Accredited by:
The Higher Learning Commission of The North Central Association of Colleges and Schools

Steven D. Crow, Director
30 North LaSalle Street
Suite 2400
Chicago, IL 60601
800.621.7440

www.ncahighered.org

For information on accreditation and to review copies of accreditation documents, contact the Office of the Provost, 106 Welch Hall, Eastern Michigan University, Ypsilanti, MI 48197.

The University undergraduate bulletin covers a 24-month period, September 1 through August 31, 2006-2007. Courses, majors, minors, programs, degrees and certificates in this catalog are subject to change without notice and may not be available in the future.

Every effort has been made to include in this publication information that, at the time of preparation for printing, is accurate. However, the contents of this publication are not to be regarded as an irrevocable contract between students and Eastern Michigan University. The University reserves the right to change at any time and without prior notice any provision or requirement included, but not limited to policies, procedures, changes and academic programs. It is the responsibility of the student to meet and satisfy all University, College and program requirements.
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### ACADEMIC YEAR

The University undergraduate bulletin covers a 24-month period, September 1, 2005 through August 31, 2007. Courses, majors, minors, programs, degrees and certificates in this catalog are subject to change without notice and may not be available in the future.

#### 2005–2006 University Calendar

**Fall Semester 2005**
- September 3, Sat. Freshmen Residence Hall Move-In Day
- September 4–5, Sun., Mon. Upperclass Residence Hall Move-In Days
- September 3–6, Sat., Sun., Mon. Freshmen Orientation
- September 7, Wed. Classes Begin

**November**
- November 23, Wed. No Classes: Campus Open
- November 24–27, Thurs.-Sun. Thanksgiving Recess
  (University Closed; Library Open Fri., Sat., Sun.)

**November 28, Mon.** Classes Resume
- December 14, Wed. Last Day of Classes

**December**
- December 16–21, Thurs.-Wed. Final Examinations
- December 18, Sun. Commencement (2 p.m.)
- December 22, Thurs. Close of Fall Semester

**Winter Semester 2006**
- January 8, Sun. Move-In Day and Winter Orientation
- January 9, Mon. Classes Begin

**January 16, Mon.** MLK Jr. Day

**February 27–March 5, Mon.–Sun.** Winter Recess
  (No Classes; Campus Open)

**March 6, Mon.** Classes Resume
- April 14–16, Fri.-Sun. Spring Recess–University Closed
  (Library Open)

**April 30, Sat.** Last Day of Classes

**April**
- April 25–May 1, Tues.-Mon. Final Examinations

**May 2, Tues.** Close of Winter Semester

#### Spring Session 2006
- May 7, Sun. Move-In Day
- May 8, Mon. Classes Begin

**May 29, Mon.** Memorial Day
  (University Closed)

**June**
- June 19, Mon. Last Day of 6-Week Classes
- June 23, Wed. Last Day of 7 1/2-Week Classes

**June 28, Wed.** Close of Spring Session

#### Summer Session 2006
- July 2, Sun. Move-In Day
- July 3, Mon. Classes Begin

**July 4, Tues.** Independence Day
  (University Closed)

**August**
- August 14, Mon. Last Day of 6-Week Classes
- August 23, Wed. Last Day of 7 1/2-Week Classes

**August 23, Wed.** Close of Summer Session

#### 2006–2007 University Calendar

**Fall Semester 2006**
- September 2, Sat. Freshmen Residence Hall Move-In Day
- September 3–4, Sun.-Mon. Upperclass Residence Hall Move-In Days
- September 2–3, Sat.-Tues. Freshmen Orientation
- September 3–4, Sun.-Mon. Labor Day Recess
  (University Closed; Library Open)

**September 6, Wed.** Classes Begin

**November 22, Wed.** No Classes: Campus Open

**November 23–26, Thurs.-Sun.** Thanksgiving Recess
  (University Closed; Library Open Fri., Sat., Sun.)

**November 27, Mon.** Classes Resume
- December 14, Wed. Last Day of Classes

**December**
- December 16–20, Thurs.-Wed. Final Examinations
- December 17, Sun. Commencement (2 p.m.)
- December 21, Thurs. Close of Fall Semester

**Winter Semester 2007**
- January 7, Sun. Move-In Day and Winter Orientation
- January 8, Mon. Classes Begin

**January 15, Mon.** MLK Jr. Day

**February 26–March 4, Mon.–Sun.** Winter Recess
  (No Classes; Campus Open)

**March 5, Mon.** Classes Resume
- April 6–8, Fri.-Sun. Spring Recess
  (University Closed; Library Open)

**April 21, Sat.** Last Day of Classes

**April**
- April 23–26, Mon.-Sat. Final Examinations
- April 29, Sun. Commencement
  (Colleges of Arts and Sciences and Technology: 10:30 a.m.,
  Colleges of Business, Education, and Health and Human Services: 2 p.m.)
- April 30, Mon. Close of Winter Semester

#### Spring Session 2007
- May 6, Sun. Move-In Day
- May 7, Mon. Classes Begin

**May 28, Mon.** Memorial Day
  (University Closed)

**June**
- June 18, Mon. Last Day of 6-Week Classes
- June 22, Wed. Last Day of 7 1/2-Week Classes

**June 27, Wed.** Close of Spring Session

#### Summer Session 2007
- July 1, Sun. Move-In Day
- July 2, Mon. Classes Begin

**July 4, Wed.** Independence Day
  (University Closed)

**August**
- August 13, Mon. Last Day of 6-Week Classes
- August 22, Wed. Last Day of 7 1/2-Week Classes

**August 27, Mon.** Close of Summer Session
EASTERN MICHIGAN UNIVERSITY MISSION

Eastern Michigan University is committed to excellence in teaching, the extension of knowledge through basic and applied research and creative and artistic expression. Building on a proud tradition of national leadership in the preparation of teachers, we maximize educational opportunities and personal and professional growth for students from diverse backgrounds through an array of baccalaureate, masters and doctoral programs. We provide a student-focused learning environment that positively affects the lives of students and the community. We extend our commitment beyond the campus boundaries to the wider community through service initiatives and partnerships of mutual interest addressing local, regional, national and international opportunities and challenges.

Institutional Values
- Teaching and Learning
- Excellence
- Human Dignity and Respect
- Diversity
- Scholarship and Intellectual Freedom
- Public Engagement
- Leadership and Participatory Decision-Making
- Integrity

Guiding Principles
- Accessibility
- Relevancy
- Responsiveness to Change
- Flexibility
- Quality
- Collaboration
- Accountability
- Affordability

University Profile and History

Eastern Michigan University is a multipurpose university whose roots date back to 1849, when the Michigan Legislature designated it as Michigan's first institution to educate teachers to serve the public schools. At that time the Detroit school system was only 10 years old and the transition from one-room school houses had just begun.

Graduate education was inaugurated in 1938, when the programs were conducted in cooperation with the University of Michigan. In 1953 Eastern gained approval to offer its own graduate programs.

During its first 100 years, Michigan State Normal School, as it was originally called, certified thousands of teachers and developed a broad-based academic curriculum that prepared it for its evolution to university status in 1951. Within the new university, three colleges emerged: the College of Education, the College of Arts and Sciences, and the Graduate School. The University has expanded three more times since 1964 with the College of Business; in 1975 with the College of Health and Human Services; and in 1980 with the College of Technology.

New colleges created a need for additional acreage. The University campus spread from its original 275 acres on the south side of the Huron River to encompass an additional 182 acres west of the campus where student residences, athletic facilities and the Convocation Center are located. Among the newest buildings are the Convocation Center (1998); the Potter College of Education building (1999); the Marshall College of Health and Human Services building (2000); the Terrestrial and Aquatic Ecology building (1998); and the Bruce 7. Hale Library (1998).

Today’s student body reflects the national trend of younger, adult returning to college to continue their education and prepare for new careers in a changing society. Women compose approximately 61 percent of the student body. Most students are from the state of Michigan, but 45 states and 93 countries are also represented. In fall 2003, 24,419 undergraduate and graduate students were enrolled at Eastern Michigan University.

EMU’s perspective has also grown, not only in on-campus program development, but also in online courses offered through the Office of Extended Programs.

Eastern Michigan University is known worldwide for its educational contributions. In 165,000 graduates are scattered among many countries as well as coast-to-coast in the United States, both strengthening and supporting the foundation that is the multipurpose University in Ypsilanti, Mich.

ACCREDITATIONS OF COLLEGES AND DEPARTMENTS

The University is fully accredited by the Higher Learning Commission, a subcommittee of the North Central Association of Colleges and Schools. In 2001-2002 the University received an unqualified accreditation for a period of 10 years.

Eastern Michigan University also retains membership in these organizations: American Association of Colleges for Teacher Education; American Music Therapy Association; Association of Baccalaureate Social Work Program Directors; Council on Hotel, Restaurant, and Institutional Education; National Association of Deans and Directors of Schools of Social Work; National Council for Preservation Education; National Trust for Historic Preservation; and The Pioneer America Society.

Colleges and Departments

College of Arts and Sciences
Department of African American Studies
Department of Art
Department of Biology
Department of Chemistry (accredited by the American Chemical Society)
Department of Communication and Theatre Arts
Department of Computer Science (accredited by the Computer Science Accreditation Board)
Department of Economics
Department of English Language and Literature
Department of Foreign Languages and Linguistic Studies
Department of Geosciences
Department of Music and Dance (accredited by the American Association of Schools of Music and American Music Therapy Association and the National Association of Schools of Dance)
Department of Physics and Astronomy
Department of Political Science (Public Administration accredited by the National Association of Schools of Public Affairs and Administration)
Department of Psychology (accredited by the Association for Behavior Analysis, American Psychological Association and Masters in Psychology Accreditation Council (MAPAC))
Department of Sociology, Anthropology and Criminology
Women's Studies Program

College of Business
(accredited by the Association to Advance Collegiate Schools of Business)
Department of Accounting and Finance
Department of Computer Information Systems
Department of Management
Department of Marketing

College of Education
(All professional educator preparation programs of EMU are accredited by the National Council for the Accreditation of Teacher Education and approved by the Michigan Department of Education.)
Department of Leadership and Counseling (Community, college and school counseling programs are accredited by the Council for Accreditation of Counseling and Related Educational Programs.)

Department of Special Education (Speech-language pathology program accredited by the American Speech-Language-Hearing Association; hearing-impaired programs accredited by the Council on Education for the Deaf.)

Department of Teacher Education (accredited by the National Council for the Accreditation of Teacher Education)

College of Health and Human Services

School of Health Promotion and Human Performance (athletic training accredited by the Commission on Accreditation of Allied Health Education Programs and the Joint Review Committee on Education Planning and Athletic Training; health education accredited by the Michigan Department of Education/National Council for the Accreditation of Teacher Education; occupational therapy accredited by the Accreditation Council for Occupational Therapy Education; dietetics accredited by the Commission on Accreditation for Dietetics Education of the American Dietetic Association)

School of Health Sciences (clinical laboratory science program accredited by the National Accreditation Agency for Clinical Laboratory Sciences; occupational therapy accredited by the Accreditation Council for Occupational Therapy Education; dietetics accredited by the Commission on Accreditation for Dietetics Education of the American Dietetic Association)

School of Nursing (accredited by the Commission on Collegiate Nursing Education)

School of Social Work (accredited by the Council on Social Work Education)

College of Technology

School of Engineering Technology (Construction Management accredited by the American Council for Construction Education; Computer-Aided Design, Manufacturing Technology and Polymers and Ceramic Technology accredited by the National Association of Industrial Technology; Interior Design accredited by the Foundation for Interior Design Education and Research)

School of Technology Studies (Aviation Management, Communication Technology and Industrial Distribution accredited by the National Association of Industrial Technology; Hospitality Management program accredited by the Council on Hotel, Restaurant and Institutional Education; Legal Assistant (Paralegal Studies) program accredited by the American Bar Association; Network and Information Technology Administration, Marketing Education, Technology Education — fully approved by the National Council for Accreditation of Teacher Education/International Technology Educational Association/Council on Technology Teacher Education)

Military Science and Leadership

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## The Undergraduate Experience

Eastern Michigan University prides itself on its commitment to undergraduate education. The University offers numerous academic majors and special programs and services that contribute to a stimulating and supportive learning environment. The Academic Advising Center, Career Services Center and Hofman Learning Center help students map out and succeed in their academic careers at EMU. In addition, numerous student organizations offer students opportunities to be active members of the campus community.

EMU is dedicated to providing personalized instruction to students through small class sizes, supplemental instruction and individual tutoring. At EMU, the average ratio of students to professors is 20:1. Students can also access advanced technology in residence halls, in McKenney Union and in the library.

EMU is also recognized for its ethnic and cultural diversity. We’re a metropolitan University with a student population of 24,419 and representation from more than 100 nationalities. Eastern Michigan is situated in the larger metropolitan Detroit area, facilitating a wide range of career and cultural opportunities. Internships and cultural events are minutes away, and many cultural events are offered right on campus throughout the school year.

### New Student Programs

Fusion, EMU’s New Student Orientation, is a high energy, information filled four-day program that occurs directly before the fall semester. Transfer students may attend an abbreviated, one-day student orientation during fall Fusion. A one-day version of Fusion is also offered just prior to the start of winter semester. This program is mandatory for all new first-year students. From academics to involvement, Fusion provides important resources and information crucial for a smooth transition to Eastern. The First-Year Mentor Program at Eastern Michigan University complements the Orientation program by creating enduring connections between first-year students and upper-class peer mentors.

### Undergraduate Studies

The mission of Undergraduate Studies is to facilitate the implementation of quality programs that enhance undergraduate education and build community at Eastern Michigan University. Undergraduate Studies fosters an academic climate that promotes improved teaching and pedagogy, and is committed to providing unique opportunities for students to examine their studies from a variety of disciplines.

### General Education

General Education is the core of an undergraduate education. It is general in that it provides a comprehensive educational experience and to prepare students for study within the major. General education teaches critical thinking and effective communication. It provides an introduction to the methodologies and practices of the foundational academic disciplines, and it promotes intellectual curiosity and a love of learning.

### First Year Experience Programs

EMU offers practical yet innovative programs for its first-year students to enhance learning experiences in the classroom, increase academic performance, improve student connections in the campus and community and aid in student retention and persistence towards an undergraduate degree.

### Freshman Interest Groups (FIGs)

FIGs are learning communities in which freshmen explore common interests, develop critical thinking skills and build lasting friendships. FIG students take up to three college-level courses with the same peer group. All courses satisfy general education, program or elective credit towards graduation. FIG instructors are experienced in teaching, mentoring and developing the strengths of first year students.
Promoting Academic Success and Survival (PASS)
The PASS program is designed to challenge and support freshman who fall just below regular admission criteria and addresses some students face as they transition to college. The program is based on the assumption that students are willing to work hard to succeed and that effective academic programs and teaching methods can bring them to the standards expected of college students. Among the benefits of the PASS program are learning community scheduling, free academic workshops, development of study skills as well as academic mentoring, individualized instruction and advising assistance.

University Honors Program (UHP)
The University Honors Program was established in 1994 to provide enrichment opportunities for EMU's most academically qualified students. Close to 1,000 students are currently members of this program, the purpose of which is to enhance the college experience educationally and culturally, both inside and outside the academic classroom. Honors courses are taught by outstanding faculty in small class sections. "University" Honors students complete their Honors coursework in General Education, while "Departmental" Honors students focus within their major or minor and complete a senior thesis project while working closely with faculty mentors. The Honors Program annually offers more than 50 competitive, monetary fellowships and senior thesis awards to junior and senior undergraduates working on faculty-sponsored research or teaching projects. In conjunction with the Honors Student Association, the UHP offers several special events and field trips.

Academic Support Programs
The Office of Undergraduate Studies also creates and administers programs whose work crosses the boundaries of specific academic disciplines, enhances the in-classroom learning experience within all subject areas and expands learning opportunities beyond the classroom.

Academic Service-Learning
Undergraduate students gain a deeper understanding of course objectives, acquire new knowledge and engage in civic activity through the Academic Service-Learning program at EMU. Academic Service-Learning encourages networking and it connects students to a broader learning community that encompasses both EMU and the community. Students in Academic Service-Learning classes participate in community-based projects with the guidance of faculty who are trained in service-learning theory. Grant programs and research opportunities are also available for both students and faculty through the program. For more information, see page 26.

American Humanities
For students who want to make a difference, the American Humanities program prepares undergraduates for careers in the nonprofit sector. Students can enhance their regular bachelor's degree with a certificate that demonstrates their capacity as nonprofit professionals. Certification is completed through a variety of experiences, such as working directly with nonprofits, attending workshops, participating in the student association and attending an annual conference. Students will meet and learn from others who share their interest in community involvement. For more information, see page 26.

Celebration of Student Writing
At the end of every fall and winter semester, hundreds of students from English 121 classes display their written work at the annual Celebration of Student Writing. For the celebration, sponsored by the Department of English Language and Literature and the Office of Undergraduate Studies, students create products representing the research they did in their 121 classes. Students who display their work are granted at the completion by EMU faculty and administrators, students from other EMU courses and visitors ranging from prospective EMU students to students in writing courses from other colleges. Attendees wander the room and talk with student authors about their celebration projects and their research work for the semester.

Diversity in the Curriculum
The Diversity in the Curriculum program promotes the development of a curriculum of inclusion within the college departments and programs of the Division of Academic Affairs at Eastern Michigan University. Our objective is to integrate the growing scholarship on diversity and multiculturalism into educational practices that reflect the most constructive aspects of cultural pluralism. Eastern Michigan University is nationally recognized as an institution characterized by a high level of diversity in its student population. The purpose of diversity in the curriculum is to ensure that our faculty and staff become characterized by an equally high level of multicultural expertise, as reflected in our curricular offerings and co-curricular services.

ElderQuest
217 Rackham
734.487.0227
E-mail: ElderQuest@umich.edu
www.umich.edu/elderquest

The ElderQuest program provides a welcoming environment for persons 60 years and older and offers the opportunity to fully participate in campus programs and activities. ElderQuest provides leadership in the development of inclusion within the university community, including building university awareness and support for programming and services targeted for the older population. ElderQuest office staff assists the older participants in designing an exciting and challenging plan for his or her needs. There are many ways that an ElderQuest participant may be involved in university life including serving as a guest lecturer, working part-time on campus, assisting with special campus events, and mentoring students.

Writing Across the Curriculum
Students at EMU develop the skills they need to write inside and beyond the University. They do this both through designated writing courses and through courses that are part of EMU's Writing Across the Curriculum program. In their undergraduate experience, students take courses taught by faculty who have participated in a summer institute in order to infuse more writing into their courses. Students benefit from these faculty members' dedication to the development of their critical thinking and communication skills.

Opportunities for Transferring from Community Colleges
The Office of Community College Relations works collaboratively with the faculty and staff of EMU and Michigan community colleges to enhance the educational transition process for community college students. The purpose of the office is to promote a seamless transfer process, which minimizes the loss of academic credit and time in obtaining a bachelor's degree. Many EMU academic programs have articulation agreements with community colleges that coordinate curriculum requirements for both an associate's degree and a bachelor's degree in a program area. Students who use an articulation agreement can secure credit for courses that do not transfer outside of the agreement. The agreements also provide students with a curriculum guide that, if followed, minimizes the possibility of taking the wrong courses. Community college students can check with their counselor or program advisor about the availability of articulation agreements, or visit the OCR Web site (www.umich.edu/ocra/art). For more information, see page 13.

ADMISSIONS

Undergraduate Policies and Information
Admission
The following sections: tuition and fees, financial aid, academic procedures and graduation requirements represent the official policies of Eastern Michigan University as adopted by its Board of Regents.
## CLEP Credit Available by Departments

<table>
<thead>
<tr>
<th>Department</th>
<th>Exam/Subject</th>
<th>Minimum Score</th>
<th>Credit Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting &amp; Finance</td>
<td>Accounting, Principles of</td>
<td>60</td>
<td>ACC240 (3 hrs)</td>
</tr>
<tr>
<td>Biology</td>
<td>Biology</td>
<td>60</td>
<td>ECOL105 (1 hr)</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Chemistry</td>
<td>60</td>
<td>ECOL105 (3 hrs)</td>
</tr>
<tr>
<td>Computer Information Systems</td>
<td>Information Systems and Computer Applications</td>
<td>50</td>
<td>CHEM121 (3 hrs)</td>
</tr>
<tr>
<td>Economics</td>
<td>Macroeconomics, Principles of</td>
<td>50</td>
<td>CHEM121 (3 hrs), CHEM122 (1 hr) and CHEM123 (3 hrs)</td>
</tr>
<tr>
<td>English*</td>
<td>Elementary College Composition*</td>
<td>60</td>
<td>E615 (3 hrs)</td>
</tr>
<tr>
<td></td>
<td>English Literature*</td>
<td>65</td>
<td>ECON220 (1 hr)</td>
</tr>
<tr>
<td></td>
<td>American Literature*</td>
<td>65</td>
<td>ECON220 (1 hr)</td>
</tr>
<tr>
<td></td>
<td>Analyzing &amp; Interpreting Literature*</td>
<td>65</td>
<td>ENGL121 (3 hrs)</td>
</tr>
<tr>
<td></td>
<td>English Composition with essay</td>
<td>65</td>
<td>ENGL121 (3 hrs) and ENGL225 (3 hrs)</td>
</tr>
<tr>
<td></td>
<td>Humanities</td>
<td>65</td>
<td>HIST100 (3 hrs)</td>
</tr>
<tr>
<td>Foreign Languages</td>
<td>French Language</td>
<td>50</td>
<td>HIST100 (3 hrs) and LITR101 (1 hr)</td>
</tr>
<tr>
<td></td>
<td>German Language</td>
<td>62</td>
<td>HIST100 (3 hrs)</td>
</tr>
<tr>
<td></td>
<td>Spanish Language</td>
<td>63</td>
<td>HIST100 (3 hrs) and LITR101 (1 hr)</td>
</tr>
<tr>
<td>History</td>
<td>U.S. History I</td>
<td>50</td>
<td>HIST100 (3 hrs)</td>
</tr>
<tr>
<td></td>
<td>U.S. History II</td>
<td>50</td>
<td>HIST100 (3 hrs) and LITR101 (1 hr)</td>
</tr>
<tr>
<td></td>
<td>Western Civilization I</td>
<td>50</td>
<td>HIST100 (3 hrs) and LITR101 (1 hr)</td>
</tr>
<tr>
<td>Management</td>
<td>Management, Principles of</td>
<td>70</td>
<td>LAW225 (3 hrs)</td>
</tr>
<tr>
<td>Marketing</td>
<td>Business Law, Introductory</td>
<td>70</td>
<td>MGMT366 (3 hrs)</td>
</tr>
<tr>
<td>Mathematics</td>
<td>College Algebra</td>
<td>50</td>
<td>McGT1000 (3 hrs)</td>
</tr>
<tr>
<td></td>
<td>Trigonometry</td>
<td>50</td>
<td>MATH105 (3 hrs)</td>
</tr>
<tr>
<td>Political Science</td>
<td>American Government</td>
<td>50</td>
<td>MATH107 (2 hrs)</td>
</tr>
<tr>
<td>Psychology</td>
<td>Psychology, Introductory</td>
<td>50</td>
<td>PSY101 (1 hr)</td>
</tr>
<tr>
<td>Sociology</td>
<td>Sociology, Introductory</td>
<td>50</td>
<td>SOC105 (3 hrs)</td>
</tr>
</tbody>
</table>

*may required

Eastern Michigan University is open to students who have the potential to succeed academically as determined by a review of official high school records and/or college records. Admission to the University is based on a combination of factors including, but not limited to, the review of high school or college grade point average, high school or college curriculum and scores on standardized tests.

Acceptance into the University is dependent upon meeting the admission criteria described below. Eastern Michigan University admits students at the freshmen and transfer level to the University. Separate admission is required for the College of Business and the College of Education, as well as for the Nursing and Occupational Therapy programs. Some academic programs are designed to include courses from more than one college.

The Admissions Office, 401 Pierce Hall, provides information to meet the various needs of prospective students. The Academic Advising Center, 301 Pierce Hall, assists students in selecting courses applicable to their planned programs or appropriate to their academic needs after the students have been admitted to the University.

Application for admission to the University requires completion of an admission application, submission of an official high school transcript and/or official college transcript, and a non-refundable application fee of $30 for mailed application or $25 for online application. Required supporting documentation may vary depending on the category of admission.

**Freshmen Applicants**

Freshmen applicants entering college for the first time must submit official high school transcripts with grades posted through the sixth semester of high school. Official college transcripts if dually enrolled in high school and college, standardized test results from either the ACT or SAT and the $30 non-refundable application fee. Evidence of graduation is required after admission (if still in high school). Evidence of graduation or the General Educational Development (GED) certificate is required if the applicant is no longer attending high school. Applicants over 21 years of age should refer to the non-traditional category. Applications are available on the Admissions Web site (www.cmich.edu/public/admissions/admissions.html).
## Advanced Placement Credit Available by Departments

<table>
<thead>
<tr>
<th>Department</th>
<th>Exam/Subject</th>
<th>Minimum Score</th>
<th>Credit Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art</td>
<td>History of Art</td>
<td>3</td>
<td>ART120 (3 hrs)</td>
</tr>
<tr>
<td></td>
<td>Studio Art 2-D or 3-D Design, or drawing portfolio</td>
<td>4</td>
<td>ART120 (4 hrs)</td>
</tr>
<tr>
<td></td>
<td>Note: An additional three credit hours may be awarded as art credit and minor through departmental evaluation of test portfolios.</td>
<td>5</td>
<td>ART120 (5 hrs) or ART139 (5 hrs)</td>
</tr>
<tr>
<td>Biology</td>
<td>Environmental Science</td>
<td>3</td>
<td>BIOL224 (3 hrs)</td>
</tr>
<tr>
<td></td>
<td>Biology</td>
<td>4</td>
<td>BIOL426 (4 hrs)</td>
</tr>
<tr>
<td></td>
<td>Chemistry</td>
<td>3</td>
<td>BIOL110/110 (2 hrs)</td>
</tr>
<tr>
<td>Computer Science</td>
<td>Computer Science A</td>
<td>3</td>
<td>CHEM121 (3 hrs)</td>
</tr>
<tr>
<td></td>
<td>Computer Science AB</td>
<td>3</td>
<td>CHEM221 (3 hrs)</td>
</tr>
<tr>
<td>Economics</td>
<td>Macroeconomics</td>
<td>3</td>
<td>ECON101 (3 hrs)</td>
</tr>
<tr>
<td></td>
<td>Microeconomics</td>
<td>3</td>
<td>ECON202 (3 hrs)</td>
</tr>
<tr>
<td>English</td>
<td>English Language</td>
<td>3</td>
<td>ENGL121</td>
</tr>
<tr>
<td></td>
<td>English Literature</td>
<td>3</td>
<td>ENGL221</td>
</tr>
<tr>
<td></td>
<td>Foreign Language</td>
<td>3</td>
<td>LATN121</td>
</tr>
<tr>
<td></td>
<td>Foreign Literature</td>
<td>3</td>
<td>SPAN121</td>
</tr>
<tr>
<td>Geography</td>
<td>Human Geography</td>
<td>3</td>
<td>GEOG100</td>
</tr>
<tr>
<td>History</td>
<td>United States History</td>
<td>3</td>
<td>HIST112</td>
</tr>
<tr>
<td></td>
<td>European History</td>
<td>4</td>
<td>HIST113 (3 hrs)</td>
</tr>
<tr>
<td></td>
<td>World History</td>
<td>3</td>
<td>HIST101</td>
</tr>
<tr>
<td></td>
<td>World History</td>
<td>4</td>
<td>HIST102 (3 hrs)</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Calculus AB</td>
<td>3</td>
<td>MATH120</td>
</tr>
<tr>
<td></td>
<td>Calculus BC</td>
<td>3</td>
<td>MATH121</td>
</tr>
<tr>
<td>Music and Dance</td>
<td>Music Theory</td>
<td>3</td>
<td>MUSC109</td>
</tr>
<tr>
<td>Physics</td>
<td>Physics A</td>
<td>3</td>
<td>PHYS122</td>
</tr>
<tr>
<td></td>
<td>Physics B</td>
<td>4</td>
<td>PHYS222</td>
</tr>
<tr>
<td></td>
<td>Physics C</td>
<td>3</td>
<td>PHYS223</td>
</tr>
<tr>
<td>Political Science</td>
<td>Government and Politics, U.S.</td>
<td>3</td>
<td>POLS101</td>
</tr>
<tr>
<td></td>
<td>Government and Politics, Comparative</td>
<td>3</td>
<td>POLS201</td>
</tr>
<tr>
<td>Psychology</td>
<td>Psychology</td>
<td>3</td>
<td>SOCL101</td>
</tr>
<tr>
<td>Sociology</td>
<td>Statistics</td>
<td>3</td>
<td>SOCL201</td>
</tr>
</tbody>
</table>

### Transfer Applicants

Students who have enrolled in classes at a college or university other than Eastern Michigan University must provide an official transcript of credit hours attempted and earned from each institution attended. Transfer applicants may also be required to submit an official high school transcript (or GED certificate). Applicants under the age of 21 who have earned fewer than 12 credit hours of transferable credit (18 quarter hours) are also required to submit results of the ACT or SAT. Information about the MACERAC Agreement can be found in the Graduation Requirements section of this catalog. Applications are available on the Admissions Web site (www.emich.edu/public/admissions/admissions.html).  

### Non-traditional Students

Applicants who are 21 years of age or older and have a high school diploma or GED but have not attempted college work previously may be considered for admission without further requirements. Evidence of the high school diploma or GED is required. Non-traditional students may be required to take selected tests for advising and course placement purposes. Applications are available on the Admissions Web site (www.emich.edu/public/admissions/admissions.html).  

### Veterans

Veterans who have served in the U.S. Armed Forces for more than 181 consecutive days will be admitted upon receipt of the high school transcript, or its equivalent, and a DD214 document verifying military duty. Veterans released from active service for reasons of disability will be considered as having met the 181 consecutive day requirement. If the veteran has attempted college work since release from active duty or while on active duty, the application will be reviewed as that of a transfer student.
Re-enrollment
Former EMU students desiring to re-enroll at EMU after an absence of two years should make application in the Office of Records and Registration, 303 Pierce Hall, at least one month prior to the first day of classes. The applicant should complete the application and return it to the same office. A printable re-enrollment form is available on the Admissions Web site (www.emich.edu/public/admissions/admissions.html). Students may also apply on the Web.

Students who have a past due obligation to the University must clear their obligation through the Student Accounting Office, Pierce Hall, before they will be allowed to register.

Students who have attended any institution of higher education since being enrolled at EMU must have an official transcript sent from that institution to the Office of Records and Registration.

If absence from EMU was by request of the University due to academic dismissal, the student must initiate re-admission with the Academic Advising Center, 301 Pierce Hall.

Guest Students
Guest students are admitted (provided space is available) when regularly matriculated and in good standing at another regionally accredited college or university. The student assumes full responsibility for determining whether or not the courses selected at this university will apply to his/her program of study. While at EMU, the student is subject to Eastern Michigan University's academic policies and student code of conduct. Application for admission as a guest student may be obtained either at the student's home institution or EMU's Office of Admissions. Guest applicants who possess a bachelor's degree must apply as a graduate student through the Office of Admissions.

Dual Enrollment
Dual enrollment may be approved for a student whose primary enrollment is in a high school provided space in the classroom is available. Applicants must submit a high school transcript, obtain high school and parental approval, and meet current academic eligibility requirements for that program.

International Student Applicants
International student applicants are welcomed by the University, which is authorized under federal law to enroll non-immigrant alien students. They may apply for admission to any semester and will need the following documentation in support of the application:

1. Complete an application for admission.
2. Provide official documents of transcripts of academic credit or true attested copies of official documents. (If the documents are not in English, they must be accompanied by an official English translation.)
3. Provide evidence of proficiency in the English language (e.g., TOEFL or MELAB). In some cases, foreign students will be required, as a condition of admission, to take one or more courses in spoken or written English as a Second Language (ESL).
4. Present a statement of financial responsibility covering the total cost of attending the University.

Undergraduate foreign student's English proficiency requirements are listed under the Department of Foreign Languages and Linguistic Studies, see page 88.

For answers to your questions about admission to Eastern Michigan University, call 734.487.3505 or 800.GO-TO-EMU (800.468.6368).

Post-Baccalaureate Academic Options
Please refer to the EMU Graduate catalog if you are pursuing a master's degree or would like to take graduate-level courses for self-improvement.

Post-Baccalaureate Certification Programs
Post-baccalaureate certification programs are designed for individuals who have a bachelor's degree or higher who want to obtain a teaching certificate. The number of additional courses required to obtain a certificate will vary for each individual, depending on how many program requirements are met by courses taken at part of the bachelor's degree. The elementary education test and subject matter tests of the MTTC must be passed prior to recommendation for certification.

Information on curricula for obtaining elementary and secondary certification is listed under the Department of Teacher Education. Information on obtaining an endorsement in any area of special education while obtaining an elementary- or secondary teaching certificate can be found under Department of Special Education. Information on obtaining certification in specialized programs (e.g., art, business education, marketing education, technology and design, music, physical education) must be obtained through the department that houses the program.

Second Bachelor's Degree
Students who wish to obtain a second bachelor's degree should apply as a second bachelor's candidate through the Office of Admissions, 401 Pierce Hall. The office requires an undergraduate application, a non-refundable application fee and official transcripts from each college, university or other post-secondary school attended.

After the admission process is complete, the prospective candidate must make an appointment with an advisor for second bachelor's degree programs in the Academic Advising Center, 301 Pierce Hall (734.487.2171) for evaluation of transcripts and development of a program of study.

- All second bachelor's degree candidates must complete a minimum of 30 new credit hours through Eastern Michigan University.
- Course work taken prior to entering a second bachelor degree program may be applied, provided the grade earned was a C or higher.
- All candidates must satisfy all school/college/department and program requirements for the degree.
- Only EMU alumni can receive additional majors or minors to be pursued after their first degree.
- Candidates who completed undergraduate GPA was less than 2.5, and who wish to pursue Teacher Certification, must declare a non-teaching major and graduate with the Second Bachelor's Program before student teaching.
- Students whose prior undergraduate GPA was 2.5 or above, who wish to enter a Teaching Certification Program, need to contact the Teacher Certification Office in the College of Education (734.487.0275). The Second Bachelor's Program does not process certification programs of study.

Each program is individually designed and must be approved by appropriate faculty advisors as well as the second bachelor program.

Teacher Certification
Students who possess a bachelor's degree and are seeking teacher certification should contact the Teacher Certification Office in the College of Education (734.487.0275) for an advising appointment. Candidates whose undergraduate GPA was less than 2.5 should apply as a second bachelor's candidate (see Second Bachelor's Degree above). Candidates whose undergraduate GPA was 2.5 or better should apply using the graduate application.

ALTERNATIVE METHODS FOR EARNING UNIVERSITY CREDIT

Alternative Credit Options
Eastern Michigan University offers students the opportunity to earn up to 30 hours of academic credit by examination and/or by portfolio. In some instances, students may enroll immediately in advanced courses through various credit-by-examination programs. Especially high test scores may warrant additional academic credit and/or higher placement.

