and strategies necessary to aid new students in their transition from high school or work to the college environment. Delivered in face-to-face format and fully online format.

**1100:102 Tutor Training I (1 Credit)**

Prerequisite: Permission from coordinator of tutorial programs based on GPA, letter of recommendation, and interview. Corequisite: Tutoring practicum of 25 hours. Training of peer tutors in several academic areas with topics to meet requirements of the College Reading and Learning Association.

**1100:103 Tutor Training II (1 Credit)**

Prerequisite: 1100:102. Summative training of peer tutors emphasizing assertiveness training, leadership skills, administering and interpreting a learning styles inventory, and structuring a learning experience.

**1100:104 Tutor Training III (1 Credit)**

Prerequisite: 1100:102. Summative training of peer tutors emphasizing assertiveness training, leadership skills, administering and interpreting a learning styles inventory, and structuring a learning experience.

**1100:110 Information Tools for Academic Success (1 Credit)**

Information Tools for Academic Success will allow a student to bring a real world problem or academic assignment to class to use as the framework upon which to build a repertoire of information skills. This class is a project-oriented, process-based course in which the students will: Identify and articulate an information need as it relates to a problem or assignment; effectively and efficiently access appropriate information using a variety of resources; critically evaluate the information; incorporate the information into their existing knowledge base; use the information appropriately and effectively to accomplish an explicit purpose; understand the legal, social, and economic aspects of information ultimately accessing and using information in an ethical manner.

**1100:117 Career Planning (2 Credits)**

Learners develop the skills necessary to make effective educational and career decisions. Emphasis upon self-understanding, career exploration, career planning, and decision making. Delivered in face-to-face format and fully online format.



**1100:150 Resident Assistant Skills (2 Credits)**

This course is designated for Resident Assistants upon their hire to the Department of Residence Life and Housing. Leadership development and management skills are the core material.

**1100:191 Special Topic: General Education (1-4 Credits)**

Special Topics in General Education.

**1100:205 Leadership Principles and Practices (2 Credits)**

This course is about being a leader and about leadership. Students will learn leadership principles through case studies and self-assessment with a goal of developing effective leadership skills and abilities. Students complete the course better prepared to lead across a broad spectrum of responsibilities by possessing and communicating an organized perspective of leadership.

## Women's Studies (3001)

**3001:100 Social & Cultural Diversity in the United States (3 Credits)**

See department for course description.

**3001:110 Multicultural Sensitivity Training (1 Credit)**

See department for course description.

**3001:200 Introduction to Women's Studies (3 Credits)**

Introduction to the interdisciplinary program in Women's Studies. Explores current scholarship in women's issues and experiences from perspectives of psychology, history, sociology, anthropology, and literary criticism. Feminist orientation and methodology.

**Gen Ed:** Tier 3 - Domestic Diversity

**3001:480 Feminist Theory (3 Credits)**

Prerequisite: 3001:200. A summary of feminist theory to familiarize students with the main currents in contemporary feminist theory and the origins and evolution of that thought.

**3001:485 Special Topics in Women's Studies (1-3 Credits)**

Special topics and current issues in Women's Studies. Covers content not currently addressed in other courses. Fosters a critical approach to knowledge about women. (May not be repeated)

**3001:489 Internship in Women's Studies (1-4 Credits)**

Prerequisites: 3001:200 and permission of Director of Women's Studies. This class provides supervised experience and on-the-job training in an organization, agency, corporation or group dealing with women's issues.

**3001:490 Women's Studies Lecture Series (1-3 Credits)**

Various topics focused on women. Themes and course materials vary each semester. Lecture and discussion.

**3001:493 Individual Studies on Women (1-3 Credits)**

Prerequisites: 3001:200 and permission of Director of Women's Studies. Directed study of selected topics related to women. Projects are chosen by student in consultation with instructor.

**3001:499 Seminar in Women's Studies (1 Credit)**

See department for course description.

# **ADDENDUM**

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**No changes at the time of publication**

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International Development (3004) .....	665	Mild/Moderate Intervention Specialist, BS .....	200
Interpersonal Group Communication, Minor .....	96	Military Science (1600) .....	678
Italian (3550) .....	665	Military Studies, Military Science, Minor .....	541
<b>J</b>		Moderate/Intensive Intervention Specialist, BS .....	202
Japanese (3560) .....	666	Modern Languages .....	209
Jewelry & Metalsmithing, BFA .....	65	Modern Languages (3500) .....	679
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Latin American Studies, Certificate .....	291	Music - School of (7500) .....	679
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LeBron James Family Foundation School of Education .....	159	Music, BA .....	233
Linguistic Studies, Certificate .....	138	Music, Brass Performance, BM .....	235
<b>M</b>		Music, Composition, BM .....	236
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Management (6500) .....	666	Music Education, Instrumental String, BM .....	228
Manual Communication, Certificate .....	516	Music Education, Vocal & Keyboard, BM .....	229
Manufacturing Engineering Technology (2880) .....	669	Music, Guitar Performance, BM .....	237
Marketing .....	342	Music Jazz, Minor .....	230
Marketing (6600) .....	669	Music, Jazz Studies, BM .....	238
Marketing and Sales Technology (2520) .....	670	Music Organizations (7510) .....	683
Marketing, BBA .....	346	Music, Percussion Performance, BM .....	240
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Math - Associate Studies (2030) .....	671	Music, Piano Performance, BM .....	241
Mathematics .....	203	Music, String Performance, BM .....	242
Mathematics (3450) .....	672	Music, Voice Performance, BM .....	243
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Mechanical Engineering (4600) .....	674	<b>N</b>	
Mechanical Engineering, BS .....	453	National Center for Education and Research on Corrosion and Materials Performance .....	559
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Mechanical Engineering Technology (2920) .....	676	News, Minor .....	98
Mechanical Engineering Technology, AAS .....	440	Nursing .....	487
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Nursing: Cooperative Education (8000) .....	686	Pre-Law, Minor .....	271
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Painting & Drawing, BFA .....	67	Professional Social Media, Certificate .....	101
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Pan African Studies .....	247	Psychology .....	271
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Philosophy (3600) .....	689	Public Relations, BA .....	102
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Philosophy of Science and Religion, Minor .....	255	Radiologic Technology (2760) .....	703
Philosophy of Science, Minor .....	256	Ray C. Bliss Institute of Applied Politics .....	559
Philosophy/JD Degree Accelerated, BA .....	258	Research Centers and Institutes .....	555
Photography, BFA .....	70	Research Methods for the Social Sciences, Certificate .....	277
Photography For Non-Art Majors, Minor .....	69	Residential Building Technology, Certificate .....	445
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Sport Science and Wellness Education .....	524	Undergraduate Bulletin .....	8
Sport Studies Coach Education, Minor .....	534	University of Akron Magnetic Resonance Center (UA/MRC) .....	560
Sport Studies, Coaching Education, BS .....	535	University Orientation/General Education Special Topics (1100) .....	720
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