These programs include:

1. Advanced Placement (AP)
2. International Baccalaureate (IB)
3. College-Level Examination Program (CLEP)
4. Credit by Examination (available through academic departments when CLEP is not available)
5. Validation (may be required to transfer two-year college credit for 300- and 400-level EMU courses)
6. Portfolio-assisted Prior Learning Assessment (PLA) — available through participating academic departments

The table that precedes illustrates academic credit available by department for AP IB and CLEP test scores, with the following limitations:

1. Credit may not be duplicated for separate tests and/or completed courses covering the same subject matter. Credit may be denied if the student has already successfully completed a higher-level course in the same subject, or enrolled in a similar course.
2. Credit by examination may be awarded up to a maximum of 30 credit hours.
3. The International Baccalaureate Diploma does not equate automatically with sophomore standing, nor does it automatically waive general education requirements.

For more information, contact the Academic Advising Center.

Students who submit their AP or IB scores to Eastern Michigan University are assured of at least two hours of academic credit for a score of three or higher on an AP exam and four or higher on the higher-level IB exam. Credit by examination and validation is available through academic departments when CLEP examinations are not appropriate in assessing the student's previous education and/or life experiences.

Credit by examination regulations are:

1. The applicant must be admitted to Eastern Michigan University.
2. Prerequisites must be met before credit by examination may be considered for any course.
3. Credit normally will not be awarded for any course below the level of a course for which the student already has credit or that the student is taking or has taken.
4. Courses such as workshops, special topics, seminars and directed or independent studies are excluded from credit by examination.
5. Academic departments may exclude certain other courses from credit by examination.
6. A student who fails to pass such an examination will not be permitted to take another examination in the same course until four months have elapsed, and until the student has presented evidence of sufficient further study to justify reexamination.

Validation regulations are implemented after all college-parallel credit earned at accredited two-year colleges has been recorded on the student's official EMU record and the transfer has been completed. If further validation of two-year college credit is required for 300- and 400-level EMU courses, two ways to achieve this are:

1. Satisfactory completion of the next more advanced course in the series designated by the department head.
2. Passing a comprehensive examination in the course for which EMU validation is requested.

Procedures for credit by examination and validation are:

1. Pick up the application for credit by examination/validation at the Office of Records and Registration at 303 Pierce Hall.
2. Take the application to the head of the department in which the course is offered. The department head will evaluate the request and make one of the following decisions:
   a. Grant permission for credit by examination/validation
   b. Deny permission for credit by examination/validation
   c. Hold request for further investigation
3. Once permission is granted and the time and place of exam are agreed upon, the student will validate the permission form by paying the fee to the EMU Cashier's Office.
4. The student will present the validated permission form to the instructor prior to taking any exam or activity for credit by examination/validation.
5. After the instructor evaluates student performance and indicates D/F on permission form, a copy of the written examination or explanation of the activity as well as the instructor's total evaluation will be placed on file in the office of the department head. The department head will sign the permission form indicating receipt of instructor's evaluation.
6. The department head will forward the permission form to the Office of Records and Registration for posting to the student's record.

The fee for each undergraduate exam is $10.

Prior Learning Assessment (PLA)

Portfolio-assisted Prior Learning Assessment is available through participating academic departments when CLEP, credit by examination and validation are not appropriate in assessing the student's previous learning.

Call the Office of Prior Learning Assessment at 734.487.9801 or 800.777.3521 for additional information.

Academic standards for portfolio-assisted Prior Learning Assessment are:

- Credit is given only for learning and not for experience.
- College credit is awarded only for college-level learning.
- Credit is awarded only for learning that has a balance, appropriate to the subject, between theory and practical application.
- The determination of competence levels and credit awards is made by academic experts in the appropriate subject matter.
- Credit is appropriate to the academic context in which it is accepted.

Procedures for portfolio-assisted Prior Learning Assessment are:

1. The applicant contacts the PLA Office for information about the PLA process.
2. The applicant must be admitted to Eastern Michigan University.
3. The student completes UNIV 279 before requesting credit through the process of portfolio-assisted Prior Learning Assessment.
4. The student compiles portfolios to present for assessment within one year of completion of UNIV 279.
5. The student presents the master portfolio and departmental portfolios to the Office of Prior Learning Assessment for review upon successful review, the PLA office issues appropriate forms.
6. The student pays the required assessment fee to Eastern Michigan University.
7. The Office of Prior Learning Assessment distributes portfolios to the department heads for assignment to faculty assessors.
8. Faculty assessors evaluate the portfolio; faculty assessors may request additional demonstrations of competence.
9. Faculty assessors return portfolios and assessments to the Office of Prior Learning Assessment.
10. The Office of Prior Learning Assessment notifies the student of credit award or denial and also modifies the Academic Records Office of Records and Registration of awarded credit for posting to the student's record.

Undergraduate Transfer Center

200 Pierce Hall
734.487.1432
734.487.1446 (fax)
E-mail: transfercenter@emich.edu

Hours: Monday-Friday 8 a.m. to 5 p.m. (fall and winter semesters - also open Tuesdays and Wednesdays until 7 p.m.)

The Undergraduate Transfer Center (UTC) is designed to assist prospective and current transfer students.
FINANCIAL INFORMATION AND STUDENT ACCOUNTS

Tuition and Fees

All University fees and assessments are subject to change without notice at any time by action of the Board of Regents.

Registration

Official registration day is the day students complete the initial registration for the semester or session. Students must be registered before attending class.

The registration fee is $40 for each semester. This service fee is assessed at the time the student registers.

An additional late registration fee of $130 per semester is charged to students who do not complete registration prior to the official first day of classes each semester. The last day to register is at the mid-point of the term or session.

Financial obligations must be met by students by the posted due dates in order for students to be eligible for the next registration period (or graduation). Transcripts, diplomas or other assessments of record will be withheld and students will be ineligible for further registration until obligations have been fulfilled.

Cancellation of registration by a student who decides not to return to EMU after registering in advance for classes must be initiated by the student on a signed cancellation-of-registration form either in person or by letter to the Office of Records and Registration, 303 Pierce Hall. If students have applied for University housing, they also must contact the contact in the Housing Office. This is necessary for cancellation of tuition and room and board assessments.

Failure to withdraw may leave students with responsibilities for payment of tuition, fees and housing charges that will not be paid by financial aid.

Tuition

Tuition is assessed for all credit hours for which the student is registered. Regardless of student class level, undergraduate tuition is assessed for all courses through the 499-level. Graduate tuition is assessed for all courses 500-level and above.

Off-campus tuition rates are the same as on-campus tuition rates (online courses, which are offered at in-state tuition rates, cost an additional $40 per credit hour).

Tuition for auditing classes is the same as for credit classes.

2004-2005 Michigan and Ohio resident rates, per credit hour:
Undergraduate courses up to 196: $156.90
Graduate courses lower level (500-699): $284.20
Doctoral assessment upper level (700 and above): $327.50

2004-2005 non-resident rates, per credit hour:
Undergraduate courses up to 196: $190.45
Graduate courses lower level (500-699): $375.35
Doctoral assessment upper level (700 and above): $648.70

Residence Classification for Tuition Purposes Policy

1. Regulations for determining residence classification

A person enrolling at Eastern Michigan University shall be classified as a resident or a non-resident for tuition purposes. A student’s residence status shall be determined at the time of his/her initial admission to the University. In order to determine the domicile of a student, the following regulations will be utilized:

A. Establishment of Residence

No student shall be eligible for classification as a resident for tuition purposes unless the student has demonstrated that he/she has established domicile in Michigan.

B. Minors and Dependents over 18

The domicile of a student who is not yet 18 years of age follows that of the student’s parents or legal guardian. If that student’s
parents or legal guardian would qualify in accordance with the University's regulations for determining residence classification, that student shall be considered a Michigan resident for tuition purposes.

Students 18 years of age or older who are claimed as dependent for federal income tax purposes by their parents or guardians at the time of registration and for the entire year preceding the year in which they register will be classified for tuition purposes as though they were minors.

C. Nondependent Student
An independent student 18 years of age or older is considered eligible for residence classification if the student has demonstrated that he/she has established domicile in Michigan.

D. Spouse
The domicile of a student who otherwise would be classified as a nonresident for tuition purposes will follow that of the student's spouse, if the spouse is eligible for classification as a Michigan resident for tuition purposes (applicable only to U.S. citizens or to aliens admitted to the United States in accordance with Subsection E).

E. Alien
An alien (non-citizen) student shall be eligible for classification as a Michigan resident for tuition purposes if he/she is domiciled in the United States and also qualifies in accordance with the University's Regulations for Determining Residence Classification.

In order to demonstrate that he/she is domiciled in the United States, the student must be a permanent resident, or an alien with one of the following visa classifications, or an alien with other documentation from the Immigration and Naturalization Service that reflects such status:

Visa classifications: E-1 — treaty trader, spouse, and children; E-2 — treaty investor, spouse, and children; G-4 — international organization officer or employee and members of immediate family; H-1 — temporary worker of distinguished merit and ability; H-2 — temporary worker performing services unavailable in the U.S.; H-3 — trainee; H-4 — spouse or child of H-1, H-2 or H-3; J-1 — exchange visitor (limited to persons engaged as trainee, teacher, professor or research scholar); J-2 — spouse or child of J-1 as limited above; L-1 — intra-company transferee; L-2 — spouse or child of L-1.

F. Migrant
Migrant status is one factor considered when determining if a student is domiciled in Michigan for tuition purposes. Michigan migrants are defined as individuals who have made their livelihood in seasonal work in the state of Michigan, and have traveled interstate for this purpose. Migrant students shall be considered Michigan residents for tuition purposes if they, or their parents or legal guardian, were employed in Michigan for at least two months during each of three of the preceding five years. Verification of employment as migrant workers should be secured from the Michigan Farm Labor and Rural Manpower Services Office. Other appropriate evidence also may be used by migrant workers to establish their status.

G. Spouse or Dependent of a U.S. Military Service Person
The spouse or dependent of a person currently serving in a branch of the U.S. military service (excluding reserve programs) or of a person who died while serving in a branch of the U.S. military service shall be eligible for classification as a Michigan resident for tuition purposes if their military service person qualified in accordance with the University's regulations for determining residence classification immediately before entering the military service as a Michigan resident.

H. U.S. Military Service Veteran
A veteran of a branch of the U.S. military service (excluding reserve programs) shall be eligible for classification as a Michigan resident for tuition purposes if that person qualifies in accordance with the University’s regulations for determining residence classification immediately before entering the military service as a Michigan resident.

II. Guidelines And Criteria For Determining Residence Classification
Since a student normally comes to Eastern Michigan University for the primary or sole purpose of attending the University rather than to establish domicile in Michigan, one who enroll in the University as a nonresident shall continue to be so classified throughout his/her attendance as a student, unless and until he/she demonstrates that his/her previous domicile has been abandoned and a Michigan domicile is established.

The following guidelines and criteria shall be applied when reviewing a student's classification. It is recognized that no one of the following criteria shall, standing alone, necessarily be controlling. All factors indicating an intent to make Michigan the student's domicile will be considered by the University in classifying a student.

A. The following facts and circumstances, although not necessarily conclusive, have probative value in support of a claim for residence classification:

1. Domicile in Michigan of family, guardian, or other relatives or persons legally responsible for the student.
2. Former domicile in Michigan and maintenance of significant connections therein while absent.
3. Self-supporting reliance upon Michigan sources for financial support (verification of Michigan income tax liability must be provided).
4. Continuous presence in Michigan during periods when not enrolled as a student.
5. Long-term military commitments in Michigan.
6. Acceptance of an offer of permanent employment in Michigan (in a position not normally filled by a student).
7. Ownership of real estate in Michigan.

B. Please note. The following circumstances, standing alone, shall not constitute sufficient evidence of domicile to affect classification of a student as a resident under these regulations:

1. Voting or registration for voting.
2. Employment in any position normally filled by a student.
3. The lease of living quarters.
4. A statement of intention to acquire a domicile in Michigan.
5. Automobile registration, driver's license.
6. Other public record, e.g., birth records.

III. Redetermination of Residence Status
A student's residence status may be reviewed at each subsequent registration, if a student's circumstances should change to the extent that he/she would no longer be considered a Michigan student for tuition purposes, as herein described, that student shall be reclassified as a nonresident for tuition purposes 12 months thereafter.

It shall be the responsibility of all students, prior to registering, to raise questions in the Student Business Services regarding their right to be registered as a resident for tuition purposes.

The administration is authorized to establish procedures and delegate authority for determining the residence status of students for tuition purposes.

A tuition reciprocity agreement with Ohio, entered into by the Board of Education and the Ohio Board of Regents in 1981, allows an Ohio resident to attend Eastern Michigan University at Ohio resident tuition rates. Monroe County residents can attend the University of Toledo at Ohio resident tuition rates.

Tuition and Fee Payment
Tuition and fee payment for fall and winter semesters may be made in two installments. There is no installment payment plan for spring and summer sessions. The exact due dates are printed on the invoice from Student Business Services and is published in the class schedule book for each semester. To ensure a correct billing address, it is the responsibility of the student to inform the University of any address changes by completing a change of address form in the Registration Office.
Special billing addresses are processed only by the Student Business Services office. 

Eastern Michigan University accepts VISA and MasterCard credit cards for payment of tuition, fees and room and board.

**Additional Tuition Payment Plan**

EMU offers a 10-month payment plan through an outside agency for fall and winter semesters only. There is a nominal charge for using the plan, which can be used to cover tuition, required fees and room and board costs. Contact Student Business Services for details.

EMU's optional installment payment plan is offered in the fall and winter semesters only and is applicable to tuition and room and board. A minimum of 50 percent must be paid initially and the remainder by the eighth week of the semester. An installment service fee of $20 is assessed with the first installment billing and a late payment fee of $20 per month is assessed on past-due balances.

If a student account is past due for a current semester, enrollment, University housing, and other University services (such as release of a transcript) are subject to suspension until the account is brought into current status. Payment of assessments for a current semester does not relieve the student of the obligation for payment of any balance from a prior semester.

Any exceptions shall be by authority of the vice president for business and finance.

Workshop sessions offered for one, two and three weeks during the spring and summer sessions are assessed the same registration and tuition fees as regular classes. Only one registration fee for enrolling in a session is assessed.

An adjustment of 100 percent of the tuition assessment will be made to students who withdraw from a workshop prior to the close of business (5 p.m.) on the first day of the workshop. No other adjustment or refund will be granted.

**Fee Adjustments**

Beginning with the start of classes, a program adjustment fee of $10 per drop transaction will be assessed for each student-initiated program adjustment.

For final adjustment deadlines and coordinate fee schedules, see the Class Schedule Books or on the Web at www.emich.edu.

No program adjustment fees will be assessed for changes required as a result of University actions.

**Credit Adjustment for Total Withdrawal**

A credit adjustment of 100 percent of tuition and fees for the fall and winter semesters, less an administrative fee, will be made to those students who cancel their registration or withdraw from the University through the eighth class day. For the spring and summer sessions, a 100 percent credit adjustment, less an administrative fee, will be made during the first four days of classes. Actual dates are printed in the class schedule book for each semester and session or on the Web.

A credit adjustment of 50 percent of tuition and fees for the fall and winter semesters, less an administrative fee, will be made to those students who withdraw from the University (all classes) from the ninth through the eleventh class day. For the spring and summer sessions, a 50 percent credit adjustment, less an administrative fee, will be made from the fifth through tenth class day of the session. Actual dates are printed in the Class Schedule for each semester and session.

A credit adjustment of 25 percent tuition and fees for the fall and winter semesters, less an administrative fee, will be made to those students who withdraw from all classes between the 20th through the 35th class day. For the spring and summer sessions, a 25 percent credit adjustment, less an administrative fee, will be made from the eleventh through nineteenth day of the session. Actual dates are printed in the class schedule for each semester and session.

No credit adjustment will be made after the above stipulated dates.

**Decrease in Academic Load**

For the fall and winter semesters, 100 percent tuition credit, less a $10 program adjustment fee, will be processed for those students who decrease their academic load prior to the ninth day of classes. For the spring and summer sessions, a 100 percent credit adjustment, less a $10 program adjustment fee, will be made during the first four days of classes. Actual dates are printed in the class schedule for each semester and session.

No credit adjustments will be made after the above stipulated dates.

If a student or parent feels that individual circumstances warrant exceptions from the credit adjustment or University withdrawal adjustment policy:

1. Obtain a Tuition and Fee Appeal Application from the Student Business Services in 203 Pence Hall. Complete and return the application along with an explanation of the extraordinary circumstances involved and supporting documentation of those circumstances. An approval or denial will be issued in writing by return mail. If the application is denied,
2. Appeal in writing to the Director of Student Business Services at the address above. Be sure to include any additional pertinent information with your written appeal.
3. If, after following the procedures in steps 1 and 2, an acceptable solemn is not achieved, a formal written appeal may be made to the Controller, 107 Welch Hall.

Tuition and fee appeal applications must be submitted at early in the semester as possible. Applications received later than 15 calendar days after the close of the semester may be denied.

**The General Fee**

EMU has the responsibility to maintain certain services and facilities on campus for the comfort and convenience of students, and to maintain academic accreditation. Examples are: improvements to academic facilities, Snow Health Center, learning technology labs, athletic facilities, performing arts facilities and Student Government. These are funded through a general fee of $21 per credit hour and assessed to all students. Not every supported service or facility is used by every student, but the overall good of the student body is served.

**The Program Fee**

Students in upper-level and graduate courses in certain areas of study will be charged program fees ranging from $22.50 to $52.50 per credit hour.

**Student Union Fee**

A student union fee of $1.50 per credit hour is charged to all students to service the debt on the new student union building. The fee will increase each summer by .75 cents per credit hour for three years, capping at $3 per credit hour beginning summer term 2006, and thereafter.

**The Technology Fee**

Each student will be charged a technology fee of $10 per credit hour to support the technology of the University. This fee applies to any on campus, off campus and online courses.

**Service Fees**

Room and board fees are published by the Housing Office and are set by action of the Board of Regents.

A per-credit-hour health care fee is charged. Payment entitles the student to health care at reduced rates.

Students' spouses, faculty and staff and their spouses may avail themselves of health center services, but at somewhat higher rates. If they desire, these persons may pay the participation fee at Snow Health Center and become eligible for reduced rates. The complete schedule of health service fees is available at Snow Health Center.

A graduation fee is charged to each student who makes application for graduation. It covers the cost of mailing of diplomas and other specific graduation items. The fee is assessed once for each degree and is non-refundable.

<table>
<thead>
<tr>
<th>Undergraduate degree fee</th>
<th>$90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master's and specialist's degrees</td>
<td>$90</td>
</tr>
</tbody>
</table>

Parking your motor vehicle in University parking lots requires the proper parking permit. To purchase your parking permit, you must first register your motor vehicle with the Public Safety Department, located on
the ground floor of the parking structure. The application will contain information to indicate whether the permit will be mailed to you or whether you must pick it up in person.

Motor vehicle rates are as follows:

**Commute Permits:**
- FA and WI ........................................... $120
- SP and SU ............................................ $65

**Resident Permits:**
- Apartment Housing FA and WI .................. $50
- Apartment SP and SU .............................. $25
- Residence Hall FA and WI ...................... $100
- Residence Hall SP and SU ..................... $50
- Brown-Munson FA and WI ..................... $100
- Brown-Munson SP and SU ...................... $50
- Graduate Assistant FA and WI .............. $40
- Graduate Assistant SP and SU ............. $20

All students meeting the requirements of the law are eligible to operate and maintain motor vehicles on campus. Motor vehicles are required to be operated within the provisions of the Traffic, Parking and Pedestrian Ordinances of the University and the city of Ypsilanti. Further details are available in the Parking and Traffic Regulations brochure available from campus police. Permit cost is subject to change.

**Special Fees**
Music fees are charged for private lessons according to the following schedule:

| Music majors | $60 per semester (maximum) for all instruction. | Other University students | $50 per semester for one-hour lesson | $30 per semester for half-hour lesson. |

Students from public schools, the community and EMU staff and families: lessons are available through the EMU Community Music School. Fees vary depending on the length of the lesson and the instructor. Call the Department of Music and Dance for details.

Lessons are arranged through the Department of Music and Dance. The applied music fee is assessed to each student's account at the close of the program adjustment period. This fee is not refundable after the first lesson. Music fees of $15 per credit hour for clinical laboratory courses are charged in addition to per credit hour fees. These courses are listed below:

- NURS209 The Art and Science of Nursing I Laboratory (3 hrs) ........................................... $45
- NURS251 The Art and Science of Nursing II Laboratory (3 hrs) ........................................... $45
- NURS305 Nursing Care of Childbearing Families Laboratory (3 hrs) ........................................... $45
- NURS307 Nursing Care of Childbearing Families Laboratory (3 hrs) ........................................... $45
- NURS331 Adult Health Nursing I Laboratory (3 hrs) ........................................... $45
- NURS341 Community Mental Health Nursing Laboratory (3 hrs) ........................................... $45
- NURS351 Psychiatric/Mental Health Nursing Laboratory (3 hrs) ........................................... $45
- NURS405 Adult Health Nursing II Laboratory (4 hrs) ........................................... $60
- NURS451 Community Health Nursing Practice (3 hrs) ........................................... $45

Materials and exam costs are assessed at the close of the program adjustment period in certain courses.

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**Student Expenses**

**Estimated Academic Year Costs**

(Residence Hall and Commuter Students)

The following budget represents typical expenses for a freshmen student. Michigan or Ohio resident, taking a total of 31 undergraduate credit hours during fall and winter semester, living in a University residence hall or off-campus apartment and attending the full academic year (fall and winter semesters).

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and fees</td>
<td>$5,762</td>
</tr>
<tr>
<td>Books and supplies</td>
<td>$900</td>
</tr>
<tr>
<td>Residence hall room and board</td>
<td>$6,082</td>
</tr>
<tr>
<td>Estimated additional costs of personal, transportation and miscellaneous expenses</td>
<td>$1,700</td>
</tr>
</tbody>
</table>

**Personal expenses include:** clothing allowance, medical/dental expenses, recreation, personal hygiene articles. Out-of-state students should allow for additional tuition and transportation costs.

Students can anticipate the following real costs: tuition and fees, books, room and board, personal and miscellaneous expenses and transportation for an eight-month academic year:

- On-campus student ................................ $12,744
- Commuter student .................................... $9,550
- Off-campus student .................................. $12,744

The above budgets are based on financial aid average costs for 2004-2005.

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**FINANCIAL ASSISTANCE**

During the 2003-2004 school year, Eastern Michigan University provided $126,398,857 in financial aid to more than 14,000 students in the form of scholarships, grants, awards, GA tuition/scholarships, athletic grants-in-aid, part-time employment and fellowships.

The federal government, state of Michigan, Eastern Michigan University and private sources provide program funding. While most awards are based on financial need, scholarships often have academic achievement requirements or other eligibility criteria.

Federal and state aid is awarded to help pay college costs based on the assumption that parents and students will contribute as much as they are financially able. To the extent that the family does not have sufficient resources to meet the costs of higher education, students may qualify for need-based financial aid.

**Academic Scholarships**
- New freshmen who are admitted by February 15 and transfer students by May 15 for the following fall are considered for scholarships through the EMU Scholarship application. Applications are available at the Office of Financial Aid in October and are due in January.

**Presidential Scholarship** — Four-year award that pays 30 credit hours per year of in-state tuition, housing, food allowance and mandatory fees. Awards are based on a competitive exam. High school seniors must have either a 3.7 GPA or a 3.5 to 3.0 GPA with a minimum 25 ACT or 1150 SAT. Requires an additional application, available at high school beginning each September. Fifteen awards are made per year. Minimum $3,500 for renewal. Recipients must live in University residence halls their first two years. Deadline to apply is generally November 20 of each year.

**Regents Scholarship** — Four-year award that pays $2,600 per year. High school seniors must have a 3.7 GPA with a 25 ACT or 1150 SAT. Minimum 3.5 for renewal. Recipients must live in University residence halls their first two years. Must be admitted by February 15 for the fall semester (or May 15 for transfer).
Recognition of Excellence Scholarship — Four-year award that pays $1,500 per year. High school seniors must have a 3.5 GPA with a 21 ACT or 1000 SAT. Minimum 3.3 for renewal. Recipients must live in University residence halls their first two years. Must be admitted by February 15 for the next fall semester (or May 15 for transfer).

National Scholars Program — Four-year award that pays 30 credit hours per year (15 per semester) of out-of-state tuition differential. High school seniors must have a 3.5 GPA with a 21 ACT or 1000 SAT. Minimum 3.0 for renewal. Recipients must live in University residence halls their first two years. Must be admitted by February 15 for the next fall semester.

Valedictorian and Salutatorian Scholarship — One-year award of $2,000. This scholarship will be awarded to new freshmen who graduate as the valedictorian or salutatorian from their high school. Notification deadline is June 30.

Great Lakes Award — Four-year award that pays $6,000 per year. Available to new freshmen who have permanent residence in Canada, Wisconsin, Minnesota, Illinois, New York, Pennsylvania, or Indiana. High School seniors must have a minimum of 3.0 high school GPA for consideration and be admitted by February 15.

Eastern Michigan Merit Plus — One-year award that ranges from $500 to $1,250. Available to new freshmen who have a minimum 3.0 high school GPA and who have earned a qualifying score on the MEAP for the Michigan Merit Award.

Wade McCune Scholarship — Eastern Michigan University participates in this scholarship program. The program originates at the high school and determines the student eligibility. Students receiving the scholarship should contact the program administrator about accepting their scholarship or transferring remaining scholarship eligibility to EMU. The value of this scholarship is the full cost of tuition less any tuition specific scholarships or grants.

Leader Award — One-year award of $500-750. High school seniors must have a GPA of 3.0 and must show volunteer involvement in their school or community for consideration. Students must be admitted by February 15 for the next fall semester.

Community College Scholarship — One-year award of $1,000. Students must have completed at least 30 credit hours with a minimum cumulative 3.5 college GPA and must be admitted by May 15 for the next fall semester.

Departmental Scholarship — Award amounts vary and are made by department. Selections can be based on academic as well as representative talent within that department or major.

Music Service Awards — Award amounts vary. Awards are made to students who perform in EMU's music programs or provide outstanding service to the Music and Dance Department. Deadline is June 1 for the next fall semester.

Communication/Theatre Arts Service Awards — Awards are made to students who perform in forensics, theatre arts programs or make outstanding contributions to the Communication Theatre Arts Department.

Army and Air Force ROTC Scholarships are also available. Contact the ROTC office at 734-487-1020 for more information.

Many academic scholarships are provided by external sources, including community agencies, service organizations, charitable organizations, civic groups and foundations. Students should investigate these potential resources by checking with public and university libraries for scholarship resource books and by contacting the agencies directly.

General Eligibility Requirements for Financial Aid
By completing the Free Application for Federal Student Aid (FAFSA), eligible students will be considered for all federal and state aid programs. To receive aid, students must:

- Be enrolled in an eligible program;
- Be a U.S. citizen or an eligible noncitizen;
- Demonstrate need;
- Make Satisfactory Academic Progress toward a degree;
- Not be in default on a federal student loan and;
- Not owe a refund on any federal Title IV, state or university aid program.

Determination of Need-based Financial Aid Awards
The award process for the upcoming academic year begins in April. Aid is awarded to students once they have been officially admitted to the University and EMU receives the institutional record of the Student Aid Report from the federal government. Once the Office of Financial Aid has determined the aid package, a Financial Aid Award Statement will be made available to the student applicant. The award statement contains information regarding the type and amount of aid, disbursement information and other instructions necessary to complete the aid process.

Financial aid awards are processed and funded in compliance with established federal, state and institutional policies.

Federal and State Financial Aid
To be considered for federal and state aid programs, students complete the Free Application for Federal Student Aid (FAFSA) available through high schools and college financial aid offices beginning each November. The FAFSA must be filed every year to determine eligibility for the upcoming academic year.

Priority funding will be offered to students who receive their Student Aid Report from the FAFSA processor dated March 15 or earlier. To meet this deadline, applications should be filed during the month of January.

The application collects information about family income and assets, family size and the number of family members attending college at least half time. Based on an analysis of this data, the federal government determines the Expected Family Contribution that is identified on the Student Aid Report. The Expected Family Contribution is subtracted from the University’s cost of education to determine whether there is a difference between the family’s ability to pay and the college budget. Most federal and state programs are awarded based on a student's need.

The cost of education consists of an estimate of direct and indirect expenses. The direct costs are tuition, fees and room and board. The indirect costs are books and supplies, transportation and miscellaneous personal expenses. The cost of education at EMU is determined annually.

- The cost of education* for undergraduate students for fall and winter 2002-2003 semesters was:
  - On-campus ................................ $14,262
  - Off-campus ................................ $14,262
  - Commuter .................................. $11,068

Note: *Estimated and subject to change.

Federal Financial Aid Programs
The maximum amounts of aid described below are subject to change by federal and state regulations or university policy.

Federal Pell Grant — Annual awards of up to $4,050 are available to undergraduate students who are enrolled and have demonstrated financial need.

Federal Supplemental Educational Opportunity Grant — Awards range from $100 to $2,000 per year. Priority is given to students who receive a Federal Pell Grant.

Federal Perkins Loan — Annual awards are available to undergraduate and graduate students who are enrolled at least half-time and have demonstrated financial need. Undergraduates may borrow up to
Loans without a FAFSA
Students may apply for the following loans without a FAFSA:

**University Short Term Loans (USTL)** — Available to part-time and full-time students who:
1. are currently enrolled at the University,
2. have earned previous credit at Eastern,
3. qualify academically (minimum GPA of 2.0 “C” undergraduates, 2.5 GPA of 3.0 “B” graduate),
4. have no past due obligations, and
5. have repaid previous loans satisfactorily.

Students may borrow up to $250 without a co-signer or up to $500 with a co-signer. Applications may be obtained at the Student Loan Account Office, 205 Pierce Hall. Loans are processed within 24 hours, Monday-Friday.

**The Small Loan Fund** — Provides 30-day, short-term, interest-free loans to $15 maximum to help students meet an emergency. Loans are available at the Cashier’s Office, Pierce Hall.

**Tax Information**
Grants and scholarships received in excess of qualified tuition, fees, books, and supplies may be taxable income. Students who do not earn enough money to file an income tax return may need to determine if their financial aid makes a difference in their tax filing status. EMU will issue 1098T and 1098E forms to assist in determining taxable income and eligibility to claim the Hope or Lifetime Learning Tax Credits for Student Loan Interest Deduction. Contact the IRS with any questions regarding tax issues.

**ACADEMICS**

**Degrees**
Basic undergraduate degrees conferred by the Board of Regents on recommendation of the president and faculty are the bachelor of science (B.S.) and the bachelor of arts (B.A.) degrees, described fully in the introduction to the College of Arts and Sciences.

Bachelor’s degrees are awarded in the following fields:
- **Arts** (B.A.) — see College of Arts and Sciences
- **Science** (B.S.) — see College of Arts and Sciences
- **Business** (B.B.A., B.B.S.) — see College of Business and Economics
- **Education** (B.Ed., M.Ed.) — see College of Education
- **Health** (B.S.N., M.S.N.) — see College of Health and Human Services
- **Nursing** (B.Nurs., M.Nurs.) — see College of Health and Human Services
- **Social Work** (B.S.W., M.S.W.) — see College of Social Work
- **Law** (J.D.) — see College of Law
- **Engineering** (B.Eng., M.Eng.) — see College of Engineering
- **Architecture** (B.Arch., M.Arch.) — see College of Architecture and Urban Studies
- **Education** (B.Ed., M.Ed.) — see College of Education
- **Business** (B.B.A., B.B.S.) — see College of Business and Economics
- **Health** (B.S.N., M.S.N.) — see College of Health and Human Services
- **Nursing** (B.Nurs., M.Nurs.) — see College of Health and Human Services
- **Social Work** (B.S.W., M.S.W.) — see College of Social Work
- **Law** (J.D.) — see College of Law
- **Engineering** (B.Eng., M.Eng.) — see College of Engineering
- **Architecture** (B.Arch., M.Arch.) — see College of Architecture and Urban Studies
- **Education** (B.Ed., M.Ed.) — see College of Education
- **Business** (B.B.A., B.B.S.) — see College of Business and Economics
- **Health** (B.S.N., M.S.N.) — see College of Health and Human Services
- **Nursing** (B.Nurs., M.Nurs.) — see College of Health and Human Services
- **Social Work** (B.S.W., M.S.W.) — see College of Social Work
- **Law** (J.D.) — see College of Law
- **Engineering** (B.Eng., M.Eng.) — see College of Engineering
- **Architecture** (B.Arch., M.Arch.) — see College of Architecture and Urban Studies

Many students also select pre-professional fields of study such as medicine, dentistry and forestry (listed in departments) or seek certification and/or licensing in teaching, medical technology and similar fields (listed at the end of this section).

Graduate degrees offered by the University are master of arts, master of science, master of fine arts, master of business administration, master of science in accounting, master of public administration, master of business education, master of science in computer-based information systems, master of professional studies, master of social work, master of nursing, master of occupational therapy, master of science in organizational behavior and development, and master of liberal studies. In addition, there is a certificate in arts degree and diploma in educational leadership and psychology. All are listed in the graduate catalog.

Bachelor’s degree programs require all students to take courses in various subject areas as specified both in the general education requirements and in departmental majors and minors.

** Majors/Minors**
Each student must complete a major subject of at least 30 credit hours and a minor subject of not less than 20 credit hours with the following exceptions:

1. A student on the elementary teaching curriculum may present three minors of not less than 20 credit hours — each of which are subject fields taught in the elementary grades.
2. A student who completes at least 60 hours of study will automatically satisfy major/minor requirements.

Hours of credit counted on a minor may not be applied to a major or another minor or vice versa. General education courses may be applied toward a major or a minor where appropriate.

Professional education courses do not count toward majors and minors except in cases in which such courses are specifically required or indicated as permissible as part of a major or minor.

All students, including transfer students, must complete at least 60 semester hours of credit at Eastern Michigan University to receive a degree.

**Degree Requirements**

Residency: Candidates for the bachelor’s degree must earn at least 30 semester hours at Eastern Michigan University. These 30 hours may be taken on or off campus.

Of the last 30 semester hours, prior to the granting of a bachelor’s degree, at least 10 hours must be taken in courses offered by Eastern Michigan University. These 10 hours may be taken on or off campus.

Students with credit from a junior or community college must earn a minimum of 60 semester hours exclusive of junior or community college credit. This rule is waived if a major has been completed through a program-to-program articulation agreement.

**Subject Limitation:** No more than 60 hours in any one academic department may be applied toward the minimum of 124 hours required for a bachelor’s degree.

**Distance Education/Independent Learning credit:** No more than 15 credit hours of correspondence or online credit may be applied toward a bachelor’s degree or used to meet any of the residence requirements. There is no restriction on other types of distance learning or independent learning course formats, which may be applied toward a bachelor’s degree, residence and grade point average.

**Minimum GPA:** Students will not be graduated if their grade point average in their degree program (major and minor) is less than 2.0. Credit earned at EMU must average at least 2.0.

**Physical Education and Health:** All students must earn at least two credits of physical education and health as follows:

1. PECG 210 Lifetime Fitness and Wellness
2. Any two courses in Physical Science and Leadership (2 semesters)
3. PECG 140 Marching Band (2 semesters)
4. PECG activity course requirements of the Music Therapy program (2 courses)
5. DTC155 Healthy Lifestyles

Students who started any college prior to fall 1996 may select from 1 through 4 above OR two credits from any PECG activity courses.

This requirement may be modified or waived if, for reason of disability, the student is unable to participate in physical education activity
courses. Physical disability shall be determined by the health service and, in accordance with the school chair of Health Promotion and Human Performance, a decision will be made as to appropriate modification or waiver of the requirement to ensure maximum benefit to the student.

Any student may apply up to eight hours of credit earned in physical education activity courses to the minimum 124 credit hours required for graduation.

Students majoring in physical education or dance may apply to the minimum 124 credit hours the minimum number of hours in activity courses required for their respective majors.

All grades received in physical education activity courses, including those which exceed the credit hour limits prescribed above, are used in computing the student’s GPA. Military Service/Science: Students who have been in military service will be granted credit in Military Science and Leadership as follows:

1. Those who have served for one year in the Army, Navy, Air Force, Marine Corps, Coast Guard (including attendance at service academies) will be given credit for the first two years of Military Science and Leadership; those who have served for six months in service will be given credit for the first year of Military Science and Leadership.

2. Students who have completed the final two years of Army JROTC (junior and senior level) may receive credit for EMU Military Science and Leadership courses MSL101 and 102, after conducting an interview with the Professor of Military Science and Leadership. Students completing all four years may receive credit for not only MSL100-level but also 200-level courses, after an interview and assessment of JROTC performance by the Professor of Military Science and Leadership.

Veterans who are awarded credit for Military Science and Leadership under 1. above are, nevertheless, eligible to enter the advanced course voluntarily, if qualified, and should consult the Department of Military Science and Leadership on special opportunities that are available (see Department of Military Science and Leadership Advanced Program). Military Science and Leadership courses are credited in the 124 minimum credit-hour requirement for the bachelor’s degree.

Degree Candidates
Candidates for a degree and/or certificate must make formal application for graduation during the first two weeks of the final semester or session. (The application should be made after final registration is complete but not later than the last day of program adjustment for the semester or session in which the student expects to graduate.)

Application forms, obtained in the Office of Records and Registration, 303 Pierce Hall, must be submitted with the $50 graduation fee to the Cashier’s Office, 201 Pierce Hall, or charged to the student’s account.

Failure to meet the application deadline will result in the candidate’s graduation being delayed until the following graduation period. Failure to satisfy degree requirements, including the removal of incompletes in required courses or providing official transcripts for course work taken at other colleges or universities, will necessitate that the student file a new application for graduation for the subsequent graduation period. However, only one application fee is required.

Financial obligations must be met before students may receive their diplomas.

Certification
Six-year Provisional Teaching Certificates are conferred by the Michigan State Board of Education upon recommendation of Eastern Michigan University. The University recommends for provisional certification only those students who have satisfied the curricular requirements in one of the teacher education degree programs, and have completed and passed the appropriate state competency tests.

Certificates always expire on June 30 of the calendar year. The two certificates recommended by Eastern Michigan University are:

State Elementary Provisional Certificate*, which certifies the holder to teach all subjects in elementary grades (K-5) and appropriate majors and/or minors in grades 6-8 middle school, and 6-8 self-contained.

State Secondary Provisional Certificate all subjects*, which certifies the holder to teach majors and minors in grades 7-12.

Certificates are issued by the Michigan State Department of Education. Issue date and expiration date are printed on the face of the certificate.

Note
A holder of this certificate who has completed EMU’s curriculum requirements in art, speech pathology, industrial arts, music, Japanese or physical education is normally eligible to teach in the specialty in grades K-12.

Vocational certificates qualify the holder to teach in the programs named below in schools offering programs that are reimbursed by federal and state funds allowed for that purpose. The vocational certificates issued are:

State Secondary Provisional Certificate with vocational endorsement in Office and/or Distributive Education.

State Secondary Provisional Certificate with vocational endorsement in Trade and Industrial Education.

Information on continuing certification may be obtained from the coordinator of continuing certification, 206 Potter.

Professional certificate:
As of July 1, 1992, the Continuing Certification was discontinued. It was replaced by the Professional Certificate.

The Professional Certificate is issued for a period of only five years, and must be renewed every five years. Renewal of the Professional Certificate requires an additional six hours of credit.

Other professional certificates and procedures are as follows:

Registration in Dentistry: The American Dental Association issues a certificate of membership in dentistry upon successful completion of the coordinated dentistry curriculum. Successful completion of the national examination administered by the American Dental Association results in professional registration status with the American Dental Association.

Certification as a Medical Technologist: There are four certifying agencies for medical technologists: (1) American Society of Clinical Pathologists, (2) National Certifying Agency for Clinical Laboratory Personnel, (3) International Society of Clinical Laboratory Technology and (4) American Medical Technologists. Because there can be differences in training practice and salary differentials based on agency certification, it is recommended that students carefully consider agency certification before the examination is taken. The clinical laboratory sciences office has information on each of the agencies mentioned.

Certification in Occupational Therapy: The National Board for Certification in Occupational Therapy, Inc. (NBCOT) requires successful completion of all academic requirements and fieldwork experiences for candidates to be eligible for the national certification examination. A Registered Occupational Therapist (OTR) is one who has passed the certification examination and has applied to the NBCOT for certification.

Certification in Music Therapy: The Certification Board for Music Therapists (CBMT) mandates that candidates for board certification must have successfully completed the academic and clinical training requirements for music therapy or their equivalents, as established by the American Music Therapy Association. Candidates who pass the CBMT examination are allowed to use the credential “Music Therapy Board Certified” (MT-BC).
Certificate in Speech Pathology: The American Speech-Language-Hearing Association issues Certificates of Clinical Competence to individuals who present satisfactory evidence of their ability to provide independent clinical services to persons who have disorders of communication (speech, language and/or hearing). An individual who meets these requirements may be awarded a Certificate in Speech Pathology or in Audiology, depending upon the emphasis of his or her preparation. As of 1986, Eastern Michigan prepared some individuals to meet the requirements in speech pathology only. Specific requirements may be obtained from the advisers in speech pathology.

Certification for Teachers of the Hearing Impaired: The Council on Education of the Deaf issues certificates to individuals who satisfactorily complete training programs at approved teacher preparation centers. Eastern Michigan University has been an approved center for training teachers of the hearing impaired since 1967.

International Diplomas in Business French, German and Spanish: The Chamber of Commerce and Industry of Paris awards a "Certificat pratique de français économique et commercial" and a "Diplôme supérieur de français des affaires" upon successful completion of examinations held in Paris. Candidates should be enrolled in the language and international trade curriculum or in the business French major.

The Carl Thünen Society, in cooperation with the Goethe House, awards a "Zertifikat Hauptschule Deutsch" upon successful completion of examinations held in Germany. Candidates should be enrolled in the language and international trade curriculum or in the business German major.

Examinations leading to the "Diploma de espanol comercial" and the "Certificado de espanol comercial básico" granted by the Chamber of Commerce and Industry of Madrid in cooperation with the Official School of Languages of Madrid are administered at Eastern Michigan University. Candidates should be enrolled in the language and international trade curriculum or in the business Spanish major.

Licentiate in Nursing: Graduates of the nursing program receive a bachelor of science in nursing and are eligible to qualify as registered nurses through the Michigan Board of Nursing licensure examination. This examination is given at times and places specified by the State Board of Nursing, usually twice a year. Candidates should file application immediately after the official completion date of degree requirements. Upon receipt of the application and all credentials, a temporary permit to practice will be issued and an examination date assigned. Licensure is granted upon successful completion of the State Board of Nursing licensure examination.

Academic Assessment
The Higher Learning Commission of the North Central Association of Colleges and Schools (NCA), EMU's regional accrediting body, has mandated that every college and university in the region have a plan for assessing both general education and each existing academic major for all students enrolled in the fall 1995 semester and later. EMU endorses this mandate and believes that the University will benefit by identifying the key skills and concepts that academic programs are developing and how well these skills and concepts are being developed in our students. Because it is important to assess a representative sample of students, Eastern Michigan University considers involvement in this assessment mandatory for students asked to participate.

In some cases all students will be asked to participate, in other cases where it is impractical to assess all students, a representative sample will be selected. In either case, the above stated requirement will apply.

General education will be assessed through use of the Educational Testing Service's "Tasks in Critical Thinking." Between 200-250 students will take this test each year and students who participate in academic assessment activities will be helping Eastern Michigan University continually refine and improve its excellent academic programs and further enhance the reputation of all degrees awarded.

General Education Program

History
In February 1985, the provost commissioned a Basic Studies Review Committee and charged the members "with conducting a comprehensive reexamination of our present basic studies requirements and with determining what changes should be made to provide the most efficient liberal/general education for today's students." The Basic Studies Review Committee met through April 1986 and recommended a series of revisions in the structure of the existing program. The recommended revisions were subjected to a thorough process of review by departmental college and University bodies and were finally approved by the Board of Regents September 23, 1987.

The revised structure included the establishment of a standing Basic Studies Committee, whose task was to make recommendations about implementation of the new basic studies program. The Basic Studies Committee was commissioned in January 1988 and has met regularly since that time. The Basic Studies Committee considered extensive input from the University community. Upon recommendation of the Basic Studies Committee, the provost approved the following program.

Implementation Schedule
The requirements were effective fall 1990. A phased transition provided 10 years for students following the pre-1990 requirement to graduate. All students must follow the general education requirements to graduate. Students who began their academic career prior to fall 1990 should seek advising.

Rationale
The general education program is designed to provide students with a case of knowledge about people, things and processes. The program also seeks to teach students how to evaluate the work of others, to add to their store of ideas and ideals and to communicate their discoveries and insights. The general education courses are intended as introductions to fields of study; they should also develop students' capacity for independent thought. The general education program attempts to ensure that you will not be content with the world as it is but will seek to improve and perfect it.

Requirements

All students are required to complete courses in four areas:

- I. Symbolics and Communication: 5 courses
- II. Science and Technology: 3 courses
- III. Social Science: 4 courses
- IV. Arts and Humanities: 4 courses

Special note 1: At least one of the 16 courses must be an approved course in cross-cultural or international studies. Such courses appear in the following course list preceded by an asterisk (*).

Special note 2: A set of interdisciplinary courses may be elected by honors students and, as space is available, by students with a cumulative grade point average of at least 3.0 to satisfy the requirements in fine arts, history, literature, music, philosophy and theater arts. For further information, consult the Honors Courses in General Education on page 26.

Special note 3: A number of majors and minors specify precisely which courses should be taken to satisfy both the major/minor and the following general education requirements. Students in the elementary education and nursing programs have a special grouping of courses to satisfy some of these requirements. It is extremely important that you confer with the Academic Advising Center and/or your departmental adviser prior to making your general education choices.

Area 1: Symbolics and Communication
Requirements: 5 courses

1. A course in written composition
2. A course in speech communication
Meeting the Requirements in Area I (Symbolics and Communication)

Courses marked with an asterisk (*) also satisfy the cross-cultural or international studies requirement.

1. A course in written composition
   Note: For those students who do not submit SAT scores, placement will be determined by the Academic Advising Center.

   ENGL120 Composition I: Writing the College Experience
   You must enroll in this course in your first semester if you score below 19 on the English section of the ACT or below 430 on the verbal section of the SAT.

   When you have completed ENGL120, you must then complete ENGL121.

   ENGL121 Composition II: Reading the Public Experience
   You must complete ENGL121 in order to satisfy this requirement. You are eligible for a waiver from this requirement if you score 29 or above on the English section of the ACT or 640 or above on the verbal section of the SAT.

   International students may substitute ESL4112 with permission of the Department of Foreign Languages and Bilingual Studies.

2. A course in speech communication
   One course from the following:
   CTAS121 Fundamentals of Speech (2 hrs)
   CTAS124 Fundamentals of Speech (3 hrs)

   Note: Students with strong previous preparation in speech may seek approval for a waiver of this requirement from the Department of Communication and Theatre Arts.

3. Complete a course from one of the following options (3a, 3b, or 3c):
   3a. An upper-level course in written composition
      One course from the following:
      AAS301 Writing for African American Studies (3 hrs)
      ANTH200 Writing for Anthropology (3 hrs)
      ENGL225 Writing in a Changing World (3 hrs)
      ENGL227 Writing about Literature (3 hrs)
      ENGL323 Writing in the Professional World (3 hrs)
      ENGL324 Principles of Technical Communication (3 hrs)
      ENGL326 Research Writing (3 hrs)
      LEGL304 Legal Writing, Research and Analysis I (3 hrs)
      MGMT202 Business Communication (3 hrs)

   3b. An upper-level course in speech communication
      One course from the following:
      CTAS224 Public Speaking (3 hrs)
      CTAS225 Listening Behavior (3 hrs)
      CTAS226 Nonverbal Communication (3 hrs)
      CTAS227 Interpersonal Communication (3 hrs)
      CTAS374 Intercultural Communication (3 hrs)
      CTAS375 Interpersonal/Interethnic Communication (3 hrs)

   3c. A course in foreign language composition
      One course from the following (initial placement in language courses depends upon student proficiency and/or placement examinations):
      FRNH121/122 Beginning French (5 hrs)
      FRNH223/224 Intermediate French Conversation, Composition and Grammar (3 hrs)
      GERN121/122 Beginning German (5 hrs)
      GERN233/234 Intermediate German Conversation, Composition and Grammar (3 hrs)
      GREK111/112 Beginning Ancient Greek I/II (5 hrs)
      JPN111/112 Beginning Japanese I/II (5 hrs)
      JPN211/212 Intermediate Japanese I/II (3 hrs)
      LATN111/112 Beginning Latin I/II (5 hrs)
      SPNH111/112 Beginning Spanish I/II (5 hrs)
      SPNH211/212 Intermediate Spanish I/II (5 hrs)

4. A course in mathematical reasoning
   One course from the following:
   MATH109 Mathematics for Elementary Teachers
   MATH110 Mathematical Reasoning (3 hrs)
   MATH111 Linear Models and Probability (3 hrs)
   MATH119 Applied Calculus (3 hrs)
   MATH120 Calculus I (4 hrs)
   MATH121 Calculus II (4 hrs)
   MATH122 Elementary Linear Algebra (3 hrs)
   MATH170 Elementary Statistics (3 hrs)
   MATH341 College Geometry (3 hrs)
   SOCI250 Social Statistics (3 hrs)

   Note: You are eligible for a waiver of this requirement if you score 25 or above on the math section of the ACT or 580 or above on the math section of the SAT. A waiver form must be obtained from the Academic Advising Center. Curriculum of major/minor requirements must still be satisfied.

5. A course in computer literacy
   One course from the following:
   BEDX101 Microcomputers for Business Applications (3 hrs)
   CADM105 Computer Applications for Industry (3 hrs)
   COSC101 Computer Science Concepts and Practical Applications (3 hrs)
   COSC105 Everyday Computing and Social Responsibility (3 hrs)
   COSC111 Introduction to Programming (3 hrs)
   COSC145 Introduction to FORTRAN Programming (5 hrs)
   COSC146 Introduction to C++ and Programming Languages (3 hrs)
   COSC161 Explorations in Robotics (3 hrs)
   COSC245 Computer Programming and Numeric Methods (3 hrs)
   COSC246 Programming in C++ (3 hrs)
   IHHS226 Computers for Health and Human Services (3 hrs)
   INDT201 Microcomputer Applications in Technology (3 hrs)
   IS215 End-User Computing (3 hrs)

Area II: Science and Technology

Requirements: 3 courses (including one course with a lab component)

1. A course in physical science
   a. You must complete a course in chemistry or physics unless you have submitted appropriate evidence to the Academic Advising Center that you completed a one year high school course in chemistry or physics with a grade of C or above. You may then satisfy this requirement by choosing among chemistry, earth science, geology, or physical astronomy.

2. A course in life science (biology or psychology)

3. A course in science or technology, chosen from a department other than the ones in which you have completed your physical and life science requirements.

   Note: Earth science and geology are in the same department. The same is true of physics and astronomy.

Meeting the Requirements in Area II (Science and Technology)

At least one of the three courses in Area II must have a laboratory component.
1. A course in physical science
   1a. Physical science courses open to all students who meet course
       requirements.

       One course from the following:
       - CHEM 115 Chemistry and Society (no laboratory) (3 hrs)
       - CHEM 15/116 Chemistry and Society with lab (4 hrs)
       - CHEM 17/118 Fundamentals of Chemistry with lab (4 hrs)
       - CHEM 120 Fundamentals of Organic and Biochemistry (4 hrs)
       - CHEM 121/122 General Chemistry 1 with lab (4 hrs)
       - PHYS 103 Physics for Elementary Teachers (elementary
         education students only) (3 hrs)
       - PHYS 104 Physical Science for the Arts (4 hrs)
       - PHYS 122 Mechanics, Sound, and Heat (4 hrs)
       - PHYS 222 Mechanics, Sound and Heat (5 hrs).

   1b. Additional options open to students who have submitted
       appropriate evidence of having completed a one-unit high school
       chemistry or physics course with a grade of C or above.

       One course listed in 1a. or one course from the following:
       - ASTR 203 Exploration of the Universe (no
         laboratory) (3 hrs)
       - ASTR 203A Exploration of the Universe/Astronomical
         Investigations (4 hrs)
       - ASTR 204/205 Astronomical Investigations/Principles
         of Astronomy (5 hrs)
       - ASTR 205 Principles of Astronomy (no laboratory) (4 hrs)
       - GEOC 108 Earth Science (4 hrs)
       - GEOC 20 The Postal Record (no laboratory) (3 hrs)
       - GEOC 60 Physical Geology (4 hrs).

2. A course in life science

   One course from the following:
   - BIOL 101 Introductory Biology for Non-majors (4 hrs)
   - BIOL 110 Introductory Biology (5 hrs)
   - BIOT 130 Botany I (5 hrs)
   - BIOL 266 Science for the Elementary Teacher (elementary
     education students only) (3 hrs)
   - DTCI 101 Fundamentals of Personal Nutrition (3 hrs)
   - PSY 101 General Psychology (no laboratory) (3 hrs)
   - PSY 102 General Psychology (4 hrs)
   - ZOO 110 Biology of Animals (4 hrs).

3. A course in science or technology (3a or 3b)
   3a. You may choose any one of the courses listed under physical
       or life science, so long as you have chosen three courses in
       this area from three different departments.
   3b. You may also choose your third course from the following list:
       - CAS 150 Life's Risk (3 hrs)
       - CHEM 101 Chemistry for Elementary Teachers
         (elementary education students only) (3 hrs)
       - INDT 150 Understanding Technology
         (no laboratory) (3 hrs)
       - MFG 140 Science, Technology and People
         (no laboratory) (3 hrs)

Area III Social Science

Requirements: 4 courses

1. A course in U.S. government
2. A course in history
3. A course in anthropology, economics, geography or sociology, whose
   content includes the structure and methodology of the discipline.
4. One course from the following:
   a. A second course in a two-course history sequence
   b. A second course in a two-course sequence in anthropology,
      economics, geography or sociology, whose content includes
      the structure and methodology of the discipline.
   c. An approved social science course in cross-cultural or interna-
      tional studies.

Meeting the Requirements in Area III (Social Science)

   Courses marked with an asterisk (*) satisfy the cross-cultural/interna-
   tional studies requirement.

1. A course in U.S. government
   One course from the following:
   - PLSCI 112 American Government (3 hrs)
   - PLSCI 113 American Government Honors (3 hrs)

2. A course in history
   One course from the following:
   - HIST 101 Western Civilization to 1048 (3 hrs)
   - HIST 102 Western Civilization, 1048 to World War I (3 hrs)
   - HIST 103 20th Century Civilization (3 hrs)
   - HIST 104 Quest for Power: Famous Figures in History (honors
     only) (3 hrs)
   - HIST 106 Asian and African Civilizations (3 hrs)
   - HIST 109 World History to 1500 (3 hrs)
   - HIST 110 World History Since 1500 (3 hrs)
   - HIST 123 The United States to 1877 (3 hrs)
   - HIST 124 The United States, 1877 to the Present (3 hrs)
   - HIST 151 Reason and Revolution (honors only) (3 hrs)

   Note: Some students may be eligible to fulfill the requirements in history by
   pursuing options described in the Honors Courses in General Education.

3. A course in anthropology, economics, geography or sociology
   One course from the following:
   - ANTH 135 Introduction to Cultural Anthropology (3 hrs)
   - ECON 101 Introduction to Economic Problems and Policies (3 hrs)
   - ECON 201 Principles of Macroeconomics (3 hrs)
   - GEOG 107 Introduction to Geography (3 hrs)
   - SOCI 105 Introductory Sociology (3 hrs)

4. Complete a course from one of the following options: 4a, 4b, or 4c:
   4a. A second course in a two-course history sequence
       One course from the following:
       - HIST 102 Western Civilization, 1648 to World War I (follows
         HIST 101) (3 hrs)
       - HIST 103 20th Century Civilization (follows HIST 102) (3 hrs)
       - HIST 110 World History Since 1500 (follows HIST 109) (3 hrs)
       - HIST 124 The United States, 1877 to the Present (follows
         HIST 123) (3 hrs)
   4b. A second course in a two-course sequence in anthropology,
       economics, geography or sociology
       One course from the following:
       - ANTH 140 Introduction to Physical Anthropology
         (follows ANTH 135) (3 hrs)
       - ECON 202 Principles of Microeconomics (follows
         ECON 201) (3 hrs)
       - GEOG 110 World Regions (follows GEOG 107) (3 hrs)
       - GEOG 111 Regions and Resources (follows GEOG 110) (3 hrs)
       - SOCI 102 Social Problems (follows SOCI 105) (3 hrs)
   4c. A social science course in cross-cultural or international studies
       One course from the following:
       *ANTH 101 Introduction to African American Studies (3 hrs)
       *ANTH 102 Introduction to African Civilization (3 hrs)
       *ANTH 252 Politics of the African American Experience (3 hrs)
       *AST 313 Contemporary Africa Prospects (3 hrs)
       *ANTH 205 Minority Women in the United States (3 hrs)
       *ANTH 214 Racial and Cultural Minorities (3 hrs)
       *ANTH 230 Peoples and Cultures of Mexico (3 hrs)
       *ANTH 240 Peoples and Cultures of Africa (3 hrs)
       *ANTH 297 Indians of North America (3 hrs)
       *ANTH 355/WMST 355 Anthropology of Women (3 hrs)
       *ANTH 355 Culture of Japan (3 hrs)
       *CAS 206 Culture and the Holocaust (3 hrs)
       *DTC 358 Food and Culture (3 hrs)
       *ECON 321 Minority Workers in the Labor Market (3 hrs)
Area IV: Arts and Humanities

Requirements: 4 courses

1. One course from the following:
   a. a course in literature
   b. an intermediate or advanced foreign language literature course

2. One course from the following:
   a. a second course in literature
   b. an intermediate or advanced foreign language literature course
   c. a course in oral interpretation
   d. a literature course in cross-cultural or international studies

3. A course in philosophy or religion

4. A course in art, dance, music, or theatre arts

Meeting the Requirements in Area IV (Arts and Humanities)

Courses marked with an asterisk (*) satisfy the cross-cultural/international literature requirement.

Note: Some students may be eligible to fulfill the requirements in fine arts, literature, music, philosophy and theatre arts by pursuing options described in the Honors Course in General Education on page 26.

1. Complete a course from one of the following options (1a or 1b):

   1a. A course in literature
      
      One course from the following:
      - LITR 100: The Reading of Literature (3 hrs)
      - LITR 101: The Reading of Literature: Fiction (3 hrs)
      - LITR 102: The Reading of Literature: Poetry (3 hrs)
      - LITR 103: The Reading of Literature: Drama (3 hrs)
      - LITR 106/CLAS 106: Rome and America (honors only) (3 hrs)
      - LITR 106/CLAS 106: Rome and America (honors only) (3 hrs)
      - LITR 150: Humantiy and Technology (honors only) (3 hrs)
      - LITR 151: The Legacy of Greece (honors only) (3 hrs)
      - CLAS 104: Course for Pros. Famous Figures in History (honors only) (3 hrs)

   1b. A course in intermediate or advanced foreign language literature
      
      One course from the following:
      - FRN/321 or FRN/322: Intermediate French (Reading) (3 hrs)
      - FRN/321 or FRN/322: Intermediate French (Reading) (3 hrs)
      - GER/221 or GER/222: Intermediate German (Reading) (3 hrs)
      - GER/221 or GER/222: Intermediate German (Reading) (3 hrs)
      - SPN/341 or SPN/342: Survey of German Literature (3 hrs)
      - SPN/341 or SPN/342: Survey of German Literature (3 hrs)
      - SPN/351 or SPN/352: Survey of Spanish-American Literature (3 hrs)

2. Complete a course from one of the following options (2a, 2b, 2c, or 2d):

   2a. A second course in literature
      
      Any course not already completed from the list under 1a above.

   2b. A course in intermediate or advanced foreign language literature
      
      Any course not already completed from the list under 1b above.

   2c. A course in oral interpretation
      
      CITA 210: Interpretative Reading (3 hrs)

   2d. A course in cross-cultural or international studies
      
      One course from the following:
      - FLAN 215: The Cultures of Mexican-Americans and Cubans in the United States (3 hrs)
      - LITR 204: Native American Literature (3 hrs)
      - LITR 208: Multicultural Children's Literature (3 hrs)
      - LITR 260: African American Literature (3 hrs)

3. Complete a course from one of the following options (3a or 3b):

   3a. A course in philosophy
      
      One course from the following:
      - PHIL 100: Introduction to Philosophy (3 hrs)
      - PHIL 110: Philosophies of Life (3 hrs)
      - PHIL 110: Introductory to Critical Reasoning (3 hrs)
      - PHIL 130: Introduction to Logic (3 hrs)
      - PHIL 212: Philosophy of Art (3 hrs)
      - PHIL 215: Philosophy of Religion (3 hrs)
      - PHIL 220: Ethics (3 hrs)
      - PHIL 221: Business Ethics (3 hrs)
      - PHIL 222: Medical Ethics (3 hrs)
      - PHIL 225: Political Philosophy (3 hrs)
      - PHIL 226/WMST 226: Feminist Theory (3 hrs)

3b. A course in the study of religion
      
      One course from the following:
      - HIST 109: The Comparative Study of Religion (3 hrs)
      - PSY 225: Psychology of Religion (3 hrs)

4. Complete a course from one of the following options (4a, 4b, 4c or 4d):

   4a. A course in art
      
      One course from the following:
      - ART 100: An Appreciation (3 hrs)
      - ART 110: Introduction to Art (3 hrs)
      - ART 207: Art History Survey (3 hrs)
      - ART 210: Art History Survey II (3 hrs)
      - ART 212: Two Dimensional Design (3 hrs)
      - ART 213: Drawing I (3 hrs)
      - ART 165: Graphic Design for Nonmajors (3 hrs)
      - ART 166: Ceramics for Nonmajors (3 hrs)
      - ART 167: Jewelry for Nonmajors (3 hrs)
      - ART 151: Reason and Revolution (honors only) (3 hrs)

   4b. A course in dance
      
      One course from the following:
      - DANC 100: Ballet I (2 hrs)
      - DANC 101: Jazz I (2 hrs)
      - DANC 102: Modern Dance I (2 hrs)
      - DANC 103: Tap I (2 hrs)
      - DANC 106: Introduction to the Performing Arts (3 hrs)

   4c. A course in music
      
      One course from the following:
      - MUSC 100: Introduction to Music Theory (3 hrs)
      - MUSC 106: Introduction to the Performing Arts (3 hrs)
      - MUSC 107: Music Appreciation (2 hrs)

   4d. A course in theatre arts
      
      One course from the following:
      - CAS 234: Read Women/Read Women (3 hrs)
      - CTAR 106: Introduction to the Performing Arts (3 hrs)
      - CTAR 150: Introduction to Theatre (3 hrs)
      - CTAR 157: African American Theatre: An Introduction (3 hrs)
      - CTAR 158: Fundamentals of Acting (3 hrs)
      - CTAR 222: Drama and Play in Human Experience (3 hrs)
      - CTAT 145: Introduction to Film Appreciation (3 hrs)

Cross-Cultural or International Studies

Requirements: 1 course selected from Area I-IV

At least one approved course in cross-cultural or international studies must be completed in the process of meeting the requirements of the following Areas I-IV. Approved courses are described with an asterisk (*).
Honors Humanities Courses

Honors courses in general education may be elected to satisfy the requirements in fine arts, history, literature, and philosophy.

These courses, whose subject matter often crosses disciplinary boundaries, may be taught by instructors from more than one discipline. Members of the University Honors Program are welcome to enroll. Other students with a GPA of at least 3.0 may enroll by permission of the honors director.

Available honors humanities courses (see departmental listings for course description) satisfy the following areas:

- CLAS104/HIST104 Quest for Power: Famous Figures in History (3 hrs)
  - Areas: Ethics III.2 or IV.1 or IV.2
- CLAS106/LTR106 Rome and America (6 hrs)
  - Areas: IV.1 and IV.2
- CLAS191/LTR191 The Legacy of Greece (3 hrs)
  - Areas: IV.1 or IV.2
- ART151/HIST151 Reason and Restitution (3 hrs)
  - Areas: Ethics III.2 or IV.4
- LTR150 Humanity and Technology (3 hrs)
  - Areas: IV.1 or IV.2
- 179/279/379/479 Special Topics (3 hrs)
  - Areas: Various

Future changes in the General Education Program:

Additional courses may be approved and refinements made periodically in the general education program.

General education transfer credit will be determined by Eastern Michigan University in cooperation with the college or university from which the student wishes to transfer credit. In most cases, equivalency lists exist.

Educational Opportunities

Academic Service-Learning

Academic Service-Learning is a teaching methodology that utilizes community service as a means of helping students gain a deeper understanding of course objectives, acquire new knowledge and engage in civic activity.

The Office of Academic Service-Learning provides a resource center that features videos, journals, books, other publications and tapes related to academic service-learning. Also, research opportunities are available for faculty and students through the office.

To get involved in Academic Service-Learning, students should:

- contact past faculty fellows for resources on how to get involved (to find out which courses faculty members teach that include an academic service-learning component, see Faculty Fellows).
- take a course that includes an academic service-learning component (see list of courses) or
- contact our office:

Office of Academic Service-Learning
219 Rackham, Eastern Michigan University
Ypsilanti, MI 48197
734.487.1570
734.487.8564 (Fax)

Kathleen Stacey, Director
E-mail: kathleen.stacey@emich.edu

Courses taught at EMU that may include an academic service-learning component are:

- ACC546 Public and Nonprofit Nonprofit Accounting
- ACC547 Strategic Cost Management
- ACC596 Accounting Theory, Research and Policy
- ATM255 Apparel Analysis
- ATM210 Display Techniques
- ATN457 Professional Seminar
- BISD395 Administering Workplace Systems and Technology
- BISD396 Information and Media Administration
- BICL403 Methods for Teaching Secondary Biology
- CFAAC224 Public Speaking
- CFAAC225 Learning Behavior
- CFAAC226 Nonverbal Communication
- CFAAC227 Intercultural Communication
- CFAAC237 Interviewing as Communication
- CFAAC299 Small Group Communication
- CFAAC374 Intercultural Communication
- CFAAC379 Queer Communication
- CFAAC475 Research in Speech Communication
- EDMT330 Institutional Application of Media and Technology
- ENGL325 Writing for the Professional World
- ENGL488 Writing for Working Teachers
- ENGL499 Teaching English in the Secondary School
- ESLN685 English as a Second Language for Special Purposes: Business
- ENSN554 Investments

GEOG/GEOL Many, all graduate level Documenting Human Structures and Preservation

HIST213 The United States to 1877
HIST214 The United States, 1877 to the Present
HIST317 History and Geography of Spain
HIST361 Teaching Methods
HLED384 Psychosocial Concepts of Health Education
HREM350 Seminar in Hospitality Management
IDEA20 Studio
JRN131 Public Relations Writing
LITR260 African American Literature
MATH381 The Teaching of Mathematics K-6
MFG111 Engineering Materials
MGMT202 Business Communications
MGMT386 Organizational Behavior and Theory
MGMT390 Management Skills
MGMT492 Managing World Business Communication
MGMT504 Management/Communications Theory and Practice
MGMT505 Organizational Theory and Behavior
PHIL221 Business Ethics
PHIL223 Medical Ethics
PHIL226/WMST226 Feminist Theory
PHY101 Physical Science in the Arts
SOCL302 Sociology of Education
SWK132 Social Science for Social Welfare
SWK138 Schools in a Multicultural Society
SPEH600 Introduction: Clinical Experiences in Emotional Impairment
SPEH801 Emotionally Impaired Children and Adolescents
SPEH805 Current Topics in Emotional Impairment
SPGN231 Education of Exceptional Children
SPMN150 Introduction to Mental Restraint
SPS622 Augmentative Communication
SWK403 Practice Issues in Women
SWK420 Working with Aging People
TEDU350 Curriculum in Technology and Vocational Education

American Humanities

220 Rackham
734.487.1612
734.487.8514 (Fax)
E-mail: humanities@emich.edu
www.americanhumanities.emich.edu or www.humanities.org

The American Humanities Program at Eastern Michigan University certifies undergraduate students for professional positions in nonprofit agencies. American Humanities, Inc. is a national alliance of colleges, universities,
nonprofit agencies and collaborating professional organizations dedicated to preparing students for rewarding careers in the nonprofit sector. Nation-
wide, more than 5,000 students in over 100 colleges and universities are enrolled in, or have been certified by, an American Humitcricis program.

To date, American Humitcricis is affiliated with more than 16 nonprofit agencies and numerous collaborating professional organizations and foundations including the American Red Cross, Girl Scouts, YMCA, and Boy's & Girls Clubs of America.

Undergraduate students enrolled in the program earn a regular bachelor's degree enhanced by a certificate from American Humitcricis. Students earn an American Humitcricis certificate by achieving 14 competencies specified by American Humitcricis, completing 300 hours of field-based experiences at local nonprofit agencies, participating in the EMU chapter of the American Humitcricis Student Association, and attending the American Humitcricis Management Institute. American Humitcricis, Inc. provides a certificate and transcript indicating the student has completed the stated program requirements. Additionally, students prepare individualized portfolios that highlight the skills, knowledge and accomplishments earned while pursuing certification.

The American Humitcricis competency requirements serve as a comprehensive yet flexible framework to guide students toward certification while also providing nonprofit agencies with a pool of graduates highly qualified for employment. Examples of competency requirements include program planning, board/committee development, human resource management, nonprofit marketing and fundraising principles and practices. Students have flexible options for completing competency coursework, academic service-learning, seminars, workshops, conferences, campus programs, student-association activities and field-based experiences all provide opportunities to build skills.

American Humitcricis certification provides significant benefits to undergraduate students. Nationwide, nonprofits need to fill more than 50,000 positions annually. American Humitcricis graduates, specifically trained in the field of nonprofit management, are highly sought after to fill the demand for program directors, human resource managers, fundraisers, volunteer coordinators and other positions.

American Humitcricis graduates have an outstanding record of job placement — nearly 100 percent for those students completing all requirements. Structuring the program following a portfolio format also enhances student marketability. The experiential nature of the American Humitcricis program means students gain knowledge and skills by working directly with nonprofit agencies, allowing students the opportunity to network with professionals, faculty, students and like-minded individuals working in the nonprofit community. Scholarships are also available to qualified students through the American Humitcricis Financial Aid Program.

**University Honors Program**

De: James A. Knapp, interim director

Wise Hall Honors Suite

734.487.0341 or 734.487.0345

Fax: 734.487.0793

Il-mail: asuan.anderson@emich.edu

www.emich.edu/honors/

The University Honors Program (UHP) is designed to encourage and reward scholarly performance among our academically talented and motivated students. High school seniors, currently enrolled students, transfer students and second bachelor's students can all apply for admission. If applying out of high school, admission standards work on a "sliding scale." For example, a high school GPA of 3.7 (on a 4.0 scale) requires a score of 25 on the ACT, while a GPA of 3.3 requires an ACT score of 29 for admission. Transfer, second bachelor's and current students need a minimum GPA of 3.3 (with at least 15 credit hours) to be eligible.

How to apply to the University Honors Program:

Applying to the UHP is a three-step process.

1. Complete the application form, which can be obtained from the Honors Office or downloaded from the UHP Web site.

2. Write an essay of 500 words describing your academic and personal accomplishments, as well as your academic, personal and career goals. In a concluding statement, express the nature and extent of your proposed commitment to the University Honors Program.

3. Fill in the first section of the recommendation form(s) and then give it to a teacher or counselor. The teacher/counselor should place the completed form in an envelope, sign across the seal and give it back to the applicant to return with the completed application.

High school and community college applicants should submit two academic recommendations.

Applicants will be notified of acceptance or rejection by letter. Rejected applicants can re-apply after completing at least one semester (15 credit hours) at EMU and earning a minimum GPA of 3.3.

**Graduation with Honors**

I. University Honors

A. Coursework: 24 credit hours required

1. A minimum of 18 credit hours must be completed in General Education.

2. A minimum of 3 credit hours must be completed in the major or minor.

3. The remaining 3 credit hours may be taken in either General Education or the major/Minor.

B. Honors Experiences: 3 required

1. One honors experience should be completed annually for three years, beginning in either the freshman or sophomore year.

2. One honors experience must be multicultural.

3. If a student is also pursuing departmental honors, one honors experience must be relevant to the field in which the student is earning departmental honors.

C. Community Service: 24 hours required

1. Approximately six hours should be completed each year (freshman, sophomore, junior and senior).

II. Departmental Honors

A. Coursework: 12 credit hours required

1. A minimum of 12 credit hours must be completed in the major or minor.

2. Six non-general education credit hours earned pursuing University Honors can be counted toward this requirement.

B. Honors Experiences: 2 required

1. Honors experiences completed pursuing University Honors may be counted for this requirement.

2. One honors experience must be relevant to the field in which the student is earning departmental honors.

3. One honors experience should be completed annually during the junior and senior years, unless previously completed pursuing University Honors.

C. Community Service: 24 hours required

D. Thesis

1. A senior thesis/project must be completed for academic credit in either the major or minor field of study.

III. Highest or Double Honors

Here, the requirements for both University and departmental honors are fulfilled. This entails six to nine credit hours (including the senior thesis project) above and beyond University Honors (for 30 total honors credits), 24 hours (total) community service, and three (total) honors experiences.

**Honors Experiences**

Honors experiences are acceptable with prior approval by a UHP staff member. An honors experience is an event, experience or activity that will achieve one or more of the following goals:
Cooperative Education

The purpose of this program is to provide students with the opportunity to gain practical work experience in the field of their choice while earning academic credit. Students are placed in positions that allow them to apply classroom knowledge and develop skills that are necessary for success in future careers. The program is designed to enhance the educational experience and facilitate the transition from academic studies to professional practice.

Program Benefits

- Gain real-world work experience
- Develop job skills and prepare for future employment
- Earn academic credit while working
- Build a professional network
- Improve resume and employability
- Explore career options and interests

Eligibility

- Full-time students in good academic standing
- Minimum 2.0 GPA
- Completion of specific course requirements
- Approval from program coordinator

Program Components

- Internship experience
- Academic coursework aligned with internship
- Regular assessments and evaluations
- Career development and professional skills training

Placement Services

- Assistance with resume and cover letter preparation
- Interview preparation and mock interviews
- Personalized career counseling
- Networking opportunities

Registration Process

- Complete application form
- Submit required documentation
- Participate in an interview with program coordinator
- Sign agreement and consent form

Completion Requirements

- Successful completion of assigned job responsibilities
- Submission of work evaluations and performance reviews
- Completion of academic coursework
- Presentation of completed program requirements

Contact Information

For more information or to apply, please contact:

Program Coordinator
123 Main Street
City, State 12345
Phone: 555-1234
Email: info@cooperativeeducation.com

Visit our website for more details: www.cooperativeeducation.com
INFORMATION AND COMMUNICATIONS TECHNOLOGY

To learn more about all the technology services provided for students, faculty and staff, please visit the ICT Web site at http://ict.emich.edu.

Electronics on Campus

Lab locations:

- Morell D. Boone Computing Commons
  G07 Bruce T. Halle Library
  Phone: 734.487.2121
- Multimedia Commons
  Bruce T. Halle Library, first floor
  Phone: 734.487.2667
- McKinley Computing Lab
  28 McKinley Union
  Phone: 734.487.1365
- Owen Computing Lab
  101 Owen Building
  Phone: 734.487.2284

Some of the colleges and departments have specialty labs available for different uses. Your professor will tell you about using these specialty labs. If you would like to know more visit the Web site of your specific college or department.

ICT Computer Help Desk

Help Desk location:

ICT Computer Help Desk
106 Halle Library
734.487.2120
Web site: http://ict.emich.edu

The ICT Computer Help Desk can assist you with problems accessing EMU's Internet-based resources, such as myemich or the residence hall network (ResNet). Please check the ICT Help Desk Web site for more information on protecting your computer from viruses and other malicious programs.

myemich Portal Account

myemich is Eastern Michigan University's personal portal. It is an official form of communication with EMU. This secure site provides students, faculty and staff with world-class intranet and Internet services including a 30 MB e-mail account and calendar. If you are unsure where you can check e-mail, access EMU's Web, register for classes, check your grades and pay tuition through e-Bill. For complete information on setting up your account, please visit the myemich Web site at: http://myemich.edu and single click on "How Do I... Get my user name and password."

EMU Computer Store

Computer Store location:

EMU Computer Store
G08 Halle Library
734.487.2400
Web site: http://ict.emich.edu

Eastern Michigan University's Computer Store is the location for students, faculty and staff to purchase computers, software, and related products at an educational discount. The ICT Computer Store Web site provides information on hardware, software, special promotions and details about the computer refresh program.

ResNet

ResNet is Eastern Michigan University's residence hall network service. ResNet uses dedicated Ethernet wiring to connect students to the university network and the Internet, and works much like DSL or cable modem. Service is provided free of charge to students living in University Housing residence halls.

Advantages of ResNet: ResNet is convenient, it requires no modem or phone line to connect; ResNet is fast; and ResNet is a 10Mbit/sec Ethernet network.

To sign up for ResNet, you need to plug in and then go through the simple registration process. For more detailed information about ResNet, visit the ICT Web site at http://ict.emich.edu.

Wireless Networking

Wireless networking is available to students, faculty and staff in select locations on campus. Wireless networking allows others with a wireless compatible laptop computer, and a myemich user name and password, the ability to connect to the campus network without being "plugged in." For more details about the EMU Wireless network and responses to frequently asked questions, please visit the ICT Web site at http://ict.emich.edu.

REGISTRATION AND GRADING

Academic Year

The academic year is divided into fall and winter semesters of 15 weeks each, a spring session of either six or seven and one-half weeks, and a summer session of either six or seven and one-half weeks, dependent on course selection. The new student may be admitted to the University for any semester or session. The University calendar is printed on page 4.

Evening courses and continuing education courses permit scheduling options within each semester or session. Two-week workshops and weekend seminars provide additional course credit opportunities.

Academic Course Load

Academic course load is the number of hours that a student carries in a semester or session. In the fall and winter semesters, the recommended full-time course load is 15-18 hours; in the seven and one-half week spring and summer sessions, it is six to eight hours; and in the six-week spring and summer sessions, it is six hours. Full and winter students must register for a minimum of 12 credit hours to qualify for full time for University purposes, including financial aid. For the spring and summer semesters, the minimum full-time load is six credit hours for financial aid or other purposes.

Occasionally an increased academic load is found to be necessary or desirable. Before registering for more than the recommended hours, the student is asked to consult an advisor. The following two restrictions are placed on increased academic load:

-
1. First semester freshmen may not take more than the recommended full-time academic load without special permission from the Academic Advising Center, 303 Pierce.

2. Students on academic probation may not take more than the recommended full-time academic load without special permission from the Academic Advising Center.

Qualified continuing students taking over 18 credit hours should consult carefully with an academic advisor before taking an overload. The overload system will prevent registration for more than 18 credit hours (12 in spring or summer). Request assistance at the Records and Registration Service counter to add courses in excess of 18 credits.

No person is allowed to attend class unless officially registered on a credit or audit basis with appropriate fees paid or is, as full-time staff or faculty, auditing under the staff benefits program. No credit will be given for work in courses not officially enrolled in by the mid-point of the term or session.

Auditing Courses
Courses may be audited subject to the approval of the head of the department offering the course. Audit applications may be obtained at, and returned to, the Office of Records and Registration, 303 Pierce Hall. No credit or hour of grade points are awarded for a class audit. However, registration and payment of all fees is required for the class. Tuition and fees for auditing are the same as for the course in which credit is elected. Check the University calendar for deadlines to decide on course audits.

Under provisions of the University staff benefits program, full-time staff, faculty and faculty spouses may audit classes by completing an approval process initiated at the Benefic Programs Office, 207 Bowett. These students do not register for the class and there is no transcript of their attendance.

Credit Hours/Class Levels/Course Numbers
Credits are determined by the units of work completed. One credit hour is the credit granted in a course that meets 50 minutes per week for 15 weeks. Credits earned in the term of quarter-hours basis at other institutions are converted to EMU credit hours by multiplying by two-thirds.

Class levels are determined by the academic hours completed as follows:

<table>
<thead>
<tr>
<th>Class</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>0-24</td>
</tr>
<tr>
<td>Sophomore</td>
<td>25-55</td>
</tr>
<tr>
<td>Junior</td>
<td>56-84</td>
</tr>
<tr>
<td>Senior</td>
<td>85 or over</td>
</tr>
</tbody>
</table>

Administrative class levels that are not affected by academic hours completed:

<table>
<thead>
<tr>
<th>Class</th>
<th>GS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nodegree</td>
<td>ND</td>
</tr>
<tr>
<td>Second bachelor's</td>
<td>SB</td>
</tr>
<tr>
<td>Post degree teaching certificate</td>
<td>TC</td>
</tr>
</tbody>
</table>

Course numbers indicate the academic level of the course as follows:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Level of Difficulty*</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-199</td>
<td>Introductory</td>
</tr>
<tr>
<td>200-299</td>
<td>Intermediate</td>
</tr>
<tr>
<td>300-399</td>
<td>Advanced</td>
</tr>
</tbody>
</table>

Note:
*Introductory courses are appropriate for students who have had no course work at the University level in the discipline in question. Intermediate courses presuppose that the students enrolled are familiar with and able to work with the content or methods, or both, of the discipline as presented in the introductory course. Advanced courses presuppose that students enrolled are familiar with and able to work with content, concepts, and methodology of the discipline at a level appropriate to that of undergraduate majors in the discipline.

Courses numbered 300-399 are intended primarily for graduate students but are open in some cases to seniors. To be eligible, an undergraduate student must have successfully completed 35 hours or more of undergraduate credit, have a cumulative grade point average of 2.5 or better, and receive approval from the instructor and the Graduate School. Request forms are available at the Office of Records and Registration, 303 Pierce Hall. The maximum number of graduate hours that an advanced undergraduate can take is 15. Course numbers in the 500s and 700s are exclusively for graduate students. Should an undergraduate student register in a 500 or higher class, they will be dropped without notice.

Prerequisites
Prerequisites designated in the catalog description of courses state requirements that must be completed with credit or are necessary to the understanding of the course selected. Any student not meeting prerequisite requirements or other restrictions, unless waived by the instructor's permission, may be prevented from registering for or required to drop the course. Courses at the 200-, 300- and 400-level that carry no prerequisites are taught at the academic levels described above.

Final Examinations
Final examinations are given by instructors to help evaluate a student's achievement in a course. Whether or not that evaluation shall include the final examination shall be determined by the instructor in line with departmental and University policy. A final examination is not given, the scheduled examination period shall be used for other class activities.

If a final examination is given, students shall take the examination with their own class and at the hour indicated on the examination schedule. Failure to take the examination at the scheduled time will result in a grade of E in the course, except when the require conditions for granting an I are present.

If the student finds that he/she has three examinations scheduled on one day, he/she may request the instructor of the class having the first examination of the day to arrange to take the examination at another time. If he/she finds that he/she has four examinations scheduled for one day, he/she may request the instructor of the first two examinations to make arrangements so that no more than two are scheduled in one day. He/she may appeal to the head of the department in which the course is offered if a satisfactory solution is not reached.

Students who for religious reasons find that they are not able to follow the examination schedule should make special arrangements with their instructors. If arrangements are not satisfactory, the student may appeal to the head of the department in which the course is offered.

Any deviation from the student's examination schedule, other than to limit the exams to one in one day or to observe religious mandates, must be approved in advance by both the instructor and the department head, and will be granted only in cases of extreme emergency.

Failure to take an examination at the scheduled time without prior arrangement will result in a grade of E in the course.

Grades
The grades used by the University with their corresponding values in points are as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Significance</th>
<th>Grade points per credit hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Exceptionally high order</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td></td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>Distinctly above the average</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>Above the average</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td>Just above the average</td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td>Average</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>2.0</td>
</tr>
<tr>
<td>C-</td>
<td>Below Average</td>
<td>1.7</td>
</tr>
<tr>
<td>D+</td>
<td></td>
<td>1.3</td>
</tr>
<tr>
<td>D</td>
<td>Unsatisfactory (denoting failure)</td>
<td>1.0</td>
</tr>
<tr>
<td>D-</td>
<td>Incomplete</td>
<td>0.7</td>
</tr>
<tr>
<td>E</td>
<td>Passing grade in credit/no credit courses</td>
<td>0.9</td>
</tr>
<tr>
<td>F</td>
<td>Failing grade in credit/no credit courses</td>
<td>0.0</td>
</tr>
<tr>
<td>S</td>
<td>Pasing grade in pass/fail elections</td>
<td>0.0</td>
</tr>
<tr>
<td>SC</td>
<td>Credit for certification in student teaching courses</td>
<td>0.0</td>
</tr>
</tbody>
</table>
**Pass/fail**

The pass/fail option is available to students who wish to experiment in an unfamiliar field without jeopardizing their grade point averages or for other reasons. Limitations to the option are:

1. It may be exercised only by juniors and seniors who are in good academic standing (at least 2.0 at EMU).
2. It may be applied only to free electives, that is, to courses which are outside the student's major; minor; curriculum, general education requirements or a prerequisite to a required course.
3. A maximum of six such courses may be applied toward graduation.
4. Students shall indicate their intention to take a course by filing an application with the Academic Advising Center, 301: Pfeice, prior to the end of the program adjustment period. Approval or denial is available in two working days.
5. Students who elect a course on pass/fail may cancel the option and accept a letter grade up to the last day of class before the official University scheduled final examinations (the option for pass/fail may then be used for another course).
6. The instructor will not be notified of the student's election of this option. The regular letter grade reported by the instructor will be converted on grade reports and transcripts as follows:
   - Grades of A, B, C, or D, including D-, will be converted to S, and shall count as credit toward graduation.
   - The grade of E will be converted to U, and shall not count toward graduation.
7. A course taken under this option shall not be used in any way in the computation of the student's grade point average. Thus, a pass/fail election shall not be approved for a course in which the student previously received a letter grade.

Students should be aware that, for some scholarships offered by the University, pass/fail courses are not considered part of the minimum required load for scholarship.

Students should also be fully aware of the possible implications of this option for acceptance into graduate schools and competition for financial aid. It has been acclimated that most graduate schools will accept students who have elected to take some courses on a pass/fail basis, but that if courses taken on this basis are sufficient in number on the transcript, the Graduate School Examinations may be utilized to determine the student's acceptability. Graduate schools, in general, do tend to favor those applicants who have better letter grades on their transcripts.

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**Credit/Noncredit Grading**

A credit/noncredit option is utilized by departments in courses where the standard letter grades do not seem appropriate. Such courses will be designated as CR/NC in the class schedule book. All students taking such courses will receive either CR or NC in place of the letter grade. Neither CR nor NC will have any effect on the student's grade point average. Courses for which the CR is received will count towards graduation requirements, and there is no limit to the number of such courses that may be taken by the individual student. The CR/NC courses taken by students do not count in the number of pass-fail courses that can be elected.

An I (incomplete) grade is awarded only when a student has completed the majority of the work of a course and the student's work has been of acceptable quality (C or better) but the required amount of work has not been completed because of illness, necessary absence or other satisfactory reason. It is never applied to poor work or to absence of class by the student. The student must inform the instructor of the reason for the requested incomplete, and the instructor may at his or her discretion agree to the request.

An I grade must be removed within one semester from the end of the semester or session in which that grade was given. The time for removal of an I may be extended upon written recommendation of the instructor and approval of the dean of the college. Such extension will be granted only under unusual circumstances.

The initiative for conversion of an I to a letter grade rests with the student. If not converted to a grade by the end of the one-year period, the I will remain in a permanent part of the student's academic record. Students and faculty are encouraged to establish a written agreement on the work and time needed to remove the incomplete.

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**Grade Changes**

When a letter grade (excluding I for incomplete grade or IP for in progress grade) is posted to a student's permanent record, it will be considered final unless an error was made in assigning the grade. Permitting a student to submit missing work or extra credit to improve a grade after the grade has been posted is not acceptable.

If an instructor error is identified, the instructor must file a grade change form, explaining the error. This form requires the approval of the department head. The appropriate dean will review and approve grade changes to ensure consistency with academic policies. All changes in letter grades (except from an I or IP grade) will require the signature of the dean of the college. The grade change is then submitted to and processed by personnel in the Office of Records and Registration. One year after the end of the relevant semester all grade changes from I or IP will require the permission of the dean of the college.

It is the responsibility of the student to call the instructor's attention to a possible grading error in a timely manner, but not more than 12 months after the questionable grade is posted. Three years following the close of any term of enrollment, the student's transcript will be considered to be the final indelible record of academic achievement. Specifically, at the end of three years, grades are considered final and no changes will be made to transcripts (e.g., no term or individual withdrawals, no grade omissions, no recalculated grades based on mathematical or clerical error, no incomplete removals, etc.). The only exception to this rule will be master's specialist and doctoral field-based research, internships and dissertation hours.

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**Repeats**

Repeating courses for which the student is currently eligible can be elected, regardless of the grade received. The following conditions apply:

1. No course may be taken more than three times, except by permission of the head of the department in which the course is offered.
2. No student may repeat more than 10 different courses in the process of completing a baccalaureate degree, except by permission of the Academic Standards Committee. Contact is made through the Academic Advising Center.
3. All grades earned by a student will be retained on the student's permanent record. Repeats will be indicated.
4. Only the grade received the last time the course is taken will be used in compiling graduation credits and in determining the cumulative GPA.
5. A course failed at Eastern Michigan University may not be repeated at another accredited college or university to satisfy Eastern Michigan University requirements without prior written approval of the director of Records and Registration.
Grade Reports
Undergraduate students' academic records are kept on permanent file in the Office of Records and Registration, 303 Pierce Hall. Unless there are undue financial obligations, students may get an official transcript of their complete records by requesting them in writing from the Cathie's Office.

Grade Point Average (GPA)
The scholarship index or grade point average is the total number of Eastern Michigan University grade points awarded, divided by the total number of Eastern Michigan University credit hours taken that earn grade points. When a course is repeated, only the last grade is used in the computation of the cumulative grade point average.

Transfer credit from another accredited institution is allowed for all transferable courses in which a grade of C or better is received, but is not included in computation of the GPA.

Calculation of GPA for returning former students, who have not attempted any college or university work for at least two calendar years, does not include courses in which a grade of less than D- was assigned. E grades will be changed to Z/YR to reflect academic forgiveness.

Academic distinction is awarded at graduation to students whose cumulative grade point average merits special recognition. A 3.9-4.0 grade point average is accorded magna cum laude; 3.7-3.89, cum laude; and 3.5-3.69, cum laude. GPAs of students selected for special recognition in the diploma and permanent transcript record.

Academic Probation and Dismissal
If, at the end of any term of enrollment, an undergraduate's cumulative GPA falls below 2.0, having previously been at or above 2.0 (or if new to the University), that student will be placed on academic probation (P1). The student will then have three terms of enrollment (spring/summer count as one) to raise the cumulative GPA to 2.0 or higher. At any time that the student's cumulative GPA reaches 2.0, the student will be restored to good academic standing (GO). Unless the cumulative GPA has been raised to 2.0 by the end of the third term of probation (P3), the student will be subject to academic dismissal.

Exceptions to this policy are as follows:
1. Any student whose first term of probation is the result of a semester of all E's must earn better than 0.00 (all E's) in the first term of probation or face dismissal immediately.
2. Students who have been readmitted (RA is equivalent to P1) after a dismissal will be placed on P2 after their first term, if their cumulative GPA remains below 2.0. They will have two terms to raise their cumulative GPA average to 2.0 or they will face a second and final dismissal.
3. All initial dismissal actions are subject to an appeal. Procedures and deadlines for such appeals will be included in notices of academic dismissal. Appeals to academic standing (OSS) and specific grades are not possible.

Students dismissed from the University for the first time may not attend Eastern Michigan University for one calendar year. They can then apply for readmission through the Academic Advising Center. Procedures and deadlines for readmission are available in the Academic Advising Center (301 Pierce Hall); contact the Assistant Director for Academic Actions. Students dismissed more than once (excluding reinstatement) are usually not eligible to return to the University. On occasion, when students have been away from the University for at least 10 years, a request may be submitted through the Assistant Director for Academic Actions, to the Academic Standards Committee, who will make the final decision in such a case.

While remaining out of the University due to a dismissal, students may choose to attend another institution. Certain rules apply to course work taken elsewhere. Refer to the repeat policy in the catalog and consult with Academic Records on transfer of courses.

While on academic probation, a student may meet with the Assistant Director for Academic Actions or any advisor in the Academic Advising Center. In addition, students may seek help in developing successful strategies for academic performance through the Holman Learning Center, the Counseling Services Center and the Career Services Center.

Certain conditions are attached to an academic status of probation. Students on probation may not:

- Enroll in more than the established maximum load for regular full-time status in any term of enrollment. For fall and winter, this would be 16 credits (15 credits if student teaching); in spring and summer, eight credits.
- Enroll in education courses or courses that require admission to the College of Education.
- Receive credit for graduate-level courses (500-level).
- Take courses on Pass/Fail.

Drops/Withdrawals from Individual Classes

Drops/Withdrawals from Individual Classes
When withdrawal from a class, or from all classes, brings students' academic loads below the minimum number of hours necessary to qualify as full-time students for University housing, scholarship aid, student loans or any other benefits they enjoy for which academic enrollment was a prerequisite, the University may, at its option, take any or all of the following steps:

1. Deny permission to withdraw.
2. Cancel the benefits as of that date.
3. Declare the student ineligible for present and/or future benefits of a similar nature.
4. Deny permission to re-enroll in subsequent semesters.

Drops/withdrawals from class are permitted according to the following schedule (fall and winter):

Drop
- First eight days: All student-initiated drops during this period may be processed through the registration system. Such drops are not recorded on the student's permanent record.

Withdrawal
- Ninth day through tenth week: All student-initiated withdrawals are accepted automatically and recorded as a W (however, freshmen must check with the Academic Advising Center before withdrawing from courses). A withdrawal may be processed through the registration system or by submitting a withdrawal form to the Office of Records and Registration, 303 Pierce Hall.

Administrative Withdrawal
- After tenth week—until beginning of final exam period: Students can withdraw only if they have specific extenuating circumstances of recent occurrence, which clearly prevent them from completing the course in question. Withdrawals are not automatic and documentation is required. Make application for Administrative Withdrawal at the Academic Advising Center (301 Pierce Hall). The decision will be communicated to the student and the instructor in question. Students must not stop attending class until they have received notification that the administrative withdrawal has been approved. If a student stops attending class and does not take the final exam without being withdrawn, University policy requires that the instructor assign a grade of F for the course.

Note:
These procedures and University withdrawal procedures also apply to spring and summer sessions, though the timeframe is more condensed. The exact withdrawal and deadline dates are printed in the current Class Schedule Book for the session concerned.
Graduation Requirements

- Bachelor of Arts or Bachelor of Science
- Completion of the core curriculum
- Completion of major requirements

Admission to the University

Transfer of Credits

Examinations

The university follows a rigorous examination schedule, which includes weekly quizzes, midterms, and final exams. Students are expected to attend all classes and participate actively in discussions and activities. The university provides resources such as tutoring and study groups to support student success.
Social Science .......................................................... 12
One course in United States government
One course in history
One course in anthropology, economics, geography or sociology
whose content includes the structure and methodology of the discipline

One course from the following:

a. A second course in a two-course history sequence
b. A second course in a two-course sequence in anthropology, economics, geography or sociology whose content includes the structure and methodology of the discipline
c. An approved social science course in cross-cultural or international studies

Arts and Humanities ...................................................... 11-12
One course from the following:

a. A course in literature
b. An intermediate or advanced foreign language literature course
One course from the following:

a. A second course in literature
b. An intermediate or advanced foreign language literature course
c. A course in oral communication
d. A literature course in cross-cultural or international studies
A course in philosophy or religion
A course in art, dance, music or theatre arts

Cross-cultural or international studies .................................. 0
One course selected from general education areas I-IV

Major (minimum) .......................................................... 30
Minor (minimum) .......................................................... 20

Physical Education/Graduation Requirement .......................... 2

University Elective Courses .............................................. 16-32

Program Total ............................................................ 124

Individualized Studies Program

Academic Advising Center
301 Pierce Hall
734.487.2171

Undergraduate students whose educational and career goals cannot be met by existing programs of study may wish to explore the option of the Individualized Studies Program. The basic criteria for completing this program is:

1) a total of 60-63 credits
2) three distinct discipline areas; the courses of which have a common thread
3) each area consisting of a minimum of 20 credits, with a combination of foundation and advanced course work and:
4) a minimum of 15 credits in advanced (300/400 level) course work taken through EMU.

Interested students should contact the Academic Advising Center for more information. Students who wish to be considered for this program will begin by submitting a proposal through the program coordinator in the Academic Advising Center. The proposal will be reviewed by a representative of the Office of the Provost. If approved, the proposal will serve as the basis for future course work and the program coordinator will serve as academic advisor to the student. When the student is ready to apply for graduation, a final draft of the program will be submitted by the student and the program coordinator to the Office of the Provost for final approval. The final, approved program will be submitted to Records and Registration for use in the graduation audit; the student will also receive a copy of the approved program at that time.

The resulting degree will be a bachelor of science (or art, if conditions for that have been met) in individualized studies, which will satisfy all major/minor requirements. All other conditions for graduation must be met by individualized studies majors. Only first time undergraduates are eligible for this program; second Bachelor candidates may not select this option. This is a non-teaching degree only.

Graduation Audit

Students who have completed 90 credit hours or more should request a graduation audit by completing the required form at the Office of Records and Registration, 303 Pierce Hall, or completing the form usually printed in the class schedule book each semester.

The form requires the student to record their expected date of graduation, legal name, social security number and major(s) and minor(s) elected. In addition, a check list is provided for degree expected and teacher certification expected. Accurate information is essential.

Forms are filed in the Office of Records and Registration and processed according to expected graduation date. A graduation auditor checks the credit hours taken and records the credit hours still needed. One copy of this audit is mailed to the student, another is sent to the student’s major department and the third copy is filed. Students should receive their audits a semester before they apply for graduation. A graduation audit does not take the place of regular, thorough advising.

Students may return the forms by mail or in person to Room 303 Pierce Hall. Time is required by the office staff for processing, and immediate responses to requests for information cannot be made at the time of the request.

Commencement

Commencement at Eastern Michigan University represents the culmination of a student’s academic achievement. It is a time of celebration and reflection for students, families, faculty and staff. It brings together a diverse community to share in the joy of the accomplished goals of students.

The commencement ceremony at Eastern Michigan University serves as a dual purpose to mark a point of accomplishment, thus a chapter in the lives of students and those who support them, and to encourage continued pursuit of education and personal fulfillment.

Commencement eligibility includes students who have submitted an application for graduation by the posted deadline (beginning of the semester) for the next semester. Commencement ceremonies are held in April and December only (June and August graduates will participate in the December ceremony following their graduation date).

Student Affairs and Campus Life

Campus Services

McKenny Union and Campus Life
11 McKenny Union
Phon: 734.487.3045
Fax: 734.486.1927
E-mail: campuslife@emich.edu
www.emich.edu/campuslife

The Department of McKenny Union and Campus Life offers many rich opportunities for students, faculty and staff to engage in the life of the campus, to connect in communities with people who share similar interests or goals, and to establish and maintain a sense of belonging at EMU. The de-
perten, includes EMU's student union and meeting center - McKenny Union, which features meeting and lounge space, retail and dining operations, and a number of student services. In addition, the department also provides a diverse array of co-curricular programs, where students learn about themselves and others, develop academic, social, personal, and professional skills, and form lifelong friendships.

McKenny Union and Campus Life Programs

Student Organizations and Greek Life
Provides programs, services, resources and advocacy to assist student organizations and communities and enhance the quality of student life at EMU.

New Student Programs
Fusion Orientation and the First-Year Mentor Program offer programs, services and resources assisting new freshman and transfer students transition positively to EMU.

Arts and Entertainment Programs
Presenting a diverse array of excursions, lectures, performing arts, and film programs for the campus and community.

Community Service and Leadership Programs
The VISION volunteer office provides students with civic engagement and community service opportunities in the community through Alternative Spring and Winter Breaks, America Reads, Best Buddies, civic engagement activities. GREEN, Habitat for Humanity, JumpStart, Kid Connection and Students Against Hunger and Homelessness.

Leadership development programs such as EMU LeaderShape, the Ambassadors at EMU and leadership excursions provide students with opportunities to enhance their personal and professional skills.

Diversity Programs
Located on the second floor of King Hall, 734.487.3418 (located on the second floor of King Hall, 734.487.3418)

Center for Multicultural Affairs
Provides programs, services and advocacy that reflect the heritage of African-American, Latino, Native American and Asian students.

Women's Center
Provides programs, services and advocacy to assist women reach their full potential.

Lesbian, Gay, Bisexual and Transgender Resource Center
Provides programs, services and advocacy addressing the needs of students, faculty and staff related to sexual orientation and identity.

Commuter Services and Union Programs
Located on the main floor of McKenny Union, Commuter Central provides quick programs and services to the commuter student population at Eastern Michigan University. Staffed by a team of trained and talented commuter advisors, Commuter Central offers commuter-friendly programs, including Commuter Orientation and Commuter Appreciation Week, and provides information and resources to connect commuter students to Eastern.

A variety of year-round Union programs, including the popular Study All Night, Midnight Snack, Study, dance workshops, coffee houses, poetry slams and midday programs highlight McKenny Union as the "campus living room."

Student Union Services
McKenny Union is a barrier-free facility that offers 13 meeting rooms from an elegant 4,300-square-foot ballroom to the informal Huron Room, complete with a fireplace. The Union is an excellent location for organizational meetings, lectures, luncheons, wedding receptions or social gatherings. The Event Planning Office, located in 212 McKenny, is open Monday through Friday 8 a.m. to 5 p.m. to schedule meetings/events and for catering services.

The building also houses:

- Dining operations: Wendy's, Taco Bell, Panera Bread, Club Captivating, and Iron Tasty
- Retail: the Lobby Shop - a convenience store; two ATMs; EMU Barnes and Noble bookstore and gift shops and Mailboxes, Etc.
- Student Gallery: the student-run Intermedia Gallery
- Commuter Central: providing services, advocacy and programs for commuter students, and staffed by a team of trained and talented commuter advisors
- Information Center, offering assistance, directions and information to campus guests
- Eagle Card Office for student ID cards
- Service EMU - a one-stop service center for enrollment, financial aid, billing and payments
- Computer Lab
- Student Organization Center housing Student Government offices as well as office and meeting space and resources for student organizations.
- Lockers, leased by the semester
- TV Lounge

For more information on the services and programs offered at McKenny Union and Campus Life, check out our Web site at www.emich.edu/campuslife, call us at 734.487.3043, or e-mail campus.life@emich.edu.

Holman Learning Center
www.dl.emich.edu

Lynette Findley, director
Margaret Carter, associate director
Judy Mack, Learning Center specialist
Alcyne Johnson, project coordinator
Robin Clauwowski, Supplemental Instruction coordinator
Dawn Stendar, office supervisor

Bruce T. Halle Library, Room 234
Phens: 734.487.2133
TTY: 734.487.2482
E-mail: learning.center@emich.edu

Holman Learning Center (TLC) provides students with a campus-wide network of learning assistance programs designed to develop independent learning skills necessary for academic success.

Tutor Programs
TLC provides the following tutoring assistance programs: (1) Individual tutors are available to undergraduate students who wish to work one-on-one with a peer tutor to improve their understanding of a particular course. Individual tutoring is non-remedial and free. (2) Supplemental Instruction (SI) assist students who are enrolled in a first-year large lecture course to develop effective study strategies. A SI leader will hold small discussions on note-taking, study strategies and test taking and relate the skills to the specific large lecture course.

Student Academic Success
TLC focuses on the academic success of each student during their career at Eastern Michigan University. The office continues to create new and innovative programs for students. These programs focus on new students to the University and students referred to the office by other departments or faculty. These programs include the following: (1) First-Year Academic Support Program links students, faculty and parents to facilitate the student's transition into higher education and to maximize academic success. (2) Skill Building Workshops expose students to information on test taking strategies, time management, how to efficiently take notes in class and preparing for final exams. Workshops are presented to freshmen residence halls, McKenny Union and Halle Library. (3) Peer support sessions offer students an opportunity to talk to a graduate student to get help navigating the University environment and charting a positive, goal-oriented plan for academic success.
examinations in a distraction-free environment, access to adaptive technology, sign language interpreters, books on tape and note takers. However, all accommodations are determined on a case-by-case basis according to each student's documented needs. The ASO works closely with faculty members and other University departments, such as Housing and Campus Life, to ensure that students with disabilities receive the accommodations they need to participate in all University programs, services, and activities. All disability information is strictly confidential and students are encouraged to contact the ASO to discuss their individual needs.

Offine of International Students
Paul Dean Webb, Director
229 King Hall
734.487.3146
www.EMU.edu/visas

The Office of International Students extends a welcome to all international students pursuing educational goals at Eastern Michigan University. Concerned, imitable and professional staff is available to assist students in any manner, including orientation, advice on immigration issues, academic, financial, employment and personal concerns. The staff also provides the preparation of documents needed to maintain favorable status in this country.

This office serves as a consultant to faculty and staff on international students' learning needs. The office also acts as the clearinghouse for the development of various international connections in the University and, in coordination with the University and the American Consulate, promotes international education and understanding and initiates enhancement programs such as cross-cultural activities on and off-campus.

International students are encouraged to make regular contact with the office.

Student Government
Governted by the President (elected each spring)
www.EMU.edu/studentgov
011 McKenny Union
734.487.1470

Student Government at EMU is committed to improving the quality of student life on campus. The student body each spring elects a president, vice president and 21 senators who, along with representatives appointed from various organizations, comprise the Student Senate. The executive officers and members provide input to the administration of the University to help solve problems and improve programs and services. Student Government also sponsors campus-wide events. The student service office, known as REACH, provides assistance to students with legal, rental or University-related problems.

Not only do student representatives get valuable experience in the process of government, but they also represent the University on local, state and national levels. Any EMU student may run for a Student Government position. Interested students are also welcome to serve on Student Government committees and University advisory groups.

Veteran Services Office
Director Conover
18 Roosevelt Hall
734.487.1020
www.EMU.edu/veterans

The Veteran Services Office (VSO) coordinates all campus services for veterans who are pursuing their education at EMU. It is the resource center for veterans' benefits; veterans must report successful academic progress, class drops and adds, and/or relevant changes in personal status to the VSO in order to maintain benefits.

The office assists veterans in housing, financial aid and works closely with disabled veterans to provide full educational benefits. Veterans should direct all questions to a representative of this office.

Children's Institute

Rackham Building
Phone: 734.487.1126, 734.487.2340, 734.487.3426
Fax: 734.487.0286
Hours: Monday–Friday, 7:30 a.m. to 5:30 p.m.
Web site: www.EMU.edu/child

The EMU Children's Institute offers high-quality early childhood education programming to families of Eastern Michigan University and surrounding communities. We offer various programs designed to meet the needs of students and working families.

The Institute provides high-quality care and education for children ages 18 months through five years. Full and half-day programs are available for toddlers, preschoolers, and kindergartners. A special arrangement with the Ypsilanti Public School System provides transportation to and from Perry Child Development Center for the morning kindergarten program. We also offer a full-day kindergarten program at the Children's Institute.

The EMU Children's Institute serves at the practicum placement site for students preparing to be early childhood education teachers. Practicum students are closely supervised by professional classroom teachers and University faculty members.

Play is a mainstay of the Children's Institute's curriculum; children engage in a variety of group and individualized learning experiences. Activities at the Children's Institute are planned based on developmental appropriateness, and are designed to meet the needs of each child in the group. Teaching staff has completed coursework and hold degrees/advanced professional degrees in early childhood education. Staff training and in-service days are conducted throughout the year.

Counseling Services
313 Snow Health Center
Hours: Monday–Friday, 8 a.m. to 9 p.m.
Phone: 734.487.1118
Fax: 734.487.0003
Web site: www.EMU.edu/ubs

Counseling services provide:
- Free, confidential, personal counseling for EMU students
- Information, interactive workshops and presentations in classrooms and other locations on topics including managing depression, remedies for stress and relationship problems, building self-esteem, learning assertive communication and relational skills, and addressing anger and test anxiety among others
- Crisis response and support
- Screening for depression and other concerns
- Consultation with faculty and staff about student and classroom issues
- Self-help lending library, audio and video tapes for information and skill building.

Professional, licensed psychologists and counselors provide services. Graduate students completing internships also provide services under professional staff supervision.

All registered EMU students are eligible for services. Appointments can be made by phone or in person. Counseling is confidential and no cost to students.

Snow Health Center

Phone: 734.487.1122
Fax: 734.487.2342
www.EMU.edu/ubs
Hours: Monday–Friday, 8 a.m. to 5 p.m. The center is closed during official University holidays. Appointments are preferred, but walk-ins are welcome.
The basic services provided at Snow Health Center include:

- Physical exams
- Minor illness and injury treatment
- Women's health including annual exams, diagnosis and treatment for infections, pregnancy testing
- STI testing and treatment
- Allergy shots, immunizations, TB tests, flu shots, meningitis shots
- Blood pressure checks
- Laboratory
- X-ray
- Pharmacy - full line of prescription medications and over-the-counter items
- Sports medicine clinic
- Psychiatric services

If an outside physician orders lab work or an x-ray, Health Services staff can perform the service. The pharmacy can fill prescriptions written by a licensed physician within Michigan as well as most out-of-state prescriptions, and is a participating provider with several major insurance carriers. The pharmacy accepts several insurance plans. Please call them directly at 734.487.1125 with questions.

Both full and part-time physicians and nurse practitioners staff Snow Health Center. Our physician team includes a staff physician along with physicians and physician-supervised residents from nearby St. Joseph Mercy Hospital.

The EMU Student Health Insurance policy, sponsored by Student Government, is accepted in full for covered services after co-pays are met. Insurance information is available at Snow Health Center and on the website at www.emich.edu/uhh. All currently enrolled EMU students, faculty and staff and their spouses are eligible for medical services.

Students are eligible to utilize University Health Services up to six months past their last enrollment date at non-student rates.

Health Education and Wellness Programs
Snow Health Center, top floor
Phone: 734.487.2226
Fax: 734.481.0050
Web site: www.emich.edu/uhh

Health Education provides comprehensive health and wellness services and programs aimed toward the enhancement of academic achievement and the promotion of healthy lifestyles. Some of the services include:

- Alcohol, tobacco and other drug education
- Alcohol and other drug assessments
- Checkpoint program
- HIV antibody counseling and testing
- Health Resource Library
- Classroom and workshop presentations
- CloseUp Theatre Troupes
- Smoking cessation resources
- Violence Prevention Programs (PHAVE)
- Blood drives
- CPR/First Aid certification

The Employee Wellness Program provides programs and services designed to address six dimensions of wellness: physical, social, emotional, spiritual, environmental and intellectual. The overall goals of the program are to positively influence changes in health-seeking behaviors, lifestyles, stress-linked work styles and physical activity. Some of the services include:

- Health risk assessment
- Wellness Walkers
- Lunch and Learn workshops
- Wellness Fairs
- Wellness Champions

- Smoking cessation resources
- CPR/First Aid certification
- Blood drives
- Wellness newsletter

CAMPUS LIVING

Housing
Rebecca Figura, director
Dining Commons One, lower level
734.487.1390
Fax: 734.487.8513
E-mail: housing@emich.edu
Web site: www.emich.edu/housing/halls.php
8 a.m. to 5 p.m. weekdays

Residence Halls
Eastern Michigan University's residence system provides housing for over 4,000 students, staff and faculty. Housing options include both traditional residence halls and apartments. Our 14 residence halls offer six different room layouts to choose from. You can live in a double room, co-ed hall or upper-class single hall. Features include laundry and kitchen facilities, TV and study lounges, cable television, local telephone service and recreational amenities. All halls feature reception desk services and in-room network connections for Internet and e-mail service. Residence hall staff provide educational and recreational programs and promote the safety and welfare of residents.

Academic and Personal Success

Studies show that students are more likely to succeed academically and personally if they live in a residence hall. Part of the reason is the variety of academic and student support programs offered. Our Academic Enhancement Program staff organizes study skills workshops and provides a nightly study center that creates a quiet, spacious atmosphere for studying.

Residence hall staff also conduct a number of informational programs on topics such as financial aid, health, fitness and personal relationships as well as recreational programming designed to promote community development and enhance your residence life experience.

Make Your Room Special

You'll be amazed at what you can do with your residence hall room. We'll supply the basic furnishings: desk, chair, bed, dressers and window curtains, but you may want to bring your own loveseat or couch, refrigerator, microwave, carpeting and favorite wall hangings. Part of the fun of living in a hall is making it feel like home.

Get Involved in Your Hall

What a great way to make new friends and have fun! Get involved in residence hall programs. There are so many things to do throughout the academic year. Residence hall staff and hall government traditionally sponsor events such as Little Sister Weekend and a number of activities during Homecoming. Often individual floors and halls will organize bowling parties, volleyball games, sport outings, movie nights and live entertainment.

Residents take an active role in planning and organizing events. You can learn great leadership and organizational skills by participating on a planning committee or by getting involved in hall government. The Residence Hall Association, the residence hall student governing board, gives you an opportunity to represent your hall or floor. So get involved! After all, it's your home away from home.

As Your Service

You can stop by your hall front desk to pick up your mail, make changes or check out cleaning supplies, vacuum and recreational equipment.

Our custodial and maintenance staff will repair any permanent fixtures in your room, such as the heat, plumbing or light fixtures, as well as clean hall corridors, lounge areas and community bathrooms.
Residence hall students also enjoy the convenience of having shuttle bus stops right in front of many halls. You can catch a ride around campus, head to the College of Business in downtown Ypsilanti or go shopping in nearby Ann Arbor.

To reserve a room, students must:

2. Read the contract carefully and thoroughly. The contract contains important information you need to know before reserving a room.
3. Select a meal plan.
4. Select your residence hall program:
   - First-Year Center (new incoming freshmen only)
   - Honors Hall (new student and transfers must have a 3.0 GPA)
   - Upperclass Hall (seniors and above only)
   - Single Room Halls (reserved for returning students only. New upperclass, transfer and graduate students may be eligible if space is available.)
5. Return the completed and signed contract along with the Residence Hall Assignment Request form and a check for the $200 prepayment to:

Cashier’s Office
201 Pierce Hall
Eastern Michigan University
Ypsilanti, MI 48197

Apartments on Campus

Eastern Michigan University offers traditional residence halls as well as apartments, living options for students. Three apartment complexes are available to serve your housing needs. These include Brown/Munson, Cornell Courts and Westview Apartments.

Eligibility

Applicants must be:

- enrolled in 12 undergraduate credit hours or
- enrolled in six graduate credit hours, or
- actively engaged in an internship, or writing a master’s, specialist’s or doctoral thesis, or
- upperclass or non-traditional first-year students

Amenities

University Apartments include:

- locations conveniently situated to classes, the library and athletic events
- utilities included in rent (gas, electric, water and trash collection)
- basic cable service
- laundry rooms in each building
- storage facilities in some locations
- community rooms for complex activities
- leasing options
- internet in Brown/Munson

Students must submit an application to be considered for an apartment. Applications are available from the apartments office and require a $55 (U.S.) nonrefundable processing fee.

Assignments are made by the leasing coordinator according to the date the application is received. Applicants are notified when their application has been approved and a unit is available for occupancy. Apartments are leased as they become available.

According to Eastern Michigan University policy, the maximum number of individuals allowed to live in a two-bedroom apartment is four (4). The maximum number of individuals in a one-bedroom unit is two (2): a married couple, two same-sex individuals or a single parent and one child.

Contact

Eastern Michigan University
University Apartments Office
Dining Commons ONE, lower level
Ypsilanti, MI 48197
734.487.0045
www.emich.edu/housing/apartments

Dining Services

Larry Gates, Director
Dining Commons ONE, lower level
Ypsilanti, MI 48197
Phone: 734.487.0045
Fax: 734.487.0043
E-mail: lgates@emich.edu

One need not worry about gaming being eating the same food in the same place at EMU! There are more than 30 places to dine on campus (including four convenience stores). All locations are open to EMU students, parents and staff and will accept cash, Eagle Meal Meals (for Commuters — Block Plan, Block Plus and Flexible E-Dollars), EagleOne Card (Eagle Express), E-Dollar, Flex Meal Plan, meal transfer, debit/credit (Visa/MasterCard), University requisitions and gift cards.

- Dining Commons ONE: All-you-care-to-eat, self-serve food court located in Dining Commons ONE (accessed through Down Hall) 734.487.2244
- Eastern Express: High-tech fast food with 10 shops, featuring A&W, Taco Bell Express, Qdoba, Asian Cuisine and Freshman (national franchise). Offers all-you-care-to-eat Sunday buffets. Conveniently located between Walton-Playhouse and Phelps-Shelton residence halls 734.487.0444
- Crustbash MarketPlace: A unique, upper-level food court, which includes video rental, gifting cards, deli and hot grill items. Located in Hoyt Conference Center. Features Einstein Bros. Bagels. 734.487.3066
- Paniniwiches Deli: Made-to-order deli offering sandwiches, soups, salads and more. Located in McKenny Union 734.487.0417
- Taco Bell Express: Great tacos! Located in McKenny Union 734.487.3838
- It’s A Tea-Up & Company: Salads made-to-order, fresh baked pastries, frozen smoothies, yogurts and shakes. Located in McKenny Union 734.487.0417
- Lolly Shop: Convenience store located on the main floor of McKenny Union. Offers fruits, pastries, bottled beverages, toiletries, makeup and gaming items 734.487.3834
- QuickFix: Convenience store offering more than 400 video rentals, groceries, film and film processing, greeting cards and make-up. Located in lower level of Eastern Express. 734.487.0122

Satellite Operations*

- Courtyard: Located in the Rec-BM 734.487.7575
- Flying Eagles: Located on the Northeast end of Peay-Harrold 734.487.6965
- TO BE Cafe: Located in Quick-Speaking Theatre 734.487.6699
- Gaff Gourmand: Located in Alexander Hall 734.487.8410
- pastry Cafe & Company: Located in the Hall Library 734.487.6550
- The Bottom Line: Located in the College of Business 734.487.8409
- Common Ground Cafe: Located in the Marshall Building 734.487.3412
- Food for Thought: Located in Sill Hall 734.487.0965

Note:
*All satellite operations offer sandwiches, soups, which, and pastries as well as other items (varies depending on the location).
SKILLS FOR AN EXCELLENT COLLEGE EXPERIENCE

1. Communication: Effective communication is key to success in any field. Whether it's verbal or written, clear and concise communication can help you convey your ideas and opinions effectively.

2. Collaboration: Working collaboratively with others can enhance your skills and knowledge. Learning to work as a team can help you achieve common goals and improve your problem-solving abilities.

3. Critical thinking: Critical thinking involves analyzing information and ideas to form a logical conclusion. It's essential for making informed decisions and solving complex problems.

4. Time management: Good time management skills can help you balance your academic and personal responsibilities. Learning to prioritize and manage your time effectively can help you achieve your goals.

5. Adaptability: The ability to adapt to new situations and environments is crucial in today's rapidly changing world. Being flexible and open to new ideas can help you succeed in various settings.

6. Creativity: Creativity is the ability to think outside the box and come up with innovative solutions. It's essential for solving complex problems and developing new ideas.

7. Self-motivation: Self-motivation is the ability to motivate yourself to achieve your goals. Learning to track your progress, set goals, and stay focused can help you achieve your academic and personal aspirations.

8. Professionalism: Professionalism involves demonstrating a high level of integrity, respect, and responsibility. It's essential for building strong relationships and achieving success in any field.

9. Leadership: Leadership involves taking charge and guiding others towards a common goal. Learning to lead by example and inspire others can help you achieve your goals and make a positive impact.

10. Emotional intelligence: Emotional intelligence involves understanding and managing your own emotions, as well as recognizing and responding to others' emotions. It's essential for building strong relationships and achieving success in any field.
EXTENDED PROGRAMS

Programs:
Continuing Education
Distance Education
Academic Programs Ahmad
World College
Centers for Corporate Training
Institute for the Study of Children, Families and Communities
Upward Bound

Associate Vice President for Extended Programs
Mary Sue Matt
102 Boone Hall
www.ep.emich.edu
Phone: 734.487.0427
Fax: 734.487.2316
E-mail: extended.programs@emich.edu
Continuing Education

Mission Statement

The City College of New York is committed to providing high-quality, affordable, and accessible education to meet the diverse needs of a dynamic global society. Our mission is to empower individuals to achieve their full potential by offering comprehensive lifelong learning opportunities that foster personal growth, professional development, and civic engagement. Through our diverse range of academic programs, noncredit courses, and community partnerships, we strive to make a positive impact on our local, national, and international communities.
Independent Learning
Satisfy general education requirements and earn college credits through self-paced instructional courses via EMU's Independent Learning program. You may register at any time, and you have up to six months to complete coursework. You'll receive instructional tapes, study guide and book lists to begin your lessons. Professors are available for consultation and grade assignments that you send through regular mail or fax. There are proctored examinations for each course.

Prior Learning Assessment
Receive up to 30 hours for learning you've gained outside the classroom — including seminars, training completed on the job and knowledge acquired independently in a particular field. Through Prior Learning Assessment, you'll identify and analyze learning, document your experience, match the learning to EMU courses and compile a written portfolio to submit for evaluation. Credits earned through portfolio-assisted prior learning may be applied toward any degree for which they are appropriate. Students seeking credit for prior learning must attend a free, required workshop.

One-Week Courses
EMU-Winter Break
800.777.5921
E-mail: winter.break@emich.edu
Earn credit during EMU's winter break by taking a one-week course offered in northern Michigan.

EMU-Traverse City
888.EMU.TCTY
E-mail: traverse.city@emich.edu
Earn credit during the spring and summer by taking a one-week course offered on the campus of Northwestern Michigan College in Traverse City.

Noncredit Programs
734.487.7990
E-mail: mmn.credit@emich.edu
Continuing Education offers programs and services for professionals seeking ongoing educational opportunities: conferences, workshops and special events of interest to the EMU community; and support for area K-12 schools and districts. For a complete list of non-credit learning opportunities, visit www.cc.emich.edu.

Professional Certificates, Training and CEUs
Professional societies and organizations develop programs and offer certificates to encourage members to update their knowledge and skills. The CEU (Continuing Education Unit) is a national standard of measurement to recognize participation in a wide range of organized non-credit educational activities (conferences, seminars, workshops, etc.) in all fields. Opportunities for CEUs, certificates and training include:
- Michigan State Board — Continuing Education Unit (SB-CEUs)
- Certificate in Information Security Systems
- SHRM Human Resource Courses and Certificates
- American Payroll Association courses
- Online test preparation workshops

School Partnership Program
In order to develop win-win partnerships with schools and school districts, EMU offers services and programs emerging through customized collaboration between schools and school districts. Partnership opportunities include:
- Grant Evaluations and Administration
- Career Development Counseling and Planning matched to district's needs
- Credit classes (Consortiums, Online Partners and Online Programs)
- Customized EMU Task and Assessment Teams
- Data Collection Evaluation and Assistance
- Customized Contract Training

SUMMERQUEST
SUMMERQUEST offers high school students the opportunity to explore University life on campus while they delve into an academic experience in one- and two-week programs in the early summer. For information on programs being offered, visit www.emich.edu/summerquest.

ACADEMIC PROGRAMS ABROAD
George Klein, director
103 Boone Hall
www.emich.edu/abroad
Phone: 754.487.2424 or 800.777.3541
Fax: 754.487.4377
E-mail: programs.abroad@emich.edu

In today's interconnected world, a global perspective is increasingly important and valuable for all students. The Office of Academic Programs Abroad provides opportunities for EMU students to internationalize, diversify and enrich their University education through a variety of study abroad programs, including winter break, spring and summer, intensive language immersion, and exchanges and other semester and academic year opportunities.

Winter Break Programs
EMU students earn credit while studying abroad with EMU faculty during the break from campus classes midway through the winter semester. Recent programs include:
- Art in Mexico City
- Cultural Geography of Puerto Rico
- Hospitality Management in London
- Literature in London
- Power, Place and Image in Florence and Rome

Spring and Summer Programs
- The European Cultural History Tours are unique travel-study programs that visit more than 30 cities in 10 countries throughout Western Europe and the Mediterranean. Five and 10-week programs are offered. Students and professors study major historic and cultural sites while pursuing in-depth academic work in an interdisciplinary context. Since their beginnings in 1974, the European Cultural History Tours have become a leader in innovative travel-study abroad, drawing students from EMU as well as other colleges and universities. The Emanuel Fens Endowed Fund provides a competitive scholarship available to EMU students with financial need, applicable to either the Cultural History Tours or Adventures Abroad programs.
- Adventures Abroad Programs are short-term, low-cost travel-study tours that offer EMU students the opportunity to travel with EMU faculty to Europe or the Mediterranean while earning three credits in literature, art or another discipline. The Adventures Abroad program is a short-term module embedded within the longer Cultural History Tours. Students with financial need may apply for the Emanuel Fens Scholarship applicable to this program.
- Other spring and summer programs: EMU students may choose from a variety of travel and residence programs that carry credit in such fields as art, biology, business, community practice, education, history and political science. EMU faculty-led programs include such destinations as Ecuador and the Galapagos Islands, Mexico and the Americas, Europe and Asia. Several spring and summer programs are three weeks or less and designed to be especially affordable for EMU students.
Summer Intensive Language Programs

Intensive French, Spanish, German and Japanese language programs are available in France, Mexico, Austria and Japan respectively, in settings of cultural immersion. Faculty coordinate additional instruction and provide supervisors and cultural activities. All levels of instruction are available. These programs are offered in cooperation with the Department of Foreign Languages and Bilingual Studies.

Semester/Year Exchange Programs

Eastern Michigan University students may attend one of our Exchange Partner schools for one or two semesters for a cost equivalent to that of Eastern Michigan University. Students pay for EMU tuition and fees, plus a modest program fee. The courses taken appear on the EMU transcript as EMU courses. Students may select courses to count towards a major minor general education or elective credits.

- United Kingdom exchanges include: University of Derby, England; Oxford/Brookes University, England; University of Paisley, Scotland.
- Other exchange programs include:
  - University of Greifswald, Netherlands (English-language courses offered)
  - ESDECG - Menn, France.
  - Karlsruhe University, Germany.
  - Rostock University of Applied Sciences, Germany.
  - Kansai Gaidai University, Japan.
  - Business majors at EMU may participate in the Regional Area Mobility Program (RAMP) during fall and winter semesters. Courses are taught in the language of the host institution: Spanish at Mexican Universities English or French at Canadian Universities. Proficiency in the relevant language is required.
  - The Japan Center for Michigan Universities (JCMU) in Hitotsubashi, Japan offers Japanese Language and Culture courses open to all majors. No prior knowledge of Japanese is required.
  - Affiliated programs include Carin University of Technology, Australia; Universite Catholique de L'Ouest, France.

Office of Academic Programs Abroad Student Services

The Office of Academic Programs Abroad provides EMU students with:

- Comprehensive study abroad advising
- Study Abroad Orientation
- Health and safety information
- International student identification cards
- International health insurance
- Financial aid coordination and scholarship assistance
- Innovative and affordable study abroad programs

In addition to EMU programs, the Office of Academic Programs Abroad maintains a library of information on hundreds of study abroad programs sponsored by universities all over the world. Students may borrow the library and make appointments for advising Monday through Friday throughout the school year. Most EMU programs are online at www.emich.edu/abroad.

Centers for Corporate Training

The World College is not a traditional academic college. Rather, it serves as a facilitating and coordinating center for international education seeking to promote the broadening of awareness and understanding in all colleges, departments and programs at EMU of the world outside the borders of our country. World College programs are developed in conjunction with faculty and administrators in the other academic colleges.

Centers for Corporate Training

- Center for Organizational Risk Reduction/Great Lakes OSHA Education Center
  - www.erinoshia.org
  - Pamela Hill, director
  - 2000 Huron River Drive, Suite 101
  - 180.932.8689
  - E-mail: pamela.hill@emich.edu

- Center for Quality
  - www.centerforquality.org
  - Barbara L. Hopkins, director
  - 2000 Huron River Drive, Suite 101
  - 180.932.8689
  - E-mail: barbara.hopkins@emich.edu

The Centers for Corporate Training are nationally known for designing and providing a wide range of training, technical assistance and consulting for hundreds of companies each year in health, safety, security and quality. Our clients include the Big Three automotive manufacturers and their suppliers, plastics and electronics producers, healthcare providers and government agencies.

Each of the centers works, in its own way, to help individuals and organizations reach and maintain excellence. We are dedicated to helping companies not only survive but prosper during rapid organizational, technological and economic change.

By developing customized programs, innovative training and effective, practical consulting, the centers support organizations as they improve the quality of their products, the productivity of their processes and the safety of their workplaces. Our partners are workers, supervisors, managers and executives who will create and sustain in the global marketplace.

The Centers for Corporate Training provided innovative education and training for more than 8,000 people from 2003 - 2004. Since 1990, the centers have conducted programs in more than a dozen countries in North America, Asia, Europe and South America. They include:

- Center for Quality
- Center for Organizational Risk Reduction
- OSHA Training Institute
INSTITUTE FOR THE STUDY OF CHILDREN, FAMILIES AND COMMUNITIES

Ronald C. Woods J.D., director
203 Boone Hall
www.iscfc.emich.edu
Phone: 734.487.0372
Fax: 734.487.9284
E-mail: roland.woods@emich.edu

The Institute for the Study of Children, Families and Communities is an interdisciplinary applied research unit. It is dedicated to enhancing the quality of life in society. Its focus upon human capital development and community growth embraces, in addition to research, demonstration projects, technical assistance, consultation, training, assessment and policy analysis and advocacy. The institute executes its mission through its three centers.

The Center for Applied Research (CAR) provides a full range of research services including needs assessments, asset mapping, survey research, program monitoring and evaluation, data collection and analysis, and policy impact analysis. The CAR includes a state of the art Computer Assisted Telephone Interviewing facility, the CATI Lab. Director: Peggy Wiernek, M.S., e-mail: peggy.wiernek@emich.edu

The Center for Child and Family Programs (CCFP) focuses on vulnerable children, families and marginalized youth. The CCFP conducts applied research and program evaluation, develops training curricula, provides technical assistance and develops policy recommendations at the local, state and national levels. Director: Valerie Polkow, Ph.D., e-mail: valerie.polkow@emich.edu

The Center for Community Building and Civic Engagement (CCBCE), a newly funded through a U.S. Department of Justice grant, operationally extends EMU’s mission as a metropolitan University into the greater community. Through projects such as the HUD Community Outreach Partnership Center, it promotes community capacity building, youth violence reduction and a range of community-University collaborations. Director: Elvi R. Krajewski-Jaire, Ph.D., e-mail: ekrajewski@emich.edu

UPWARD BOUND PROGRAM

Amy Prevo-Johnson, director
Suite B4 Goddard Hall
Phone: 734.487.0488
Fax: 734.487.5088
E-mail: amy.prevo-johnson@emich.edu

Upward Bound is a pre-college academic support program funded by the U.S. Department of Education. The mission of this program is to provide the academic support, college preparation, career exploration and personal growth necessary to help students excel academically, enroll in and graduate from college, set and accomplish their goals and to realize their fullest potential as individuals. The program works with economically disadvantaged and/or potential first generation college students from Ypsilanti area high schools.

Upward Bound provides participants with academic assessment and advising, tutoring and instruction in core academic subjects and study skills enhancement. Services also include preparation for college entrance exams, assistance with the college application process including securing scholarships and financial aid, as well as the opportunity to explore careers by participating in job shadowing and summer internship programs.
COLLEGE OF ARTS AND SCIENCES

Dean:
Linda Prichard
411 Pray-Harrold
734.487.4344

Associate Dean:
Laura George, Interim
411 Pray-Harrold
734.487.4548

Associate Dean:
Harriet Helf, Interim
411 Pray-Harrold
734.487.4949

College of Arts and Sciences General Education Advising Office
720 Pray-Harrold
734.487.7523

Departments and Programs
- African American Studies
- Art
- Biology
- Chemistry
- Communication and Theatre Arts
- Computer Science
- Economics
- English Language and Literature
- Foreign Languages and Bilingual Studies
- Geography and Geology
- History and Philosophy
- Mathematics
- Music and Dance
- Physics and Astronomy
- Political Science
- Psychology
- Sociology, Anthropology and Criminology
- Women's Studies Program
MISSION STATEMENT

The College of Arts and Sciences at Eastern Michigan University has as its mission the intellectual growth and the pursuit of excellence in the study and enhancement of the arts and humanities, mathematics, and the social and natural sciences. The College is composed of students, faculty and staff committed to teaching and learning, research and scholarship, to creative endeavors, and to public service.

Through these pursuits, the College seeks to enrich the lives of all its members and prepare them for service in the local, national and global communities. The College seeks to encourage dynamic engagement with the arts and humanities and the pursuit of an ever-deeper understanding of the sciences and of physical and social life in all its forms and manifestations.

The College seeks to develop in all its members the ability and desire to think critically, to act independently, and to communicate effectively. The College seeks to foster an appreciation for diverse multicultural, ethnic and gender-related perspectives.

THE COLLEGE OF ARTS AND SCIENCES

The College of Arts and Sciences is the largest of Eastern Michigan University's seven colleges and offers a rich academic environment and one program. It offers 183 fields of undergraduate study and enrols more than 8000 undergraduate students at Eastern Michigan University. The college was established during the 1955-1960 academic year, unifying various disciplines that had existed on campus for the previous century and a half.

The breadth of the college's programs present many exciting opportunities encompassing multiple branches of human knowledge. Some students arrive with a well-focused sense of the subjects such as biology, mathematics or history that they want to study. Others are undecided or change their minds as they develop new interests in disciplines such as anthropology, area studies, geology, astronomy, art history, linguistics and philosophy that generally are not in the K-12 curriculum. The College Advising Office as well as faculty advisers in departments are able to work with students to help clarify individual learning and career goals. The College of Arts and Sciences is an excellent place for personal growth and career exploration.

Regardless of field, all the arts and sciences have common learning objectives which are of value in virtually any career. They stress the analysis of complex issues, the development of focused research questions, the finding and synthesis of information and cogent expression. A number of studies of U.S. corporations and other institutions have shown that liberal arts majors are less likely to be satisfied and tend to dominate leadership positions. This is attributed to their ability to think broadly and clearly and not simply within the parameters of a technical specialization.

Many liberal arts graduates go directly into the workforce as well-educated generalists. Others pursue a bachelor's degree preparatory to advanced graduate study in a liberal arts field or a doctoral institution, leading to a teaching or research career. Others gain admission to professional schools such as law, business and medicine. College of Arts and Sciences graduates are to be found at some of the leading graduate schools in the nation. For those interested in elementary through high school teaching, a liberal arts major and minor, coupled with professional preparation at EMU's College of Education, is a common route. Still other undergraduate students are returning to college after an absence from formal study, and are improving their subject expertise and power of analysis while seeking advancement in the workforce. Yet others are pursuing a lifelong interest in a subject for personal enrichment. All find a place in the college.

Students work closely with the College's skillful and experienced teachers and researchers. Students have an opportunity to work with nationally recognized scholars in many fields. Over ninety-four percent of the faculty have doctorates. The College of Arts and Sciences publishes scholarly and peer-reviewed articles in the best academic journals. Equally impressive is the faculty's dedication to teaching. The College has earned more than its share of Distinguished Faculty Awards in teaching, research and service.

The College of Arts and Sciences takes special pride in fostering undergraduate research. The Undergraduate Symposium, soon to celebrate its 25th anniversary, is one of the oldest continuously operating showcase of undergraduate research in the nation. The college also makes travel awards for outstanding undergraduates to attend national conferences. It also sponsors rich co-curricular activities. Departments, individually or collectively, host undergraduate clubs and organizations. The Undergraduate Research Committee, sponsored by the Department of Communication and Theatre Arts and the United Nations Club, sponsored by the Department of Political Science and open to all interested students, have won national awards.

The college also recognizes that some students need to make up educational deficits before performing at their top level. It houses a Writing Center and a Math Center for those who need assistance.

Students and faculty in the College of Arts and Sciences reflect the diversity of the world around us. Eastern Michigan University, which has evolved from a Normal School preparing teachers, pioneered in employment of women in higher education. The college continues to do so. Today more than third of its faculty is made up of women, a figure which has continued to grow over the past 15 years. It also houses one of the oldest Women's Studies Programs in the nation. Eleven percent of the College's faculty are minorities, and it has a well-established African American Studies Department, the oldest in Michigan. The majority of the international students attending EMU are enrolled in College of Arts and Sciences degree programs, Study Abroad programs and degree programs such as Language and International Trade also offer students the opportunity to experience other cultures.

Many undergraduate programs are tailored to the time demands of students in today's busy world. A number of courses are available at off-campus sites and online. Evening, weekend and summer classes in addition to traditional day/night scheduling also make the college's undergraduate programs accessible and reflect its commitment to meeting student's needs without sacrificing the quality of instruction.

Education in the College of Arts and Sciences is regularly assessed and improved. A new Territorial Aquatic Ecology Research Facility provides a 3,000 square-foot greenhouse and other updated equipment to support research in the environmental science area. A new Center for Environmental Information, Technology and Applications (CEITA) is the primary data warehouse for environmental information in southeast Michigan and has a cooperation agreement with the Chinese Academy of Science. The Linguistics Program in the Department of English Language and Literature is internationally recognized as a primary electronic repository for endangered languages and for its cutting-edge work on language education. The newly refurbished McFarland Auditorium houses a world-class organ with 4,375 pipes and has been the scene of many musical recitals. Each year, too, the College appoints a distinguished scholar, artist or performer to its McVicker Chair in the Arts and Humanities. Appointments have included novelist, Maxine Hong Kingston; American-African historian, Roger Wilkins; literary theorist, Kenneth Burke; Shakespearean actor, Nicholas Pennell; animal rights philosopher, Tom Regan and Syrian literary critic and feminist, Boudaisha Shaban. Each has taught an upper-level or graduate class in their field and has interacted extensively with students.

Above all, the College of Arts and Sciences fosters an undergraduate community in which each student is challenged to do his or her best, while providing the support and advice needed to succeed. It is the goal of the Arts and Sciences faculty to foster the same enthusiasm for learning that drew them into their own respective fields. More fundamentally, the college seeks to develop in all its members the ability and desire to think critically, act independently and communicate effectively — the traditional hallmarks of liberal arts learning.

BACCALAUREATES

Most students in the college pursue one of the two basic undergraduate degrees — Bachelor of Science (B.S.) or Bachelor of Arts (B.A.). Both degrees require completion of University general education requirements, a major and a minor, the two-hour physical education and health graduation requirement and a minimum total of 124 hours. The bachelor of arts degree includes in that total one year of college credit in a foreign language. The bachelor of science degree provides more flexibility in selection of the major and minor and in the use of electives.
Additionally, the following specialized degrees are offered: bachelor of fine arts (B.F.A.), bachelor of art education (B.A.Ed.), bachelor of music education (B.M.E.), bachelor of music-performance (B.Mus.), and bachelor of music therapy (B.M.T.). These specialized degrees are described more fully within the individual departments.

Several professional certification and preprofessional programs are also available within the college. These programs, described more fully within individual department listings, include registered music therapy (RMT); international diplomas in business French and German certified actuarial science (CAS); preclinical; prelaw; premedicne and preosteopathic medicine; prenursing sciences; prepharmacy; and prelegal studies. Two other preprofessional programs are shared with the College of Technology: prearchitecture and preengineering.

See page 237 for College of Arts and Sciences interdisciplinary courses.

DEPARTMENT OF AFRICAN AMERICAN STUDIES

Campus Address: 620 Prey Hall
Internet: www.emich.edu/public/daas/index.html
Telephone: 734.487.4560
E-mail: ronahl.wood@emich.edu

See page 237 for course descriptions.

The Department of African American Studies offers an undergraduate major and a minor. The undergraduate program examines the Black experience in the American, the Caribbean and Africa from historical and contemporary perspectives. Students study the African American experience in particular as an entity in its own right and as a microcosm of the kaleidoscope of human experiences. The program addresses the multidimensionality of the Black experience, in particular the historical, political, policy, legal, economic, sociological, psychological, religious, and artistic dimensions. AAS majors should note that one year of a foreign language is required for the B.A. degree and the B.S. degree does not have a foreign language requirement.

AFRICAN AMERICAN STUDIES MAJOR (AAS)

General Education Requirements .................................................. 36 hours

Area I: Symbolic and Communication
1. See page 23
2. See page 23
3. AAS 301 Writing for African American Studies*
4. See page 23
5. See page 23

Area II: Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III: Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. AAS 101 Introduction to African American Studies*

Area IV: Arts and Humanities
1. See page 25
2. LITR 260 African American Literature*
3. See page 25
4. CTAR 151 African American Theatre: An Introduction*

Physical Education/Graduation Requirement .................................. 2 hours

Major Requirements ......................................................... 33 hours

Required Courses ........................................................... 9 hours
* AAS 101 Introduction to African American Studies (3 hrs)
* AAS 201 Foundations of Knowledge in African American Studies (3 hrs)
* AAS 401 African American Studies Research Seminar (3 hrs)

Restricted Elective Courses .................................................. 21 hours

Twenty-one courses from the following:
* AAS 102 Introduction to African Civilization (3 hrs)
* AAS 211 African American Social Movements (3 hrs)
* AAS 231 Urbanization and the African American Community (3 hrs)
* AAS 232 Politics in the African American Experience (3 hrs)
* AAS 233 African American Policy and African Americans (3 hrs)
* AAS 241/PLSC 241 Black Women: Politics and Racism (3 hrs)
* AAS 311 The African Diaspora (3 hrs)
* AAS 312 African Civilization (3 hrs)
* AAS 313 African American Literature: African: The Struggle and Prospects for Development (3 hrs)
* AAS 314 The Social Context of African American Health (3 hrs)
* AAS 315 The African American Family (3 hrs)
* AAS 321/PLSC 321 African American History (3 hrs)
* AAS 370 Films of the African American Experience (3 hrs)
* AAS 411 African American Studies Internship Seminar (3 hrs)
* AAS 411 Law in the African American Experience (3 hrs)
* HIST 315 History of Black Americans (3 hrs)
* LITR 260 African American Literature (3 hrs)

Elective Course ................................................................. 3 hours

One course from the following:
* ANTH 236 Peopled and Cultures of Africa (3 hrs)
* CTAR 151 African American Theatre: An Introduction (3 hrs)
* CTAR 251 African American Theatre: Creative Problems (3 hrs)
* ECON 3311 Minority Workers in the Labour Market (3 hrs)
* ECON 3331 Urban Economics (3 hrs)
* GEOG 3321 Geography of Africa (3 hrs)
* GEOG 3332 Urban Geography (3 hrs)
* HIST 342 North Africa, 1798 to the Present (3 hrs)
* HIST 347 Sub-Saharan Africa to 1885 (3 hrs)
* HIST 348 20th-Century Africa (3 hrs)
* HIST 365 The Old South (3 hrs)
* PLSC 372 Government and Politics of Sub-Saharan Africa (3 hrs)
* PSY 340 Psychological Perspectives on Prejudice and Discrimination (3 hrs)
* SOC 214/ANTH 114 Radial and Cultural Minorities (3 hrs)
* SOC 266 The Urban Community (3 hrs)

Any course offered by the Department of African American Studies, including independent studies and special topics.

Minor Requirements .......................................................... 20 hours

University Elective Courses .................................................. 20 hours

Program Total ............................................................... 33 hours

Note:
* This course satisfies both a general education and a major requirement.
AFRICAN AMERICAN STUDIES MINOR (AAS)

Required Courses ........................................... 9 hours
AAST101 Introduction to African American Studies (3 hrs)
AAST201 Foundations of Knowledge in African American Studies (3 hrs)
AAST401 African American Studies Research Seminar (3 hrs)

Restricted Elective Courses ................................ 9 hours
Next five hours from the following:
AAST102 Introduction to African Civilization (3 hrs)
AAST221 African American Social Movements (3 hrs)
AAST231 Urbanization and the African American Community (3 hrs)
AAST232 Politics in the African American Experience (3 hrs)
AAST233 Public Policy and African Americans (3 hrs)
AAST242/PSC242 Black Women: Politics and Racism (3 hrs)
AAST301 Writing for African American Studies (3 hrs)
AAST311 The African Diaspora (3 hrs)
AAST312 African Civilization (3 hrs)
AAST313 Contemporary Africa: The Struggle and Prospects for Development (3 hrs)
AAST331 The Social Context of African American Health (3 hrs)
AAST361 The African American Family (3 hrs)
AAST362/PSC362/WMST362 Black Women: Religion and Science (3 hrs)
AAST370 Films of the African American Experience (3 hrs)
AAST402 African American Studies Internship Seminar (3 hrs)
AAST441 Law in the African American Experience (3 hrs)
HIST315 History of Black Americans (3 hrs)
LITR260 African American Literature (3 hrs)

Elective Course ............................................. 3 hours
One course from the following:
ANTH236 Peoples and Cultures of Africa (3 hrs)
CIAR151 African American Theater: An Introduction (3 hrs)
CIAR251 African American Theater Creative Problems (3 hrs)
ECON321 Minority Workers in the Labor Market (3 hrs)
GEOG332 Urban Geography (3 hrs)
HIST342 North Africa, 1798 to the Present (3 hrs)
HIST347 Sub-Saharan Africa to 1885 (3 hrs)
HIST348 20th-Century Africa (3 hrs)
HIST353 The Old South (3 hrs)
PLSC372 Government and Politics of Sub-Saharan Africa (3 hrs)
PSY40 Psychological Perspectives on Prejudice and Discrimination (3 hrs)
SOCI214/FYR214 Racial and Cultural Minorities (3 hrs)
SOCIL206 The Urban experience (3 hrs)

Any course offered by the African American Studies Department, including independent studies and special topics

Minor Total ............................................... 21 hours

BACHELOR OF FINE ARTS (ART)

General Education Requirements ................................ 45 hours
Area I: Symbolic and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23

Area II: Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III: Social Science
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV: Art and Humanities
1. See page 25
2. See page 25
3. See page 25
4. ARTH107 Art History Survey I*

Physical Education/Graduation Requirement .................. 2 hours

Major Requirements ........................................ 54-60 hours

Required Courses ........................................ 27 hours
*ARTH107 Art History Survey I (3 hrs)
*ARTH108 Art History Survey II (3 hrs)
ARTH122 Two-Dimensional Design (3 hrs)
ARTH123 Drawing I (3 hrs)
ARTH124 Drawing II (3 hrs)
ARTH210 Life Drawing (3 hrs)
ARTH215 History of 19th-Century Art (3 hrs)
ARTH216 History of 20th-Century Art (3 hrs)
ARTH231 Three-Dimensional Design (3 hrs)

Area of Concentration ..................................... 12-18 hours
Select a sequence of five courses in one of the following areas:
ceramics ............................................ (ART CER)
drawing ........................................... (ART DRW)
graphic design ...................................... (ART GRDS)
jewelry ........................................... (ART JWL)
painting ........................................... (ART PNT)
photography ....................................... (ART PHOT)
printmaking ....................................... (ART PRNT)
sculpture ........................................... (ART SCL)
textiles ........................................... (ART TXL)
watercolor/painting ............................ (ART WTL)

Elective Courses ......................................... 15 hours
Select from studio art courses in consultation with an advisor.

Minor Requirements ..................................... 0 hours
No minor is required.

University Electives Courses ......................... 0-15 hours

Program Total ....................................... 17-23 hours

Note:
This course satisfies both a general education and a major requirement.

†The graphic design concentration requires 18 hours and 15 hours of art electives.
Students seeking the BFA with a graphic design concentration must complete 60 hours in the major.

The Department of Art administers programs leading to the bachelor of fine arts degree, culminating for each student in an art major and minor and a major and minor in art history.

See page 246 for course descriptions.

The Department of Art directs programs leading to the bachelor of fine arts degree, culminating for each student in an art major and minor and a major and minor in art history.
ART MAJOR (AR30)

General Education Requirements .................................................. 45 hour

Area I: Symbolism and Communication
1. Sec page 23
2. See page 23
3. See page 23
4. Sec page 23
5. Sec page 23

Area II: Science and Technology
1. See page 24
2. See page 24
3. See page 24
4. Sec page 24

Area III: Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. ART107 Art History Survey I

Physical Education/Graduation Requirement ................................... 2 hours

Major Requirements ................................................................. 30 hours

Required Courses 18 hours

*ART107 Art History Survey I (3 hrs)
ART108 Art History Survey II (3 hrs)
ART122 Two-Dimensional Design (3 hrs)
ART123 Drawing I (3 hrs)
ART124 Drawing II (3 hrs)
ART231 Three-Dimensional Design (3 hrs)

Elective Courses 12 hours

Twelve hours from art studio and/or art history courses selected in consultation with an art advisor. Nine hours must be at the 300-level or above.

Minor Requirements ............................................................... 20 hours

University Elective Courses ...................................................... 20 hours

Program Total ............................................................................. 120 hours

Note:
*This course satisfies both a general education and a major requirement.

ART HISTORY MAJOR (ARTH)

This 30-hour major prepares students for graduate study, for gallery or museum work, or, with the addition of science and studio courses, for a career in conservation. Art history majors should note that one year of college credit in a foreign language is required for the B.A. degree. Students preparing for graduate study are strongly advised to pursue courses in French and German. Most graduate programs in art history require reading proficiency in at least two foreign languages.

Note: Teacher certification in art is not obtainable using this major.

General Education Requirements .................................................. 45 hour

Area I: Symbolism and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

Area II: Science and Technology
1. See page 23
2. See page 23
3. See page 23
4. See page 23

Area III: Social Sciences
1. See page 23
2. See page 23
3. See page 23
4. See page 23

Area IV: Arts and Humanities
1. See page 24
2. See page 24
3. See page 24
4. ART107 Art History Survey I

Physical Education/Graduation Requirement ................................... 2 hours

Major Requirements ................................................................. 30 hours

Required Courses 18 hours

*ART107 Art History Survey I (3 hrs)
ART108 Art History Survey II (3 hrs)
ART122 Two-Dimensional Design (3 hrs)
ART215 History of 19th-Century Art (3 hrs)
ART216 History of 20th-Century Art (3 hrs)
ART428 Seminar in 20th-Century Art (3 hrs)

Elective Courses 9 hours

Pre-Renaissance Art
One course from the following:
ART340 History of Classical Art (3 hrs)
ART426 Medieval Art History (3 hrs)

Renaissance/Baroque Art
One course from the following:
ART341 History of Renaissance Art (3 hrs)
ART427 Baroque Art (3 hrs)

Northwestern or Women's Art
One course from the following:
ART421 History of Oriental Art (3 hrs)
ART422 Chinese and Japanese Art History (3 hrs)
ART425 Arts of Africa (3 hrs)
ART438 Mesoamerican Art (3 hrs)
ART439 Women in Art (3 hrs)

Art History Elective
One course from the following:
ART451 Reason and Revolution (3 hrs)
ART453 American Painting and Sculpture Prior to World War II (3 hrs)
ART459 History of American Architecture (3 hrs)
ART460 Art Since 1945 (3 hrs)
ART474/498/499 Independent Study (1/2/3 hrs)

Any upper-level art history course not taken to fulfill another requirement

Minor Requirements ................................................................. 20 hours

University Elective Courses ...................................................... 20 hours

Program Total ............................................................................. 120 hours

Note:
*This course satisfies both a general education and a major requirement.

Students may consult with art history faculty to include lower-numbered art courses for elective credit, with additional work.
Bachelor of Art Education in Visual Arts Education (VAED)

K-12 Teacher Certification

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in art, certification code 00. The Michigan Test for Teacher Certification (MTTC) covering this field is #95, "Visual Arts Education."

General Education Requirements ........................................... 45 hours

Area I: Symbolic and Communication
1. ENGL 121 Composition II: Researching the Public Experience (3 hrs)
2. See page 23
3. See page 23
4. See page 23
5. See page 23

Area II: Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III: Social Science
1. PLSC 113/113 American Government (3 hrs)
2. See page 24
3. See page 24
4. See page 24

Area IV: Art and Humanities
1. See page 25
2. See page 25
3. See page 25
4. One course from the following:
   *ART 103 Art History Survey I
   *ART 104 Art History Survey II

Physical Education/Graduation Requirement ................................ 2 hours

Major Requirements ....................................................... 54 hours

Required Courses .................................................................. 27 hours
ART 211 Drawing I (3 hrs)
ART 212 Drawing II (3 hrs)
ART 222 Three-Dimensional Design (3 hrs)
ART 223 Three-Dimensional Design (3 hrs)
ART 224 Life Drawing (3 hrs)
ART 225 History of 19th-Century Art (3 hrs)
ART 226 History of 20th-Century Art (3 hrs)

One course from the following:
*ART 103 Art History Survey I
*ART 104 Art History Survey II

One course from the following:
ART 211 History of Oriental Art (3 hrs)
ART 222 Chinese and Japanese Art History (3 hrs)
ART 223 Art of Africa (3 hrs)
ART 224 American Art (3 hrs)

Any other available non-Western art history course

Restricted Elective Courses ................................................... 18 hours

Eighteen hours from the following, at least six from 3-dimensional media:

3-Dimensional Media
   ART 222 Introduction to Textiles (3 hrs)
   ART 307 Ceramics (3 hrs)
   ART 310 Sculpture (3 hrs)
   ART 320 Jewelry (3 hrs)

2-Dimensional Media
   ART 224 Introduction to Graphic Design I (3 hrs)
   ART 230 Beginning Printmaking Imagery (3 hrs)
   ART 305 Printmaking (3 hrs)

Area of Concentration ....................................................... 9 hours

Select a sequence of three advanced 300-level or above courses from one of the following concentrations:

1. Fine Arts
   - ART 311 Painting (3 hrs)
   - ART 314 Watercolor I (3 hrs)
   - ART 330 Computer Imaging (3 hrs)
   - ART 452 Drawing III (3 hrs)

2. Graphic Design
   - ART 311 Graphic Design (3 hrs)
   - ART 314 Graphic Design (3 hrs)
   - ART 330 Computer Imaging (3 hrs)
   - ART 452 Drawing III (3 hrs)

3. Photography
   - ART 311 Photography (3 hrs)
   - ART 314 Photography (3 hrs)
   - ART 330 Computer Imaging (3 hrs)
   - ART 452 Drawing III (3 hrs)

Minor Requirements ......................................................... 0 hours

No minor is required.

Professional Studies ......................................................... 43 hours

Pre-Admission Phase: The Learner and the Community .................. 11 hours
   EDPS 322 Human Development and Learning (4 hrs)
   FETE 201 Field Experience I (1 hr)
   SPN 251 Students with Exceptionalities (3 hrs)
   ART 317 Teaching Art (3 hrs)

The following courses require formal admission to the teacher education program:

Phase I: Curriculum, Assessment, and the Social Context ............ 10 hours
   SOFD 328 Schools in a Multicultural Society (3 hrs)
   CURR 305: Curriculum and Methods: Secondary (3 hrs)
   FETE 301 Field Experience II: Secondary (1 hr)
   SPN 251 Students with Exceptionalities (3 hrs)
   ART 317 Teaching Art (3 hrs)
   FETE 402 Field Experience III: Secondary (1 hr)

Phase II: Content Methods, Literacy and Technology .................. 8 hours
   ART 317 Teaching Art (3 hrs)
   ART 316 Art Methods and Materials (3 hrs)
   RDNG 311 Reading in the Secondary School (3 hrs)
   FETE 402 Field Experience III: Secondary (1 hr)

Phase III: Capstone Experience ........................................... 12 hours
   EDUC 396 Student Teaching (6 hrs)
   EDUC 197 Student Teaching (6 hrs)

Program Total ............................................................... 142 hours

Note:
*This course satisfies both a general education and a major requirement.
*The graphic design concentration requires 18 hours and 3-15 hours of art electives.

Art Minor (ART)

Required Courses ............................................................ 9 hours
   ART 222 Three-Dimensional Design (3 hrs)
   ART 224 Drawing I (3 hrs)
   One art history course (3 hrs)
   *ART 103 Art History Survey I (suggested)

Elective Courses .............................................................. 12 hours
   Twelve hours in studio art or art history of which at least six hours must be at the 300-level or above

Minor Total ................................................................. 21 hours
ART HISTORY MINOR (ARTH)

Students with an art major who elect the art history minor must replace ART 215 History of 19th-Century Art, ART 216 History of 20th-Century Art on the major with studio courses.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 107 Art History Survey I (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>ART 108 Art History Survey II (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>ART 215 History of 19th-Century Art (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>ART 216 History of 20th-Century Art (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>ART 428 Seminar in 20th-Century Art (3 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

Restricted Elective Courses

Six hours from art history courses selected in consultation with art history minor advising coordinator.

Minor Total

21 hours

DEPARTMENT OF BIOLOGY

Campus Address: 316 Mark Jefferson
Internet: www.cmich.edu/public/biology/bioweb.htm
Telephone: 734.487.4242
E-mail: rtwinning@cmich.edu

See pages 253, 254, 283, 322 and 359 for course descriptions.

The biology major provides a broad foundation in biology, with the opportunity to specialize in a number of different areas within biological ecology and organismal biology, microbiology, physiology and cell and molecular biology. It also provides the necessary background for students pursuing careers in medicine, veterinary medicine, dentistry and other health-related fields. Students planning to teach biology at the secondary level should also select the biology major. The biology major prepares students for job opportunities in private industry, government agencies, academic institutions and in diverse fields ranging from ecology and environmental biology to biomedical research and biotechnology. The biology major also prepares students for graduate work in various specialties in biology at major research universities across the country.

The department prides itself on a student-oriented approach supported by intense faculty dedication to integration of high-quality instruction in the classroom with sophisticated field and laboratory research beyond the classroom. In this way, the department provides a comprehensive experience augmented by work with practical scientific experiences for students. Opportunities in biology are supported by an array of facilities within the department, including: a Terrestrial and Aquatic Ecology Research Facility (with both greenhouse and laboratory facilities), a Molecular Biology Research Facility (with a DNA sequencing laboratory), zoological museums, an herbarium, an electron microscopy suite and a variety of other specialized research laboratories. Opportunities for field research are available at the EMU Lecell Field Laboratory near campus and the Paroms Property in Traverse City. Field-oriented courses are offered at the EMU Krueger Environmental Education Center at Lapeer, the Conservation Training School at Higgins Lake, and the Institute for Tropical Marine Ecology in Dominica. Students interested in off-campus programs are encouraged to visit the Biology Department website.

The department currently sponsors the Xi Delta chapter of Beta Beta Beta, the national biological honorary society. All biology majors and minors are encouraged to participate in its activities. Pre-professional students are encouraged to join the Organization for Pre-Professional Students and pre-veterinary students are encouraged to join the Pre-Veterinary Medicine Association. Internships or co-op positions are available with outside employers. In addition, faculty members have periodic openings for undergraduate research assistants through externally funded grants. The department offers approximately $50,000 in scholarships and fellowships to students each year. Scholarships for academic excellence are provided by the Mary Goddard, Minnie Nears, Bert Johnson, Grace Wenzelberger and Fred and Funia Bryan endowments for study in biology. The Men's Fellowship provides major support of fellowships each year. Student research collaboration with faculty, as well as special study scholarships for off-campus learning experiences. In addition, the department has the pleasure of offering for more than 15 years an annual, non-endowed scholarship from the Federated Garden Club of Michigan. Further information and application criteria for these awards can be obtained from the departmental office.

Departmental advising procedures are posted on the Web site and apposite the biology office (316 Mark Jefferson), or this office may be contacted for additional information.

Special Advising Requirements

Prospective biology majors/minors should declare their major/minor through the Academic Advising Center (Pierce Hall) as soon as possible after their admission to the University.

To graduate with a major in biology, the student must meet with a biology faculty advisor. This meeting must take place as early as possible but no later than the end of the sophomore year. All transfer students must contact a biology faculty advisor during their first semester at EMU.

Students intending to apply to a doctoral medical program (M.D., D.O., D.V.M., D.B.M., D.Ci., O.D., D.D.S.) are strongly urged to attend the annual pre-professional orientation and to meet with the pre-professional advisor during their first semester. Students may declare their interest in one of the pre-professional program codes along with their major and minors.

Biology majors and minors who elect teacher certification must be admitted into the College of Education.

Biology majors who elect a botany or zoology minor must file an approved program of required/elective courses for the minor with their faculty advisor and undergraduate coordinator. Program changes will require prior written approval of the faculty advisor and undergraduate coordinator. Minors in other botany or zoology are not approved teaching minors for secondary teacher certification.

Conservation and resource use minor electives must be approved by the advising coordinator. Substitutes on the approved program will count toward the minor only if approved by the coordinator.

Graduate study leads to a master of science degree in biology with students choosing a concentration in general biology, ecology and organismal biology or molecular and cellular biology. These programs are described in the graduate catalog.

Required courses at the 300-level of those taken 10 or more years ago must be retaken or the student must demonstrate current knowledge in that field. Current knowledge can be demonstrated by 1) passing a departmental or national biology exam, 2) publishing a peer reviewed paper in the field, or 3) teaching a college level course in that field.

Biology Major (BIO)

Majors start with BIOL 110 Introductory Biology I in their freshman year. Majors without high school biology should take BIOL 105 Introductory Biology I for Non-majors before taking BIOL 110. (Although BIOL 110 will not count toward the biology major, credit earned in this course will count toward the 124 hours required for graduation.) Chemistry courses should also be started at the same time as the biology courses in order to fulfill the requirements for the 300- and 400-level biology courses.

The core biology lecture and laboratory should be completed no later than the end of the junior year. Because BIOL 301 Genetics is a pre- or corequisite for both BIOL 305 and BIOL 315, it should be completed as soon as possible to avoid any delay in graduation. The 15 semester hours of elective courses that the student to specialize courses should be chosen, in consultation with an advisor. Although some electives can be taken as early as the sophomore year, most will be taken in the junior and senior years. Students are strongly advised to elect the remaining core course as one of their electives.
General Education Requirements

Area I Symbolics and Communication
1. See page 23
2. See page 23
3. See page 23
4. One course from the following:
   MATH120 Calculus-I (4 hrs)
   MATH170 Elementary Statistics (3 hrs)
5. See page 23

Area II Science and Technology
1. PHYS21 Mechanics, Sound and Heat (4 hrs)
2. BIOL110 Introductory Biology 1
3. CHEM121/122 General Chemistry I with lab (4 hrs)

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Additional Requirements

PHY222 Electricity and Light (4 hrs)
CHEM221/222 General Chemistry II with lab (4 hrs)

**Select from either option I or option II:**

**Option I:**
CHEM279 Survey of Organic Chemistry (4 hrs)
CHEM271 Organic Chemistry Laboratory (1 hr)
One course from the following:
CHEM351 Foundations of Biochemistry (4 hrs)
CHEM451 Biochemistry I (3 hrs)

**Option II:**
CHEM371 Organic Chemistry I (3 hrs)
CHEM372 Organic Chemistry II (3 hrs)
CHEM373 Organic Chemistry Laboratory (2 hrs)

Physical Education/Graduation Requirement

Major Requirements

Required Foundation Courses

*Biol110 Introductory Biology I (5 hrs)
Biol120 Introductory Biology II (5 hrs)
Biol351 Genetics (5 hrs)

Core Courses

Two courses from the following:
Biol303 Cell and Molecular Biology (3 hrs)
Biol510 Ecology (3 hrs)
Biol515 Evolution (3 hrs)

Core Labs

One course from the following:
Biol206 Cell-Molecular Biology and Genetics Lab (2 hrs)
Biol311 Laboratory in Ecology (2 hrs)

Elective Course

Fifteen hours at the 300- or 400-level in biology, botany, microbiology and zoology related in consultation with a biology advisor.

Minor Requirements

Unversity Elective Courses

It is strongly recommended that students intending to pursure graduate work take the following:

CHEM451 Biochemistry I (3 hrs)
CHEM452 Biochemistry II (3 hrs)
CHEM453 Biochemistry Laboratory (2 hrs)
*MATH120 Calculus I (4 hrs)
*MATH121 Calculus II (4 hrs)
*MATH170 Elementary Statistics (3 hrs)

Program Total

124 hours

Notes:
*This course satisfies both a general education and a major requirement.
**Students who plan to pursue graduate work in biology or who are in a pre-professional program should select Option II: CHEM371/372/373 Organic Chemistry I-III with lab.

Biology Major (BIOT)

Secondary Teacher Certification

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in biology. Certification code: DA, and, depending on the minor selected, an additional endorsement. This program of study meets all requirements of the National Science Teacher Association. The Michigan Test for Teacher Certification (MTTC) covering this field is #17, "Biology.

General Education Requirements

<table>
<thead>
<tr>
<th>Area I Symbolics and Communication</th>
<th>45 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. See page 23</td>
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<td>2. See page 23</td>
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<tr>
<td>3. See page 23</td>
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<tr>
<td>4. One course from the following:</td>
<td></td>
</tr>
<tr>
<td>MATH120 Calculus-I (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>MATH170 Elementary Statistics (3 hrs)</td>
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<tr>
<td>5. See page 23</td>
<td></td>
</tr>
</tbody>
</table>

Area II Science and Technology

| 1. PHYS21 Mechanics, Sound and Heat (4 hrs) |         |
| 2. BIOL110 Introductory Biology I |         |
| 3. CHEM121/122 General Chemistry I with lab (4 hrs) |         |

Area III Social Sciences

| 1. See page 24 |         |
| 2. See page 24 |         |
| 3. See page 24 |         |
| 4. See page 24 |         |

Area IV Arts and Humanities

| 1. See page 25 |         |
| 2. See page 25 |         |
| 3. See page 25 |         |
| 4. See page 25 |         |

Additional Requirements

<table>
<thead>
<tr>
<th>16 hours</th>
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</thead>
<tbody>
<tr>
<td>PHY222 Electricity and Light (4 hrs)</td>
</tr>
<tr>
<td>CHEM123/124 General Chemistry II with lab (4 hrs)</td>
</tr>
</tbody>
</table>

**Select from either option I or option II:**

**Option I:**
CHEM279 Survey of Organic Chemistry (4 hrs)
CHEM271 Organic Chemistry Laboratory (1 hr)
One course from the following:
CHEM351 Foundations of Biochemistry (4 hrs)
CHEM451 Biochemistry I (3 hrs)

**Option II:**
CHEM371 Organic Chemistry I (3 hrs)
CHEM372 Organic Chemistry II (3 hrs)
CHEM373 Organic Chemistry Laboratory (2 hrs)

Physical Education/Graduation Requirements

<table>
<thead>
<tr>
<th>2 hours</th>
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</tbody>
</table>
**College of Arts and Sciences  Department of Biology | pages 55-59**

**Major Requirements**

- Required Foundation Courses: 26 hours
  - BIOL110 Introductory Biology I (5 hrs)
  - BIOL120 Introductory Biology II (5 hrs)
  - BIOL301 Genetics (3 hrs)
  - BIOL305 Cell and Molecular Biology (3 hrs)
  - BIOL310 Ecology (3 hrs)
  - BIOL315 Evolution (3 hrs)
  - BIOL/406 Nature of Science (1 hr)
  - ZOOL326 Human Physiology (3 hrs)
  - Core Labs: 2 hours
    - One course from the following:
      - BIOL306 Cell-Molecular Biology and Genetics Lab (2 hrs)
      - BIOL111 Laboratory in Ecology (2 hrs)

**Elective Courses**

- Two hours at the 300- or 400-level in biology selected in consultation with a biology advisor. All courses must have a minimum prerequisite of BIOL110 and BIOL120. BIOL/403 Methods for Teaching Secondary Biology may NOT be counted toward a biology major.

**Professional Studies**

- Pre-Admission Phase: The Learner and the Community: 8 hours
  - EDPS322 Human Development and Learning (4 hrs)
  - FETE302 Field Experience I (1 hr)
  - SPGN251 Education of Students with Exceptionalities (3 hrs)

- The following courses require formal admission to the teacher education program:
  - Phase I: Curriculum, Assessment and the Social Context: 10 hours
    - SOCD328 Schools in a Multicultural Society (3 hrs)
    - CURR305 Curriculum and Methods: Secondary (3 hrs)
    - FETE302 Field Experience I: Secondary (1 hr)
    - EDPS440 Introduction to Assessment and Evaluation (3 hrs)

- Phase II: Content Methods, Literacy and Technology: 9 hours
  - RDNG311 Teaching Reading in the Secondary School (3 hrs)
  - FETE402 Field Experience III: Secondary (1 hr)
  - EDRT330 Instructional Applications of Media and Technology (2 hrs)
  - BIOL/403 Methods for Teaching Secondary Biology (3 hrs)

- Phase III: Capstone Experience: 12 hours
  - EDUC392 Student Teaching (12 hrs)

**Minor Requirements**

- 7-24 hours

  Select a minor from the approved list for secondary, K-12 and special education-secondary programs. A chemistry minor only requires eight additional credits.

**University Elective Courses**

- 0 hours

**Program Total**

- 140 hours

**Botany Minor (BOTN)**

- Open only to students majoring in biology. Students electing this minor must file an approved program of required/elective courses with a faculty advisor and with the Department of Biology undergraduate coordinator. Any program changes require prior written approval of the faculty advisor and the Department of Biology undergraduate coordinator.

  This minor is not to be considered as a teaching minor for prospective elementary or secondary teachers. Prospective teachers who wish to elect this minor must complete a second minor outside of the Department of Biology to satisfy the current requirements for teacher certification.

**Conservation and Resource Use Minor (CNRU)**

- This program is administered jointly by the heads of the Department of Biology, the Department of Economics, the Department of Geography and Geology, and the Department of Sociology, Anthropology, and Criminology.

  Students electing this minor must confer with the advising coordinator for conservation and resource use to obtain an approved schedule of electives. Substitutions on the approved program will count only if approved by the advisor.

  Students are strongly urged to take PLSC202 State and Local Government.

**Biology Minor (BIO)**

- Minors should start with BIOL110 Introductory Biology I followed by BIOL120 Introductory Biology II in their freshman or sophomore year.

  Minors without high school biology should take BIOL105 Introductory Biology for Non-majors before taking BIOL110. (Although BIOL105 will not count toward the biology minor, credit earned in this course will count toward the 124 hours required for graduation.)

  Students minoring in biology are strongly advised to take CHEM119 Fundamentals of Chemistry or CHEM121/122 General Chemistry I-II with labs.

**Required Courses**

- 13 hours
  - BIOL110 Introductory Biology I (5 hrs)
  - BIOL120 Introductory Biology II (5 hrs)
  - BIOL301 Genetics (3 hrs)

**Restricted Elective Courses**

- 3 hours
  - One course from the following:
    - BIOL305 Cell and Molecular Biology (3 hrs)
    - BIOL310 Ecology (3 hrs)
    - BIOL315 Evolution (3 hrs)

**Elective Courses**

- 6 hours
  - Six hours at the 300- or 400-level in biology, biology, micro biology, and ecology selected in consultation with a biology advisor. All elective courses must have a minimum prerequisite of BIOL110 and BIOL120. BIOL/403 Methods for Teaching Secondary Biology may NOT be counted toward a biology minor. Students are strongly advised to select other restricted electives to fulfill this requirement.

**Minor Total**

- 22 hours

**Note:**

- This course satisfies both a general education and a major requirement.
- PHY406 or ESSC406 may be substituted for BIOL406

**Botany Minor (BOTN)**

- Open only to students majoring in biology. Students electing this minor must file an approved program of required/elective courses with a faculty advisor and with the Department of Biology undergraduate coordinator. Any program changes require prior written approval of the faculty advisor and the Department of Biology undergraduate coordinator.

  This minor is not to be considered as a teaching minor for prospective elementary or secondary teachers. Prospective teachers who wish to elect this minor must complete a second minor outside of the Department of Biology to satisfy the current requirements for teacher certification.

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  Students electing this minor must confer with the advising coordinator for conservation and resource use to obtain an approved schedule of electives. Substitutions on the approved program will count only if approved by the advisor.

  Students are strongly urged to take PLSC202 State and Local Government.

**Biology Minor (BIO)**

- Minors should start with BIOL110 Introductory Biology I followed by BIOL120 Introductory Biology II in their freshman or sophomore year.

  Minors without high school biology should take BIOL105 Introductory Biology for Non-majors before taking BIOL110. (Although BIOL105 will not count toward the biology minor, credit earned in this course will count toward the 124 hours required for graduation.)

  Students minoring in biology are strongly advised to take CHEM119 Fundamentals of Chemistry or CHEM121/122 General Chemistry I-II with labs.

**Required Courses**

- 13 hours
  - BIOL110 Introductory Biology I (5 hrs)
  - BIOL120 Introductory Biology II (5 hrs)
  - BIOL301 Genetics (3 hrs)

**Restricted Elective Courses**

- 3 hours
  - One course from the following:
    - BIOL305 Cell and Molecular Biology (3 hrs)
    - BIOL310 Ecology (3 hrs)
    - BIOL315 Evolution (3 hrs)

**Elective Courses**

- 6 hours
  - Six hours at the 300- or 400-level in biology, biology, micro biology, and ecology selected in consultation with a biology advisor. All elective courses must have a minimum prerequisite of BIOL110 and BIOL120. BIOL/403 Methods for Teaching Secondary Biology may NOT be counted toward a biology minor. Students are strongly advised to select other restricted electives to fulfill this requirement.

**Minor Total**

- 22 hours
ENVIRONMENTAL BIOLOGY STUDIES MINOR (ENAN)

The minor in environmental studies has been designed for the non-science major who has a personal or professional interest in environmental aspects of biology. The primary goal of the minor is to provide prospective students with a basic foundation and understanding in environmental biology, and the pressing environmental issues that will face the human population in the 21st century. Students enrolled in this minor will be exposed to major themes of environmental biology (e.g., ecology, conservation and wildlife biology, aquatic and terrestrial biology, and biology of plants and animals). This minor is not open to biology majors or earth science majors.

In addition to the requirements for the major and general education requirements, all environmental biology studies minors need to complete:

Required Courses..............................................11-12 hours
One course from the following:
Biol105 Introductory Biology for Non-Majors (4 hrs)
Biol110 Introductory Biology (5 hrs)
Biol107/Essc107 Introduction to Environmental Science (5 hrs)
Biol154 Global Ecology and the Environment (4 hrs)
Elective Courses....................................................9 hours
Nine courses from the following:
Biol130 Biology of Plants (4 hrs)
Zool140 Biology of Animals (4 hrs)
Biol215 Economic Botany (3 hrs)
Zool246 Wildlife of Michigan (3 hrs)
Biol247 Animal Behavior (3 hrs)
Biol225 Aquatic Biology (3 hrs)

Minor Total......................................................20-31 hours

HUMAN BIOLOGY MINOR (BIOH)

Required Courses..............................................4-5 hours
One course from the following:
Biol105 Introductory Biology for Non-Majors (4 hrs)
Biol110 Introductory Biology (5 hrs)

Elective Courses..............................................15-16 hours
15 to 16 hours from the following:
Zool201 Human Anatomy and Physiology 1 (3 hrs)
Zool202 Human Anatomy and Physiology 2 (3 hrs)
Zool326 Human Physiology (3 hrs)
Biol201 Human Genetics (2 hrs)
Biol204 The Biology of Cancer (2 hrs)
Biol228 Germs, Plagues and Human Infections (3 hrs)
Biol223 Human Development (3 hrs)
Biol239 Biology of Aging (2 hrs)
Zool369 Biology of Sex and Gender (3 hrs)

Minor Total.....................................................20 hours

Note:
Minors should start with either BIOL105 or BIOL110. For students choosing to take an additional course in human physiology after completing ZOOL201, they may choose either ZOOL202 or ZOOL326, but not both.

The proposed Human Biology Minor will be open to the biology major; however, some students will not be able to apply BIOL110 toward the Human Biology Minor because it must be applied to the biology major. Instead, these students will be required to make up 4 credit hours from approved electives.

ZOOLGY MINOR (ZOOL)

Open only to students majoring in biology. Students electing this minor must file an approved program of required/elective courses with a faculty advisor; and with the Department of Biology undergraduate coordinator. Any program changes require prior written approval of the faculty advisor and the Department of Biology undergraduate coordinator.

This minor is not to be considered as a teaching minor for prospective elementary or secondary teachers. Prospective teachers who wish to elect this minor must complete a second minor outside of the Biology Department to satisfy the current requirements for teacher certification.

Minor Total.....................................................20 hours
Biology Minor (BIOT)
Secondary, K-12 and Special Education-Secondary Teacher Certification

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in biology, certification code DA. The Michigan Test for Teachers Certification (MTTC) covering this field is #17, "Biology.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 110</td>
<td>3</td>
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<tr>
<td>BIOL 120</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 200</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 350</td>
<td>3</td>
</tr>
<tr>
<td>ZOOL 210</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 305 Cell and Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 315 Cell and Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 350 Cell and Molecular Biology and Genetics Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 351 Laboratory in Ecology</td>
<td>2</td>
</tr>
</tbody>
</table>

Minor Total: 24 hours

Note: Students need to take CHEM 121/122 General Chemistry I with lab (4 hrs) and CHEM 123/124 General Chemistry II with lab (4 hrs) to satisfy the prerequisites for BIOL 305.

Premedicine (Allopathic and Osteopathic) (PMED), Preveterinary (PVET), and Prechiropractic (PCHR)
Preoptometry and Prepodiatry (POPT)

Students can complete course requirements at EMU for admission to medicine, optometry, podiatry, veterinary and chiropractic programs. For information on these programs, see the advising coordinate for premedical programs.

While medical schools do not prescribe a premedical curriculum, they expect a thorough understanding of modern concepts in biology, chemistry and physics, and all general mathematical competence, with some specifying a course sequence in mathematics. Most premedical students, therefore, select a major in one of these areas, although this is not mandatory. Students should earn the bachelor's degree prior to admission to medical school.

An important admission requirement for most medical schools, the Medical College Admission Test (MCAT), is given in April and August in various centers throughout the nation. This test should be taken after prerequisites in biology, chemistry and physics are completed, typically during the junior year.

Each allopathic and osteopathic medical school establishes its own admission requirements. The course requirements are similar but differ enough so that students should consult the catalogs of the schools in which they are interested. The latest edition of Medical School Admission Requirements, available at the reference desk of Halle Library and in the premedicine advisor's office, should be consulted. The introductory chapters of the book should be read by every prospective medical student.

If students electing the premedical sequence are not achieving at least a 2.75 GPA (overall and in their major), their chances of acceptance by a medical school are minimal, and they should plan their programs so that other professional or vocational goals are possible.

Students planning to apply for admission to a medical school should plan their schedule to include the following general requirements:

ENGL 121 Composition II: Researching the Public Experience (3 hrs)
Elective in English language or literature (3 hrs)
BIOL 110 Introductory Biology I (5 hrs)
BIOL 120 Introductory Biology II (5 hrs)
BIOL 301 Genetics (3 hrs)
BIOL 215 Cell and Molecular Biology
BIOL 216 Cell and Molecular Biology and Genetics Laboratory
CHEM 112/122 General Chemistry I with lab (4 hrs)
CHEM 123/124 General Chemistry II with lab (4 hrs)
CHEM 371 Organic Chemistry I (3 hrs)
CHEM 372 Organic Chemistry II (3 hrs)
CHEM 373 Organic Chemistry Laboratory (2 hrs)
PHYS 211 Mechanics, Sound and Heat (4 hrs)
PHYS 221 Electricity and Light (4 hrs)
Sociology and psychology courses (6 hrs)

Because of the nature of the premedical program, if the student is a biology or chemistry major it is almost mandatory to follow the first year as presented below.

First Year — Premedicine

First Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 110 Introductory Biology I</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 112/122 General Chemistry I with lab</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics (2-4 hrs)</td>
<td></td>
</tr>
<tr>
<td>General Education (2-6 hrs)</td>
<td></td>
</tr>
<tr>
<td>BIOL 120 Introductory Biology II</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 123/124 General Chemistry II with lab</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics (2-4 hrs)</td>
<td></td>
</tr>
<tr>
<td>General Education (3-7 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Prior to registering for the second semester, the student should see the premedical coordinator.

Students with one to two years of less than high-level algebra take MATH 105 College Algebra. Students with only one year of algebra take MATH 101 Intermediate Algebra, followed by MATH 105 College Algebra. Students without trigonometry take MATH 107 Plane Trigonometry. Although students may need to take MATH 104 Intermediate Algebra, MATH 105 College Algebra or MATH 107 Plane Trigonometry these courses do not satisfy general education requirements. Students must still complete a mathematics course from the list of approved mathematics courses. Biology majors will satisfy both general education and biology major requirements by taking MATH 120 Calculus I.

Department of Chemistry

Campus Address: 225 Mark Jefferson
Internet: http://chemistry.emich.edu
Telephone: 734.487.0106
E-mail: wade.nonpius@emich.edu

See page 257 for course description.

The Department of Chemistry offers both professional and general level programs in chemistry and biochemistry, and a biochemistry/forensic program. The department also administers preprofessional programs in dentistry, nursing/doctoral and pharmacy. Although the preprofessional program is not administered by the department, the biochemistry and chemistry curricula provide excellent preparation for a career in medicine.
Housed in the Mark Jefferson Science Complex, the department has laboratories available for all areas of study. Major items of equipment include research-quality UV, visible and Fourier-transform IR, spectrophotometers; gas and high-performance liquid chromatographs; preparative ultracentrifuge; fluorometers; gas chromatograph mass spectrometers; a titration microcoulometer; a PCR thermocycler; and a DNA sequence. The department also has a Bruker 500 MHz superconducting nuclear magnetic resonance (NMR) spectrometer. In addition, a computer laboratory and specialized facilities and equipment for biochemistry and cell culture are available.

The Department of Chemistry offers Honors Chemistry and Society, Honors General Chemistry I and II, Honors Quantitative Analysis and Honors Organic Chemistry Laboratory. Eligibility for these courses is based on admission to the University’s Honors Program, or the student’s interest and performance in previous chemistry courses. Prospective candidates are selected by instructors and the Chemistry Honors Coordinator; students may apply to the Honors Coordinator for permission to enroll in an honors course.

The department also offers graduate study leading to the master’s degree in chemistry. The M.S. degree program is described in the graduate catalog.

Accreditation: The professional chemistry curriculum (with an appropriate selection of electives) is certified by the American Chemical Society.

Advising: For students desiring to pursue a program in chemistry, advising is available through either the undergraduate advising coordinator or an adviser identified on the adviser list in the Department of Chemistry office or an area advising coordinator. A handbook for undergraduate chemistry students is available in the department office.

**PROFESSIONAL CHEMISTRY CURRICULUM (CHMP)**

This curriculum provides the necessary background for those planning to become professional chemists. With appropriate electives, it meets the requirements established by the American Chemical Society. Students successfully completing the curriculum are prepared to enter technical positions in industrial and governmental research, or to undertake graduate study in chemistry. The program includes a group minor composed of the required courses in mathematics and physics. No other minor is needed to meet graduation requirements.

For students planning graduate study in chemistry (especially organic chemistry), 10 hours at an equivalent reading knowledge of a foreign language, preferably German, are recommended.

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**General Education Requirements**

<table>
<thead>
<tr>
<th>Area</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Symbolic and Communication</td>
<td>37 hours</td>
</tr>
<tr>
<td>1. See page 22</td>
<td></td>
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<tr>
<td>2. See page 22</td>
<td></td>
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<tr>
<td>3. See page 22</td>
<td></td>
</tr>
<tr>
<td>4. <strong>MATH120 Calculus I</strong></td>
<td></td>
</tr>
<tr>
<td>5. See page 23</td>
<td></td>
</tr>
<tr>
<td><strong>Area II Science and Technology</strong></td>
<td></td>
</tr>
<tr>
<td>1. <strong>CHEM121/122 General Chemistry with lab</strong></td>
<td></td>
</tr>
<tr>
<td>2. See page 24</td>
<td></td>
</tr>
<tr>
<td>3. <strong>PHY223 Mechanics and Sound</strong>*</td>
<td></td>
</tr>
<tr>
<td><strong>Area III Social Sciences</strong></td>
<td></td>
</tr>
<tr>
<td>1. See page 24</td>
<td></td>
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<tr>
<td>2. See page 24</td>
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<td>3. See page 24</td>
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<tr>
<td>4. See page 24</td>
<td></td>
</tr>
<tr>
<td><strong>Area IV Arts and Humanities</strong></td>
<td></td>
</tr>
<tr>
<td>1. See page 25</td>
<td></td>
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<tr>
<td>2. See page 25</td>
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<td>3. See page 25</td>
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<tr>
<td>4. See page 25</td>
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</tr>
</tbody>
</table>

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**Physical Education/Graduation Requirement**

| Physical Education | 2 hours |

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**Major Requirement**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>69-70 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>CHEM211/212 General Chemistry I with lab</strong> (4 hrs)</td>
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</tr>
<tr>
<td>2. <strong>CHEM231/232 General Chemistry II with lab</strong> (4 hrs)</td>
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<tr>
<td>3. <strong>CHEM281 Quantitative Analysis</strong> (4 hrs)</td>
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</tr>
</tbody>
</table>

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**One course from the following:**

- **CHEM351 Foundations of Biochemistry** (4 hrs)
- **CHEM353 Biochemistry I** (3 hrs)
- **CHEM371 Organic Chemistry I** (3 hrs)
- **CHEM372 Organic Chemistry II** (3 hrs)
- **CHEM373 Organic Chemistry Laboratory** (2 hrs)
- **CHEM432 Advanced Inorganic Chemistry** (3 hrs)
- **CHEM433 Inorganic-Organic Synthesis Laboratory** (2 hrs)
- **CHEM4461 Chemical Thermodynamics and Kinetics** (3 hrs)
- **CHEM4463 Physical Chemistry Laboratory** (2 hrs)
- **CHEM4465 Quantum and Statistical Mechanics** (3 hrs)
- **CHEM4481 Instrumental Analysis** (4 hrs)

**Two hours from one of the following:**

- **CHEM474/488/489 Cooperative Education in Chemistry** (1/2/3 hrs)
- **CHEM497/498/499 Undergraduate Research in Chemistry** (1/2/3 hrs)
- **MATH120 Calculus I** (4 hrs)
- **MATH121 Calculus II** (4 hrs)
- **MATH122 Elementary Linear Algebra** (3 hrs)
- **MATH223 Multivariable Calculus** (6 hrs)
- **PHY223 Mechanics and Sound** (5 hrs)
- **PHY224 Electricity and Light** (5 hrs)

**Elective Courses**

2 hours

Choose one advanced course (or two 1-hour courses) from the following. Certification by American Chemical Society requires appropriate selection of electives from among those indicated by *.

**Chemistry**

- **CHEM11 Toxicology I** (2 hrs)
- **CHEM12 Toxicology II** (2 hrs)
- **CHEM13 Toxicology Laboratory** (2 hrs)
- **CHEM14 Regulatory Toxicology** (2 hrs)
- **CHEM432 Biochemistry II** (3 hrs)
- **CHEM434 Biochemistry Laboratory** (2 hrs)
- **CHEM475 Introduction to Polymer Chemistry** (3 hrs)
- **CHEM485 Introduction to Radiocarbon Techniques** (2 hrs)
- **CHEM477/478/479 Special Topics** (1/2/3 hrs)
- **CHEM498/499 Undergraduate Research in Chemistry** (2/3 hrs)
- **CHEM533 Enzymology** (2 hrs)
- **CHEM555 Neurochemistry** (3 hrs)
- **CHEM561 Quantum Chemistry and Spectroscopy** (2 hrs)
- **CHEM562 Statistical Mechanics and Chemical Kinetics** (2 hrs)
- **CHEM563 Nuclear Magnetic Resonance** (3 hrs)
- **CHEM571 Advanced Organic Chemistry I** (3 hrs)
- **CHEM572 Spectroscopic Organic Structure Determination** (4 hrs)
- **CHEM574 Advanced Organic Chemistry Topics** (2 hrs)
- **CHEM581 Advanced Analytical Chemistry** (3 hrs)

**Mathematics and Computer Science**

- **MATH225 Differential Equations** (3 hrs)
- **MATH425 Mathematics for Scientists** (3 hrs)

Other 400-level courses with department permission

**Physics**

- **PHY360 Heat and Thermodynamics** (4 hrs)
- **PHY440 Optics** (3 hrs)
- **PHY450 Electricity and Magnetism II** (3 hrs)
- **PHY452 Electrical Measurements** (4 hrs)
- **PHY456 Electronics for Scientists** (4 hrs)
- **PHY471 Atomic and Nuclear Physics** (3 hrs)

Other 400-level courses with department permission

---

Minor Requirements

0 hours

No minor is required.

**University Elective Courses**

15-16 hours

**Program Total**

124 hours

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**Note:**

*This course satisfies both a general education and a major requirement.*
**Professional Biochemistry Curriculum (BCHP)**

The professional biochemistry curriculum prepares students for graduate study or a research career in biochemistry. The program includes a group minor composed of the required courses in biology, mathematics and physics. No other minor is needed to meet graduation requirements.

**General Education Requirements** .................................. 34 hours

*Area I: Symbolic and Communication*
1. See page 23
2. See page 23
3. See page 23
4. **MATH120 Calculus I**
5. See page 23

**Area II: Science and Technology**
1. CHEM121/122 General Chemistry with lab
2. BIOL10 Introduction to Biology
3. **PHY223 Mechanics and Sound**

**Area III: Social Sciences**
1. See page 24
2. See page 24
3. See page 24
4. See page 24

**Area IV: Arts and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. See page 25

**Physical Education/Graduation Requirement** .................. 2 hours

**Major Requirements** ............................................... 79 hours

*Required Courses* .................................................. 72 hours
*CHEM121/122 General Chemistry I with lab (4 hrs)*
*CHEM123/124 General Chemistry II with lab (4 hrs)*
*CHEM281 Quantitative Analysis (4 hrs)*
*CHEM321 Organic Chemistry I (3 hrs)*
*CHEM322 Organic Chemistry II (3 hrs)*
*CHEM371 Organic Chemistry Laboratory (2 hrs)*
*CHEM451 Biochemistry I (3 hrs)*
*CHEM452 Biochemistry II (3 hrs)*
*CHEM453 Biochemistry Laboratory (2 hrs)*
*CHEM461 Chemical Thermodynamics and Kinetics (3 hrs)*
*CHEM463 Physical Chemistry Laboratory (2 hrs)*
*CHEM465 Quantum and Statistical Mechanics (3 hrs)*
*BOL110 Introduction to Biology (5 hrs)*
*BOL301 Genetics (3 hrs)*
*MATH120 Calculus I (4 hrs)*
*MATH121 Calculus II (4 hrs)*
*MATH122 Elementary Linear Algebra (3 hrs)*
*MATH223 Multivariable Calculus (4 hrs)*
*MATH325 Differential Equations (3 hrs)*
*PHY223 Mechanics and Sound (5 hrs)*
*PHY224 Electricity and Magnetism (5 hrs)*

*Elective Courses* .................................................... 7 hours

Four courses from the following:
CHEM411 Toxicology I (2 hrs)
CHEM412 Toxicology II (2 hrs)
CHEM413 Toxicology Laboratory (2 hrs)
CHEM443 Organic-Biochemistry Laboratory (2 hrs)
CHEM475 Introduction to Polymer Chemistry (3 hrs)
CHEM477/478/479 Special Topics (1/2/3 hrs)
CHEM481 Instrumental Analysis (4 hrs)
CHEM485 Introduction to Radiographic Techniques (2 hrs)
CHEM487/488/489 Cooperative Education in Chemistry (1/2/3 hrs)
CHEM487/488/489 Undergraduate Research in Chemistry (1/2/3 hrs)

**Minor Requirements** ............................................. 0 hours

No minor is required.

**University Elective Courses** ................................... 9 hours

**Program Total** .................................................... 124 hours

**Note:**
*This course satisfies both a general education and a major requirement.*
*Completion of BOL110, or equivalent coursework, is required for Biochemistry students to obtain biology departmental permission for 300- and 400-level biology courses.

**General Biochemistry Curriculum (BCHG)**

This curriculum is designed for students with an interest in biochemistry but who require a less extensive background than that presented in the professional biochemistry curriculum. It is often selected by students in premedical and preprofessional programs.

The program includes a group minor composed of the required courses in biology, mathematics and physics. No other minor is needed to meet graduation requirements.

**General Education Requirements** ................................ 34 hours

*Area I: Symbolic and Communication*
1. See page 23
2. See page 23
3. See page 23
4. **MATH120 Calculus I**
5. See page 23

**Area II: Science and Technology**
1. CHEM121/122 General Chemistry I with Lab*
2. **BOL110 Introduction to Biology**
3. One course from the following:
   *PHY223 Mechanics, Sound and Heat*
   *PHY223 Mechanics and Sound*

**Area III: Social Sciences**
1. See page 24
2. See page 24
3. See page 24
4. See page 24

**Area IV: Arts and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. See page 25

**Physical Education/Graduation Requirement** .................. 2 hours

**Major Requirements** ............................................... 55 hours

*Required Courses* .................................................. 50 hours
*CHEM121/122 General Chemistry I with lab (4 hrs)*
*CHEM123/124 General Chemistry II with lab (4 hrs)*
*CHEM278/279 Survey of Organic Chemistry with lab (5 hrs)*
*CHEM281 Quantitative Analysis (4 hrs)*
*CHEM301 Fundamentals of Physical Chemistry (3 hrs)*
*CHEM381 Instrumentation for Chemical Technology (2 hrs)*
*CHEM451 Biochemistry I (3 hrs)*
*CHEM452 Biochemistry II (3 hrs)*
*CHEM453 Biochemistry Laboratory (2 hrs)*
*BOL110 Introduction to Biology (5 hrs)*
GENERAL CHEMISTRY MAJOR (CHM)

The general chemistry major is for students who seek a general cultural education with emphasis on chemistry, who are preparing for careers in health fields such as medicine or dentistry, or who are interested in a career combining chemistry with fields such as business, patent law, technical writing, or industrial health and safety. Students planning to pursue a career as a professional chemist or who are interested in graduate training in chemistry should elect the professional chemistry curriculum.

General Education Requirements

<table>
<thead>
<tr>
<th>Area I: Symbolic and Communication</th>
<th>45 hours</th>
</tr>
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<td>3. See page 23</td>
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<tr>
<td>4. MATH120 Calculus I (4 hrs)</td>
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<tr>
<td>5. See page 23</td>
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</table>

<table>
<thead>
<tr>
<th>Area II: Science and Technology</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CHEM121/122 General Chemistry with Lab*</td>
<td>2. See page 24</td>
</tr>
<tr>
<td>3. One course from the following:</td>
<td></td>
</tr>
<tr>
<td>PHY221 Mechanics, Sound, and Heat (4 hrs)</td>
<td>PHY223 Mechanics and Sound (5 hrs)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area III: Social Sciences</th>
<th></th>
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<tbody>
<tr>
<td>1. See page 24</td>
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<td>2. See page 24</td>
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<td>3. See page 24</td>
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<td>4. See page 24</td>
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<table>
<thead>
<tr>
<th>Area IV: Arts and Humanities</th>
<th></th>
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<tbody>
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<td>1. See page 25</td>
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<td>2. See page 25</td>
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</table>

Additional Requirements

<table>
<thead>
<tr>
<th>Additional Requirements</th>
<th>4-5 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>One course from the following:</td>
<td></td>
</tr>
<tr>
<td>PHY222 Electricity and Light (4 hrs)</td>
<td>PHY224 Electricity and Light (5 hrs)</td>
</tr>
</tbody>
</table>

Physical Education/Graduation Requirement

| Physical Education/Graduation Requirement | 2 hours |

Major Requirements

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th>30 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses</td>
<td>25 hours</td>
</tr>
<tr>
<td>CHEM121/122 General Chemistry I with lab (4 hrs)</td>
<td>CHEM123/124 General Chemistry II with lab (4 hrs)</td>
</tr>
</tbody>
</table>

Elective Courses

<table>
<thead>
<tr>
<th>Elective Courses</th>
<th>5 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Five credits from any biology course 300-level or above.</td>
<td></td>
</tr>
</tbody>
</table>

Minor Requirements

<table>
<thead>
<tr>
<th>Minor Requirements</th>
<th>9 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>No minor is required.</td>
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</table>

University Elective Courses

<table>
<thead>
<tr>
<th>University Elective Courses</th>
<th>33 hours</th>
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<tr>
<td></td>
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</tbody>
</table>

Program Total

<table>
<thead>
<tr>
<th>Program Total</th>
<th>124 hours</th>
</tr>
</thead>
</table>

Note:
This course satisfies both a general education and a major requirement.

Pre-veterinary students should substitute CHEM120, CHEM211, or CHEM212, Organic Chemistry I with lab, for the required course in organic chemistry.

CHEMISTRY MAJOR (CHMT)

Secondary/Teacher Certification

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education, Secondary/Teacher Certification endorsement in chemistry, certification code DC, and, depending on the minor selected, an additional endorsement. This program of studies meets all requirements of the National Science Teachers Association. The Michigan Test for Teacher Certification (MTTC) covering this field is #18, "Chemistry."
CHEM 281 Quantitative Analysis (4 hrs)
CHEM 361 Fundamentals of Physical Chemistry (3 hrs)
CHEM 371 Organic Chemistry I (3 hrs)
CHEM 372 Organic Chemistry II (3 hrs)
CHEM 373 Organic Chemistry Laboratory (2 hrs)
CHEM 381 Instrumentation for Chemical Technology (2 hrs)
CHEM 406 The Nature of Science (1 hr)

One course from the following:

CHEM 351 Fundamentals of Biochemistry (4 hrs)
CHEM 451 Biochemistry I (3 hrs)

Elective Courses 2-3 hours

Twelve or more hours from 300- and 400-level courses in chemistry.

Professional Study Pre-Admission Phase: The Learner and the Community

EDPS 322 Human Development and Learning (4 hrs)
FETE 201 Field Experience (1 hr)
SPGN 251 Education of Students with Exceptionalities (3 hrs)

The following courses require formal admission to the teacher education program:

Phase I: Curriculum, Assessment and the Social Context

SOFD 328 Schools in a Multicultural Society (3 hrs)
CURR 303 Curriculum and Methods: Secondary (3 hrs)
FETE 302 Field Experience: Secondary (1 hr)
EDPS 340 Introduction to Assessment and Evaluation (3 hrs)

Phase II: Content Methods, Literacy and Technology

RDNG 311 Teaching Reading at the Secondary School (3 hrs)
FETE 402 Field Experience II: Secondary (1 hr)
EDMT 330 Instructional Applications of Media and Technology (2 hrs)
PHYS 325 Methods of Teaching the Physical Sciences (3 hrs)
EDUC 492 Student Teaching (12 hrs)

Minor Requirements 10 hours

Select a minor from the approved list of minors for secondary K-12 and special education-secondary programs.

Program Total 134 hours

Note: This course satisfies both a general education and a major requirement.

BIOCHEMISTRY/TOXICOLOGY CURRICULUM (BCTC)

General Education Requirements 34 hours

Area I: Symbolics and Communication

1. See page 23
2. See page 23
3. See page 23
4. MATH 120 Calculus I
5. See page 23

Area II: Science and Technology

1. CHEM 112* General Chemistry I with lab (4 hrs)
2. BIOL 110 Introductory Biology I
3. One course from the following:
   *PHY 221 Mechanics, Sound and Heat
   *PHY 223 Mechanics and Sound

Area III: Social Sciences

1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV: Arts and Humanities

1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement 2 hours

Major Requirements 73 hours

*CHEM 112/112 General Chemistry I with lab (4 hrs)
CHEM 123/124 General Chemistry II with lab (4 hrs)
CHEM 281 Quantitative Analysis (4 hrs)
CHEM 361 Fundamentals of Physical Chemistry (3 hrs)
CHEM 371 Organic Chemistry I (3 hrs)
CHEM 372 Organic Chemistry II (3 hrs)
CHEM 373 Organic Chemistry Laboratory (2 hrs)
CHEM 381 Instrumentation for Chemical Technology (2 hrs)
CHEM 411 Toxicology I (2 hrs)
CHEM 412 Toxicology II (2 hrs)
CHEM 413 Toxicology Laboratory (2 hrs)
CHEM 451 Biochemistry I (3 hrs)
CHEM 452 Biochemistry II (3 hrs)
CHEM 453 Biochemistry Laboratory (2 hrs)
CHEM 485 Introduction to Radiocarbon Techniques (2 hrs)
*BIOL 110 Introductory Biology I (3 hrs)
ZOOOL 404 Mammalian Histology (3 hrs)
ZOOOL 431 Comparative Anatomy of Vertebrates (4 hrs)
MATH 120 Calculus I (4 hrs)

One course from the following:

PHY 221 Mechanics, Sound and Heat (4 hrs)
PHY 223 Mechanics and Sound (5 hrs)

One course from the following:

BIO 320 Introduction to Cell Physiology (4 hrs)
ZOOOL 325 Human Histology (3 hrs)

One course from the following:

PHY 222 Electricity and Light (4 hrs)
PHY 224 Electricity and Light (5 hrs)

One course from the following:

MATH 170 Elementary Statistics (3 hrs)
PSY 205 Quantitative Methods in Psychology (3 hrs)

One-toxicology class numbered above 413, or enrollment in at least two hours from a toxicology cooperative education project

CHEM 485/488/489 (12/15 hrs)

Minor Requirements 0 hours

No minor is required.

University Elective Courses 15 hours

Program Total 124 hours

Note: This course satisfies both a general education and a major requirement.

Completion of BIOL 110, or equivalent coursework, is required for Biochemistry students to obtain biology departmental permission for 300- and 400-level biology courses.

BIOCHEMISTRY MINOR (BCHM)

Required Courses 22-23 hours

CHEM 112/112 General Chemistry I with lab (4 hrs)
CHEM 123/124 General Chemistry II with lab (4 hrs)
CHEM 270 Survey of Organic Chemistry with lab (5 hrs)
CHEM 281 Quantitative Analysis (4 hrs)
CHEM 453 Biochemistry Laboratory (2 hrs)

One course from the following:

CHEM 351 Fundamentals of Biochemistry (4 hrs)
CHEM 451 Biochemistry I (3 hrs)
The majority of pre-dental students complete four years of undergraduate work, earning a B.S. degree. Since admission to dental school is very competitive, it is recommended that alternative career plans be a part of every pre-dental student's program.

Students seeking admission to dental school take the Dental Admissions Test (DAT) usually in the junior year of two-year degree programs or the fall semester of the senior year of four-year degree programs. Application is generally made between August and December for the class beginning the following fall. Virtually all dental schools require the use of a central agency, the American Association of Dental Schools Application Service, when applying for admission.

Science courses required for admission into most dental schools are listed below. Careful scheduling will allow the student to complete these courses in three years.

Required Courses
- BIOL 110 Introductory Biology I (5 hrs)
- CHEM 121/122 General Chemistry I with lab (4 hrs)
- CHEM 123/124 General Chemistry II with lab (4 hrs)
- CHEM 371 Organic Chemistry I (3 hrs)
- CHEM 372 Organic Chemistry II (3 hrs)
- CHEM 373 Organic Chemistry Laboratory (2 hrs)
- PHYS 221 Mechanics, Sound and Heat (4 hrs)
- PHYS 222 Electricity and Light (4 hrs)

One advanced biology course with lab

Note: Introduction courses in biology, biochemistry and microbiology are recommended.

Dental Hygiene and Dental Assisting

Eastern Michigan University offers two degree programs in these areas. Two-year certificates and four-year degree programs are available at the University of Michigan, Ferris State University and the University of Detroit-Mercy. Two-year programs also are available at numerous community colleges.

Students interested in these programs should plan an transferring after completing their freshman year at EMU. Liberal arts preparation in English composition, speech, chemistry (CHEM 117/118 Fundamentals of Chemistry with lab), psychology, sociology and political science, plus electives in social science, natural science and humanities, generally will be transferrable. More specific descriptions of requirements should be obtained by writing to the schools in question since requirements vary from school to school.

Pre-Mortuary Science (PMOR)

The pre-mortuary science program requires two academic years. Before entering the professional mortuary school, the student must complete at least 60 hours of college work, that includes the following science and mathematics courses:

Recommended Courses:
- CHEM 121/122 General Chemistry I with lab (4 hrs)
- CHEM 123/124 General Chemistry II with lab (4 hrs)
- BIOL 105 Introduction Biology for Non-majors (4 hrs)
- PSY 101 General Psychology (3 hrs)
- MATH 105 Intermediate Algebra (3 hrs)

The Board of Examiners in Mortuary Science recommends the following courses for elective hours. They include behavioral sciences, business, counseling, first aid and public speaking:

Recommended Elective Courses:
- PSY 225 Psychology of Religion (3 hrs)
- PSY 323 Psychology of Human Aging (3 hrs)
- SOC 105 Introductory Sociology (3 hrs)
- SOC 311 Social Gerontology (3 hrs)
- LAW 299 Legal Environment of Business (3 hrs)
- ACC 240 Principles of Financial Accounting (3 hrs)
- ECON 200 The American Economy (3 hrs)
Pre-Pharmacy (PPHM)

Two years of college work (60 transferable hours, including the courses listed below) are required for admission to a professional school of pharmacy. Some schools have additional required or recommended courses.

Programs in pharmacy require two to four additional years of study after acceptance into the program. Clinical experience is required for some, especially doctoral programs.

Recommended Courses

- CHEM121/122 General Chemistry I with lab (4 hrs)
- CHEM123/124 General Chemistry II with lab (4 hrs)
- CHEM371 Organic Chemistry I (3 hrs)
- CHEM372 Organic Chemistry II (3 hrs)
- CHEM373 Organic Chemistry Laboratory (2 hrs)
- MATH120 Calculus I (4 hrs)
- ENGL121 Composition I: Reading the Public Experience (3 hrs)
- One biology course with a lab (Some schools require additional courses.)
- Two social science courses
- Two humanities courses (two foreign language courses may be substituted.)

ARTS MANAGEMENT MAJOR (ARTM)

The arts management curriculum provides career training and practical experience for those with a passion for the arts and whose talents are in the field of administration and/or marketing. The arts manager not only must develop a variety of management skills but also must maintain a high degree of sensitivity to aesthetics.

Students are provided a broad background in all of the arts with an opportunity to study a specific art in more depth. Additionally, each student gains practical experience working in the arts during internships on the University campus and in an approved off-campus professional arts organization.

Training in the arts is combined with the development of skills in accounting, advertising, personnel management, labor relations and various other areas of business through a program of study that includes management and marketing. Graduates are equipped to enter the arts management field or to pursue further study in arts administration.

Because the arts management field is rapidly evolving, it is advantageous for the student to maintain regular contact with an adviser during their entire program to avoid unnecessary difficulties before and after completion of the program. Arts institutions vary in their personnel needs.

EMU's arts management curriculum is divided into four sections: general education requirements, arts management major, a management or marketing minor (see College of Business) and two internships.

DEPARTMENT OF COMMUNICATION AND THEATRE ARTS

Campus Address: 124 Quirk
Internet: www.emich.edu/public/cta/cta.html
Telephone: 734-487-3131
E-mail: dennis.beagren@emich.edu

See page 265 for course descriptions.

The Department of Communication and Theatre Arts provides students with communication and performance skills fundamental to careers in broadcasting, theatre, teaching, public relations, sales and such related professions as law and the ministry. Communication theory and practice are explored in various course offerings in interpersonal, small group, organizational and public communication. Production and performance theories and techniques emphasized in telecommunications and film studies are enhanced by practical experiences in two campus radio stations (WEMU-FM and WQGR), in closed-circuit TV studios and through internships and co-ops in the professional field. The arts management and communication technology curricula require business studies in addition to aesthetic and pragmatic communication skills. All the department's programs, including forensics, interpretation/performance studies, theatre arts and dramatic productions for the young, provide students with opportunities for developing such personal qualities as creativity, leadership, self-expression and social responsibility.

Advising is initiated by students with a personal adviser who shares the student's interests and objectives. Coordinators should be consulted by each prospective major or minor student.

Graduate study leads to a master of arts in communication: a master of arts emphasizing interpretation/performance studies; a master of arts in drama/theatre for the young; or a master of fine arts in drama/theatre for the young; and a master of arts in theatre arts. For descriptions of graduate courses and programs in the Department of Communication and Theatre Arts, consult the graduate catalog.
General Education Requirements........................................ 42 hours
Area I Symbolics and Communication
1. See page 23
2. One course from the following:
   *CTAS121 Fundamentals of Speech
   *CTAS124 Fundamentals of Speech
3. CTAC227 Interpersonal Communication
4. See page 23
5. See page 23
Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24
4. See page 24
Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24
Area IV Art and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement....................... 2 hours

Major Requirements.................................................. 35 hours

Required Courses..................................................... 23 hours
*CTAC227 Interpersonal Communication (3 hrs)
CTAC354 Organizational Communication (3 hrs)
CTAC559 Small Group Communication (3 hrs)
One course from the following:
*CTAS121 Fundamentals of Speech (2 hrs)
*CTAS124 Fundamentals of Speech (3 hrs)

One course from the following:
CTAC224 Public Speaking (3 hrs)
CTAC350 Persuasion (3 hrs)
One course from the following:
CTAC374 Intercultural Communication (3 hrs)
CTAC375 Interracial/Intercultural Communication (3 hrs)
Two courses from the following:
CTAC650 Public Discourse Analysis (3 hrs)
CTAC660 Theories of Speech Criticism (3 hrs)
CTAC675 Research in Speech Communication (3 hrs)
CTAC485 Communication Theory (3 hrs)

Restricted Elective Courses......................................... 12 hours

Twelve hours from the list of restricted elective courses below that were not selected as a required course above:
CTAC224 Public Speaking (3 hrs)
CTAC225 Listening Behavior (3 hrs)
CTAC226 Nonverbal Communication (3 hrs)
CTAC350 Persuasion (3 hrs)
CTAC360 Communication in Negotiation (3 hrs)
CTAC356 Argumentation and Debate (3 hrs)
CTAC357 Interviewing as Communication (3 hrs)
CTAC360 Gender Communication (3 hrs)
CTAC370 Nonprofit Organizational Communication (3 hrs)
CTAC372 Assertive Communication (3 hrs)
CTAC373 Family Communication (3 hrs)
CTAC374 Intercultural Communication (3 hrs)
CTAC375 Intercultural/Intercultural Communication (3 hrs)
CTAC376 Communication and Conflict Resolution (3 hrs)
CTAC379 Special Topics (3 hrs)
CTAC650 Public Discourse Analysis (3 hrs)
CTAC660 Theories of Speech Criticism (3 hrs)
CTAC475 Research in Speech Communication (3 hrs)
CTAC485 Communication Theory (3 hrs)

A maximum of six hours from the following courses:
CTAA150/250/350/450 Forensics (1 hr/1 hr/2 hrs/3 hrs)
CTAC387/388/389 Cooperative Education in Communication (1 hr/2 hrs/3 hrs)
CTAC657/658/659 Internship in Communication (1 hr/2 hrs/3 hrs)
CTAC974/978/979 Independent Study (1 hr/2 hrs/3 hrs)

One course from the following may be substituted for a Restricted Elective:
CTAO205 Voice and Articulation (3 hrs)
CTAO210 Interpretative Reading (3 hrs)
CTAT244 Radio-Television-Film Announcing (3 hrs)

Minor Requirements.................................................... 20 hours

University Elective Courses......................................... 25 hours

Program Total.......................................................... 124 hours

Note: *This course satisfies both a general education and a major requirement.
COMPREHENSIVE MAJOR IN COMMUNICATION AND THEATRE ARTS (CTA)

The comprehensive major allows each student to develop a variety of communication skills with one or two areas of concentration (12 to 18 credit hours each). Within the 36 credit hours, at least nine must be in 300- and 400-level courses. Majors should plan their course selections carefully with the departmental advising coordinator and present a copy of this plan to Academic Records and Certification when requesting senior checkout.

General Education Requirements ........................................ 37 hours
Area I Symbolics and Communication
1. See page 23
2. One course from the following:
   - CTAT121 Fundamentals of Speech
   - CTAT124 Fundamentals of Speech
3. One course from the following:
   - CTAC224 Public Speaking
   - CTAC227 Interpersonal Communication
4. See page 23
5. See page 23
Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24
Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24
Area IV Arts and Humanities
1. See page 25
2. CTAG210 Interpretive Reading*
3. See page 25
4. One course from the following:
   - CTAT145 Introduction to Film Appreciation
   - CTAR190 Introduction to Theatre
   - CTAR151 African American Theatre: An Introduction
   - CTAR158 Fundamentals of Acting
   - CTAR222 Drama and Play in Human Experience

Physical Education/Graduation Requirement ................................ 2 hours

Major Requirements .......................................................... 36 hours
Required Courses ............................................................. 2-3 hours
One course from the following:
   - CTAT121 Fundamentals of Speech (2 hrs)
   - CTAT124 Fundamentals of Speech (3 hrs)

Restricted Elective Courses ............................................... 15 hours
At least three credits in five of the six following concentrations:

I. Communication
   - CTAC224 Public Speaking (3 hrs)
   - CTAC227 Interpersonal Communication (3 hrs)
   - CTAC350 Persuasion (3 hrs)
   - CTAC354 Organizational Communication (3 hrs)
   - CTAC359 Small Group Communication (3 hrs)
   - CTAC374 Intercultural Communication (3 hrs)

II. Interpretation/Performance studies
   - CTAC210 Interpretive Reading (3 hrs)

III. Voice and speech development
   - CTAV205 Voice and Articulation (3 hrs)

IV. Telecommunications and film
   - CTAT130 Introduction to Telecommunications and Film (3 hrs)
   - CTAT131 Introduction to Audio Production and Direction (2 hrs)

Concentration ................................. 9-15 hours
At least one concentration (above) selected in consultation with advising coordinator (hours here are in addition to the restricted elective courses above)

Elective Courses ......................................................... 3-10 hours
Three to 10 hours selected from areas outside the concentration

Minor Requirements ......................................................... 20 hours

University Elective Courses .............................................. 29 hours
Program Total ................................................................. 124 hours

Note:
*This course satisfies both a general education and a major requirement.

ELECTRONIC MEDIA AND FILM STUDIES
Major (TCFM)

General Education Requirements ....................................... 45 hours
Area I Symbolics and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. CTAT145 Introduction to Film Appreciation*
## Electronic Media and Film Studies Major with a Concentration in Film Studies (Film)

### General Education Requirements
- 45 hours
  - Area I: Symbolic and Communication
    - 1. See page 23
    - 2. See page 23
    - 3. See page 23
    - 4. See page 23
    - 5. See page 23
  - Area II: Science and Technology
    - 1. See page 24
    - 2. See page 24
    - 3. See page 24
    - 4. See page 24
  - Area III: Social Sciences
    - 1. See page 25
    - 2. See page 25
    - 3. See page 25
    - 4. See page 25
  - Area IV: Arts and Humanities
    - 1. See page 25
    - 2. See page 25
    - 3. See page 25
  - *CTAT45 Introduction to Film Appreciation*

### Physical Education/Graduation Requirement
- 2 hours

### Major Requirements
- 30-32 hours

#### Required Courses
- 11 hours
  - CTAT130 Introduction to Telecommunications and Film (3 hrs)
  - CTAT131 Introduction to Audio Production and Direction (2 hrs)
  - CTAT132 Introduction to Video Production and Direction (2 hrs)

#### Restricted Elective Courses
- 16-18 hours

#### Production Courses
- 6 hours

Six hours from the following, at least three hours must be at the 300- or 400-level:
  - CTAT231 Audio Recording Techniques (3 hrs)
  - CTAT241 Radio-Television Announcing (3 hrs)
  - CTAT331 Fundamentals of Radio Production and Direction (3 hrs)
  - CTAT332 Fundamentals of Television Production and Direction (3 hrs)
  - CTAT333 Fundamentals of Electronic Moviemaking (3 hrs)
  - CTAT341 Radio-Television Film Dramatic Performance (3 hrs)
  - CTAT343 Advanced Radio Production and Direction (3 hrs)
  - CTAT344 Advanced Television Production and Direction (3 hrs)

#### Writing Courses
- 3 hours

Three hours from the following:
  - CTAT334 Radio-Television News (3 hrs)
  - CTAT344 Continuity Writing for Radio-Television Film (3 hrs)

#### Theory Courses
- 6 hours

Six hours from the following, at least three hours must be at the 400-level:
  - CTAT45 Introduction to Film Appreciation (3 hrs)
  - CTAT236 History and Criticism of Radio and Television (3 hrs)
  - CTAT245 Survey of American Cinema (3 hrs)
  - CTAT335 Studies in Film (3 hrs)
  - CTAT366 Studies in Telecommunications (3 hrs)
  - CTAT45 American Film Genres (3 hrs)
  - CTAT445 Film Theory and Criticism (3 hrs)
  - CTAT446 Contemporary Problems in Telecommunications (3 hrs)
  - CTAT447 Radio-Television Station Management (3 hrs)
  - CTAT479 Special Topics (must be approved by advisor) (3 hrs)

#### Internship or Cooperative Education
- 1-3 hours

CTAT387/388/389 Cooperative Education in Radio-TV Film (1/2/3 hrs)

CTAT487/488/489 Internship in Radio-TV Film (1/2/3 hrs)

### Electric Courses
- 3-5 hours

Three hours from telecommunications and film and the remaining hours from communication and theatre are excluding CTAT121 or CTAS121 Fundamentals of Speech or Journalism courses.

### Minor Requirements
- 20 hours

### University Elective Courses
- 27 hours

### Program Total
- 124 hours

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**Note:**
- *This course satisfies both a general education and a major requirement.*
THEATRE ARTS MAJOR (THAR)

General Education Requirements

**Area I: Symbolics and Communication**
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

**Area II: Science and Technology**
1. See page 24
2. See page 24
3. See page 24
4. See page 24

**Area III: Social Sciences**
1. See page 24
2. See page 24
3. See page 24
4. See page 24

**Area IV: Art and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. One course from the following:
   * CTAR150 Fundamentals of Acting
   * CTAR158 Introduction to Theatre

Physical Education/Graduation Requirement...2 hours

Major Requirements...36 hours

**Foundation Courses**...15 hours
- CTAR150 Introduction to Theatre (3 hrs)
- CTAR152 Technical Theatre (3 hrs)
- CTAR153 Technical Theatre: Costume and Makeup (2 hrs)
- CTAR155 Producing Theatre (3 hrs)
- CTAR158 Fundamentals of Acting (3 hrs)
- CTAR167 Theatre Practice (1 hr)
- CTAR287/487 Theatre Practice (1 hr)

**Production Concentration Courses**...6 hours
- CTAR355 Play Direction (3 hrs)
  * One course from the following:
    * CTAR255 Scene Design (3 hrs)
    * CTAR258 Characterization (3 hrs)
    * CTAR260 Dramatic Composition (3 hrs)
    * CTAR363 Stage Costumes: History & Theory (3 hrs)
    * CTAR364 Stage Costumes: Design Construction (3 hrs)

**Theory Courses**...6 hours
- CTAR450 History of the Theatre to 1642 (3 hrs)
- CTAR451 History of the Theatre: 1642 to the Present (3 hrs)

**Advanced Production Courses**...2-3 hours
- One course from the following:
  - CTAR459 Acting/Directing/Production Intensive (3 hrs)
  - CTAR459 Acting/Directing/Production Intensive (2 hrs)

**Capstone Course**...2 hours
- CTAR406 Senior Seminar (2 hrs)

**Restricted Elective Courses**...4-5 hours
- Choose from any theatre and/or performance course excluding CTAR106.

Minor Requirements...20 hours

University Elective Courses...21 hours

Program Total...124 hours

Note:
*This course satisfies both general education and a major requirement.*

INTERDISCIPLINARY MAJOR IN PUBLIC RELATIONS (PURL)

Admission to the program will require a 2.8 GPA, which must be maintained in the major as well as in the minor selected. Admission is granted by the Department of English Language and Literature. Courses from both the Department of English Language and Literature and the Department of Communication and Theatre Arts are offered as requirements and restricted elective courses.

General Education Requirements...40 hours

**Area I: Symbolics and Communication**
1. See page 23
2. One course from the following:
   * CTAS121 Fundamentals of Speech
   * CTAS124 Fundamentals of English
3. One course from the following:
   * CTAC224 Public Speaking
   * CTAC227 Interpersonal Communication
4. See page 23
5. See page 23

**Area II: Science and Technology**
1. See page 24
2. See page 24
3. See page 24
4. See page 24

**Area III: Social Sciences**
1. See page 24
2. See page 24
3. See page 24
4. See page 24

**Area IV: Art and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. ART165 Graphic Design for Non-Majors

Physical Education/Graduation Requirement...2 hours

Major Requirements...48 hours

**Required Fundamentals Courses**...17-18 hours
- JRLN215 News Writing and Reporting (3 hrs)
- JRLN212 Introduction to Public Relations (3 hrs)
- JRLN214 Writing for Public Relations (3 hrs)
- CTAC245 Introduction to Radio-Television-Film Production (3 hrs)
  * One course from the following:
    * CTAC245 Public Speaking (3 hrs)
    * CTAC250 Persuasion (3 hrs)
  * One course from the following:
    * CTAS121 Fundamentals of Speech (3 hrs)
    * CTAS124 Fundamentals of Speech (3 hrs)

**Required Advanced Courses**...18 hours
- JRLN306 Feature Writing (3 hrs)
- JRLN408 Case Studies in Public Relations (3 hrs)
- CTAC245 Research in Speech Communication (3 hrs)
  * One course from the following:
    * JRLN490 Internship in Journalism/Public Relations (3 hrs)
    * JRLN487 Cooperative Education in Journalism/Public Relations (3 hrs)
  * One course from the following:
    * CTAC234 Radio-Television News (3 hrs)
    * CTAC234 Radio-Television News (3 hrs)

**Restricted Elective Courses**...12 hours
- ENGL323 Writing in the Professional World (3 hrs)
- JRLN307 Copy Editing (3 hrs)
- JRLN317 Newspaper Layout and Design (3 hrs)
COMPREHENSIVE MAJOR IN COMMUNICATION AND THEATRE ARTS (CTAT)
Secondary Teacher Certification

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in speech, certification code BD, and, depending on the minor selected, an additional endorsement, The Michigan Test for Teacher Certification (MTTC) covering this field is #04, "Speech."

General Education Requirements

Area I Symbolics and Communication

1. See page 23
2. One course from the following:
   *CTAS121 Fundamentals of Speech
   *CTAS124 Fundamentals of Speech
3. One course from the following:
   *CTAC224 Public Speaking
   *CTAC227 Interpersonal Communication
4. See page 23
5. See page 23

Area II Science and Technology

1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences

1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities

1. See page 25
2. CITA210 Interpretive Reading
3. See page 25
4. One course from the following:
   *CTAT145 Introduction to Film Appreciation
   *CTAR150 Introduction to Theatre
   *CTAR151 African American Theatre: An Introduction
   *CTAR158 Fundamentals of Acting
   *CTAR223 Drama and Play in Human Experience

Physical Education/Graduation Requirement 2 hours

Major Requirements 35-36 hours

Required Courses 23 hours

One course from the following:
*CTAS121 Fundamentals of Speech (2 hrs)
*CTAS124 Fundamentals of Speech (3 hrs)

Restricted Elective Courses 15 hour

At least three hours in two of the six following concentrations

I. Communication
   *CTAC224 Public Speaking (3 hrs)
   *CTAC227 Interpersonal Communication (3 hrs)
   *CTAC227 Persuasion (3 hrs)
   *CTAC256 Argumentation and Debate (3 hrs)
   *CTAC259 Small Group Communication (3 hrs)
   *CTAC374 Intercultural Communication (3 hrs)

II. Interpretation/Performance Studies
   *CTAO210 Interpretive Reading (5 hrs)

III. Voice and Speech Development
   *CTAO205 Voice and Articulation (3 hrs)

IV. Telecommunications and Film
   *CTAT141 Introduction to Radio-TV-Film Production (3 hrs)
   *CTAT145 Introduction to Film Appreciation (3 hrs)

V. Theatre Arts
   *CTAR131 African American Theatre: An Introduction (3 hrs)
   *CTAR152 Technical Theatre: Scenery and Lighting (3 hrs)
   *CTAR153 Technical Theatre: Costumes and Makeup (1 hr)
   *CTAR155 Producing Theatre (3 hrs)
   *CTAR158 Fundamentals of Acting (3 hrs)
   *CTAR450 History of the Theatre to 1662 (3 hrs)
   *CTAR451 History of the Theatre: 1662 to the Present (3 hrs)

VI. Educational Drama
   *CTAR223 Drama & Play in Human Experience (3 hrs)
   *CTAR227 Theatre for the Young (3 hrs)
   *CTAR227 Improvising and Role Play (3 hrs)
   *CTAR227 Plays for the Young (3 hrs)
   *CTAR429 History and Theory of Developmental Dramatic Theatre (3 hrs)

Concentration 12 hours

Select either a concentration in communications or theatre arts in consultation with an advisor.

Department Elective Courses 6 hours

Select from any courses in area outside the concentration.

Professional Studies 39 hours

Pre-admission phase: The Learner and the Community 8 hours
EDPS322 Human Development and Learning (4 hrs)
FETE201 Field Experience I (1 hr)
SPCN251 Education of Students with Exceptionalities (3 hrs)

The following courses require formal admission to the teacher education program:

Phase I: Curriculum, Assessment, and the Social Context 10 hours
SOFD328 Schools in a Multicultural Society (3 hrs)
CURR305 Curriculum and Methods Secondary (3 hrs)
FETE302 Field Experience II: Secondary (1 hr)
EDPS341 Introduction to Assessment and Evaluation (3 hrs)
COMMUNICATION MINOR (COMM)

Required Courses
- CTAC227 Interpersonal Communication (3 hrs)
- CTAC354 Organizational Communication (3 hrs)
- CTAC359 Small Group Communication (3 hrs)
- CTAS121 Fundamentals of Speech (2 hrs)
- CTAS124 Fundamentals of Speech (3 hrs)
- CTAG224 Public Speaking (3 hrs)
- CTAC359 Persuasion (3 hrs)
- CTAC374 Intercultural Communication (3 hrs)
- CTAC440 Public Discourse Analysis (3 hrs)
- CTAC469 Theories of Speech Criticism (3 hrs)
- CTAC475 Research in Speech Communication (3 hrs)
- CTAC483 Communication Theory (3 hrs)

Elective Courses
- CTAS501 Fundamentals of Speech (3 hrs)
- CTAS504 Oral Interpretation of Literature and Language with the Young (2 hrs)
- CTAS522 Theatre-Religion (2 hrs)
- CTAS523 Developmental Drama/Theatre with Handicapped Persons (3 hrs)
- CTAS525 Developmental Drama/Theatre in Recreational Setting (2 hrs)
- CTAS528 Developmental Drama/Theatre in Religion (2 hrs)
- CTAS555 Studies for Drama/Theatre for the Young (2 hrs)
- CTAG108/268/368/468 Interpretation (1/1/1/1 hr)
- CTAC359 Performing Theatre for the Young (3 hrs)
- CTAC377/378/379 Special Topics (1/2/3 hrs)
- CTAC497/498/499 Independent Study (1/2/3 hrs)
- LITH207 Introduction to Children's Literature (3 hrs)

Minor Total

20-21 hours

COMPREHENSIVE MINOR IN COMMUNICATION AND THEATRE ARTS (CTA)

Required Courses
- One course from the following:
  - CTAS121 Fundamentals of Speech (2 hrs)
  - CTAS124 Fundamentals of Speech (3 hrs)

Restricted Elective Courses
- At least three hours in four of the six areas of concentration (communication, theatre arts, music, art, dance, and film). Total of six concentrations.

Concentration Courses
- Six to nine hours in one area of concentration.

Department Elective Courses
- Select from any courses in area outside the concentration.

Minor Total

20-28 hours

DRAMA/THEATRE FOR THE YOUNG MINOR (DTY)

The undergraduate minor in drama/theatre for the young is designed to serve students wishing to prepare for a variety of careers — some already existing, others emerging — involving work with and for the young through drama and communication. The minor is useful in conjunction with many other minors and majors including elementary and secondary education, special education, language and literature, history and social studies, art, music, dance, social work, sociology, psychology, recreation, business management, counseling, library science, home economics, communication and theatre arts, family and child service and gerontology.

It provides a strong base and, at the same time, flexibility is ensured through freedom in choosing from a wide range of electives.

Required Courses
- One course from the following:
  - CTAS121 Fundamentals of Speech (2 hrs)
  - CTAS124 Fundamentals of Speech (3 hrs)
  - CTAS322 Drama and Play in Human Experience (3 hrs)
  - CTAS322 Theatre for the Young (3 hrs)
  - CTAS323 Improvising and Role-Play (3 hrs)
  - CTAS326 Oral Interpretation of Literature for the Young (3 hrs)

Elective Courses
- Five to six hours from the following:
  - CTAS326 Drama/Theatre for Persons with Disabilities (2 hrs)
  - CTAS327 Plays for the Young (3 hrs)
  - CTAS329 History and Theory of Developmental Drama/Theatre (3 hrs)
  - CTAS354 Oral Interpretation of Literature and Language with the Young (2 hrs)
  - CTAS522 TIE Theatre-in-Education (2 hrs)
  - CTAS523 Puppetry-Carousel in Human Development (3 hrs)
  - CTAS524 Developmental Drama/Theatre with Handicapped Persons (2 hrs)
  - CTAS525 Developmental Drama/Theatre in Recreational Setting (2 hrs)
  - CTAS528 Developmental Drama/Theatre in Religion (2 hrs)
  - CTAS555 Studies in Drama/Theatre for the Young (2 hrs)
  - CTAG108/268/368/468 Interpretation (1/1/1/1 hr)
  - CTAC359 Performing Theatre for the Young (3 hrs)
  - CTAC377/378/379 Special Topics (1/2/3 hrs)
  - CTAC497/498/499 Independent Study (1/2/3 hrs)
  - LITH207 Introduction to Children’s Literature (3 hrs)

Minor Total

30 hours

MUSICAL THEATRE MINOR (MUTH)

Required Courses
- Four hours of applied music-voice and two hours of ensemble performance voice courses.

Restricted Elective Courses
- Eight hours from the following:
  - CTAS555 Producing Theatre (3 hrs)
  - CTAS556 Movement for Actors (3 hrs)
  - CTAG457 Audition (2 hrs)
  - CTAG461 Musical Theatre Acting (3 hrs)
  - CTAG462 Direction of Directing (2 hrs)
  - CTAG463 The American Musical Stage (3 hrs)

Dance

4 hours
Four hours from the following:
- DANC155 Jazz I (1 hr)
- DANC156 Tap Dancing (1 hr)
- DANC166 Ballet (1 hr)
- DANC161 Modern Dance (1 hr)
- DANC255 Jazz II (1 hr)
- DANC261 Intermediate Modern Dance (1 hr)

Six hours from the following:
- MUSC101 Music Theory I (3 hrs)
- MUSC104 Elements of Music (2 hrs)
- MUSC305 Keyboard Skills (2 hrs)
- MUSC336 Conducting (2 hrs)

Minor Total .................................................. 24 hours

**Electronic Media and Film Studies Minor (TCFM)**

Required Courses ............................................. 7 hours
- CTAS130 Introduction to Telecommunications and Film (3 hrs)
- CTAS131 Introduction to Audio Production and Direction (2 hrs)
- CTAS132 Introduction to Video Production and Direction (2 hrs)

Restricted Elective Courses .................................. 13 hours
One course from the following:
- CTAS145 Introduction to Film Appreciation (3 hrs)
- CTAS236 History and Criticism of Radio and Television (3 hrs)

One course from the following:
- CTAS165 Television Laboratory (1 hr)
- CTAS169 Radio Station WQBR (1 hr)

Three credits from each group of the area courses listed under the electronic media and film studies major (production, writing and theory).

Elective Courses .............................................. 4 hours
Three hours from communication and film and the remaining hours from communication and theatre arts (except CTAS121 or CTAS124 Fundamentals of Speech) or journalism.

Minor Total .................................................. 24 hours

**Theatre Arts Minor (THAR)**

Required Courses ............................................. 18 hours
- CTAR150 Introduction to Theatre (3 hrs)
- (may be bypassed by examination or interview for no credit)
- CTAR152 Technical Theatre: Scenery and Lighting (2 hrs)
- CTAR155 Producing Theatre (3 hrs)
- CTAR158 Fundamentals of Acting (3 hrs)
- CTAR355 Play Direction (3 hrs)
- CTAR167 Theatre Practice (1 hr)

One course from the following:
- CTAR450 History of the Theatre to 1642 (3 hrs)
- CTAR451 History of the Theatre 1642 to the Present (3 hrs)

Elective Courses .............................................. 2-6 hours
Select courses beyond the 100 level in theatre arts or in other departmental areas specified under the major.

Minor Total .................................................. 20-24 hours

**Comprehensive Minor in Communication and Theatre Arts (CTAT)**

Secondary, K-12 and Special Education-Secondary Teacher Certification

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in speech, certification code BD. The Michigan Test for Teacher Certification (MTTC) covering this field is #04, "Speech."

**Required Courses** ........................................... 20-21 hours
One course from the following:
- CTAS121 Fundamentals of Speech (2 hrs)
- CTAS124 Fundamentals of Speech (3 hrs)

At least three credits in four of the six areas of concentrations (communication, interpretation/performances studies, voice development, telecommunications and film and theatre arts and educational drama).

See additional hours from speech communication or theatre arts

Minor Total .................................................. 20-21 hours

**Drama/Theatre for the Young Minor (DTYT)**

Elementary and Special Education-Elementary Teacher Certification

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in speech, certification code BD. The Michigan Test for Teacher Certification (MTTC) covering this field is #04, "Speech."

**Required Courses** ........................................... 20 hours
One course from the following:
- CTAS121 Fundamentals of Speech (2 hrs)
- CTAS124 Fundamentals of Speech (3 hrs)
- CTAR222 Drama and Play in Human Experience (3 hrs)
- CTAR322 Drama for the Young (3 hrs)
- CTAR334 Improvising and Role-Play (3 hrs)
- CTAR324 Oral Interpretation of Literature for the Young (3 hrs)

If CTAS121 is in the program, choose six hours; if CTAS124 is in the program, choose five hours from the following:
- CTAR326 Drama/Theatre for Persons with Disabilities (2 hrs)
- CTAR327 Plays for the Young (3 hrs)
- CTAR429 History and Theory of Developmental Drama/Theatre (3 hrs)
- CTAR504 Oral Interpretation of Literature and Language with the Young (2 hrs)
- CTAR523 Theatre-in-Education (2 hrs)
- CTAR523 Puppetry: Catalyst in Human Development (3 hrs)
- CTAR524 Developmental Drama/Theatre for Persons with Disabilities (2 hrs)
- CTAR525 Developmental Drama/Theatre in Recreational Settings (2 hrs)
- CTAR528 Developmental Drama/Theatre in Religion (2 hrs)
- CTAR565 Studies in Drama/Theatre for the Young (2 hrs)
- CTAR168/268/368/468 Interpretation (1/1/1/1 hr)
- CTAR377/378/379 Special Topics (1/2/3 hrs)
- CTAR477/478/479 Special Topics: Touring to Young Audiences (1/2/3 hrs)
- CTAR497/498/499 Independent Study (1/2/3 hrs)
- LTR207 Introduction to Children's Literature (3 hrs)

Any course in dramatic literature

Any communication course

Any theatre arts course

Minor Total .................................................. 20 hours

Note:
$Elementary education professional requirement.
$tAll 300-level courses are available for undergraduate credit to qualified seniors.
The Department of Computer Science offers professional foundation-based programs designed to facilitate placement and continuing growth in this rapidly changing and expanding field. Programs include an applied computer science major and minor, a curriculum in computer science and a computer science education major and minor leading to secondary or K-12 teacher certification. Six computer laboratories house about 200 desktop computers, computer clusters, servers and special purpose computers. These facilities provide hardware and software support for teaching and a broad range of class assignments and student projects.

Students completing the curriculum are uniquely equipped to pursue advanced graduate degrees. Both the applied computer science major and the computer science curriculum offer a mix of practice and theory that prepare students for graduate study and for career employment in computer science fields such as systems programming and analysis, software development and maintenance as well as applications programming. Strong industrial ties and an active cooperative education program provide both practical learning experience and entry into cutting edge job markets such as network administration, database design and administration and data-keeping and related services. Part-time on-campus employment opportunities also encourage hands-on learning.

The computer science minor provides students in mathematics, the physical and social sciences and other fields with practical tools for applying current computer technology to their major areas. Independent projects and special classes provide professional-level training and experience for students interested in the latest technological advances.

Fully accredited by the Michigan Department of Education, the computer science education major and minor both meet the rigorous standards of the International Society for Technology in Education (ISTE). Academic excellence of these programs is attested by outstanding student performance on statewide computer examinations and by the postgraduate employment rate.

Graduate programs under the auspices of the Department of Computer Science are the master of science in computer science, the graduate secondary teacher certification endorsement program, the graduate certificate in artificial intelligence and the double master's degree program with the Fachhochschule Karlruhe, Germany. The department cooperates with the departments of Biology, Management, and Mathematics in offering a graduate certificate and a master of science in bioinformatics. The department also cooperates with the Department of Mathematics in offering a master of arts in mathematics with a concentration in computer science. See the graduate catalog for program descriptions.

Permission for course substitutions, for other modifications to any computer science curriculum, major or minor, for credit by examination and for approval of transfers of computer science credit must first be obtained from the undergraduate advisor.

Graduate courses and a program leading to an endorsement in computer science for secondary school teachers certified in other fields are described in the graduate catalog.

**CURRICULUM IN COMPUTER SCIENCE (CSCC)**

The curriculum offers graduates an extensive background in the major fields of computer science. Graduates will have received the highest degree of preparation for either the pursuit of a graduate degree in the field, or for a career in the computer industry.

**General Education Requirements**

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<td>4. MATH 121 Calculus I</td>
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<td>5. COSC 111 Introduction to Programming</td>
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**Area II: Science and Technology**

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**Area III: Social Sciences**

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**Area IV: Arts and Humanities**

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** Physical Education/Graduation Requirement**

2 hour

**Comprehensive Computer Science Curriculum Major**

77-81 hour

**Required Courses**

39 hours

- COSC 111 Introduction to Programming (3 hrs)
- COSC 211 Programming Data Structures (3 hrs)
- COSC 221 Computer Organization I (3 hrs)
- COSC 231 Exploration in Internet-based Computing (3 hrs)
- COSC 311 Algorithms and Data Structures (3 hrs)
- COSC 314 Computational Discrete Structures (3 hrs)
- COSC 321 Computer Organization II (3 hrs)
- COSC 341 Programming Languages (3 hrs)
- COSC 423 Computer Operating Systems (3 hrs)
- COSC 439 Computing Networking Principles (3 hrs)
- COSC 444 Foundations of Automata and Languages (3 hrs)
- COSC 471 Database Principles (3 hrs)
- COSC 481 Software Engineering and Senior Project (3 hrs)

**Elective Courses**

6 hours

Select two from the list of courses below, or any 400-level computer sciences courses.

- COSC 315 Symbolic Computing (3 hrs)
- COSC 405 Switching Theory (3 hrs)
- COSC 421 Systems Programming (3 hrs)
- COSC 422 Introduction to Microprocessors (3 hrs)
- COSC 436 Web Programming (3 hrs)
- COSC 445 Compiler Construction (3 hrs)
- COSC 456 Microcomputer Graphics (3 hrs)
- COSC 461 Heuristic Programming (3 hrs)

**Mathematics Requirements**

17-18 hours

- MATH 130 Calculus I (4 hrs)
- MATH 122 Linear Algebra (3 hrs)
- MATH 205 Mathematical Structures for Computer Science (4 hrs)
- MATH 360 Statistical Methods (3 hrs)

One course from the following:

- MATH 212 Calculus II (4 hrs)

Any 200- or higher level course offered by the Mathematics Department not oriented specifically toward a teaching specialization (3 hrs)
Science Requirements 15-18 hours
Twelve total credits of coursework from two of the following departments: Biology, Chemistry, Geology, or Physics. These courses must be intended for majors in their respective disciplines. The course must include one of the following options:

Option I:
*CHEM 121/122 General Chemistry I with lab (4 hrs)
One course from the following:
CHEM 123/124 General Chemistry II with lab (4 hrs)
CHEM 225/226 Honors General Chemistry II with lab (4 hrs)

Option II:
ESSC 110 The Dynamic Earth System (4 hrs)
ESSC 111 The Earth System Through Time (4 hrs)

Option III:
PHY 223 Mechanics and Sound (5 hrs)
PHY 224 Electricity and Light (5 hrs)

Option IV:
*BIOI 110 Introductory Biology I (5 hrs)
BIOI 120 Introductory Biology II (5 hrs)

An additional course from the Biology, Chemistry, Physics or Psychology department. This course need not be intended for majors in that discipline (3-5 hrs)

Minor Requirements ............................................................................... 0 hours
No minor is required.

University Elective Courses ................................................................. 10-14 hours

Program Total ..................................................................................... 124 hours

Note:
*This course satisfies both a general education and a major requirement.
**Students should take care to satisfy the criteria of general education requirement II in selecting their science courses. Generally, this will require that the selected courses are from three distinct departments.

APPLIED COMPUTER SCIENCE MAJOR (CSCA)
Successful completion of this major satisfies one of the requirements for graduation with a bachelor of science or bachelor of arts degree with a major in computer science. Graduates will be able to pursue advanced graduate degrees. The applied computer science major offers a mix of practice and theory that prepares students for career employment in computer science fields such as systems programming and analysis, software development and maintenance, as well as applications programming.

General Education Requirements ....................................................... 45 hours
Are I Symbolics and Communication
1. See page 23
2. See page 23
3. See page 23
4. MATH 120 Calculus I (4 hrs)
5. COSC 111 Introduction to Programming

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Additional Requirements ................................................................... 7 hours
MATH 205 Mathematical Structures for Computer Science (4 hrs)
MATH 306 Statistical Methods (3 hrs)

Physical Education/Graduation Requirement ........................................ 2 hours

Major Requirements ........................................................................... 36 hours
Required Courses ............................................................................. 24 hours
*COSC 111 Introduction to Programming (3 hrs)
COSC 211 Programming Data Structures (3 hrs)
COSC 221 Computer Organization I (3 hrs)
COSC 231 Introduction to Internet-Based Computing (3 hrs)
COSC 311 Algorithms and Data Structures (3 hrs)
COSC 314 Computational Discrete Structures (3 hrs)
COSC 341 Programming Languages (3 hrs)
COSC 481 Computer Engineering and Senior Project (3 hrs)

Restricted Elective Courses ................................................................. 12 hours
Four courses from the following:
COSC 115 Symbolic Computing (3 hrs)
COSC 211 Computer Organization II (3 hrs)
COSC 405 Switching Theory (3 hrs)
COSC 421 Systems Programming (3 hrs)
COSC 422 Introduction to Microprocessors (3 hrs)
COSC 423 Computer Operating Systems (3 hrs)
COSC 436 Web Programming (3 hrs)
COSC 439 Computing Network Principles (3 hrs)
COSC 444 Foundations of Automata and Languages (3 hrs)
COSC 445 Compiler Construction (3 hrs)
COSC 456 Microcomputer Graphics (3 hrs)
COSC 461 Heuristic Programming (3 hrs)
COSC 481 Data Structures and Algorithms (3 hrs)

Minor Requirements ........................................................................... 20 hours

University Elective Courses ................................................................. 14 hours

Program Total ..................................................................................... 124 hours

Note:
*This course satisfies both a general education and a major requirement.

COMPUTER SCIENCE EDUCATION MAJOR (CSCT)
Secondary Teacher Certification
Successful completion of this program, in conjunction with other teacher education requirements, qualifies students for recommendation to the Michigan Department of Education Secondary Provisional Certificate endorsed in computer science, certification code NR, and, an additional endorsement, depending on the minor selected. The Michigan Test for Teacher Certification (MTTC) covering this field is #50, "Computer Science."

Students must be accepted into the College of Education before enrolling in COSC 342 Programming Languages for Educators, COSC 305 Applications in Computer Science and COSC 306 Methods of Teaching Computer Science in the Secondary Schools.

General Education Requirements ....................................................... 44 hours
Are I Symbolics and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. COSC 101 Computer Science Concepts and Practical Applications*
Computer Science Minor (CSC)

Successful completion of this minor satisfies one of the requirements for graduation with a Bachelor of Science or a Bachelor of Arts degree. Students pursuing majors in other fields such as mathematics, the physical and social sciences, the arts or business will learn the practical tools for applying current computer technology to their major areas of study.

Required Courses ........................................................................ 15 hours
COSC111 Introduction to Programming (3 hrs)
COSC211 Programming Data Structures (3 hrs)
COSC221 Computer Organization I (3 hrs)
COSC223 Exploration in Internet-based Computing (3 hrs)
COSC311 Algorithms and Data Structures (3 hrs)

Restricted Elective Courses ........................................................................ 6 hours
Two courses from the following:
COSC314 Computational Discrete Structures (3 hrs)
COSC315 Symbolic Computing (3 hrs)
COSC221 Computer Organization II (3 hrs)
COSC341 Programming Languages (3 hrs)
COSC405 Switching Theory (3 hrs)
COSC421 Systems Programming (3 hrs)
COSC422 Introduction to Microprocessors (3 hrs)
COSC423 Computer Operating Systems (3 hrs)
COSC436 Web Programming (3 hrs)
COSC439 Computing Network Principles (3 hrs)
COSC444 Foundations of Automata and Languages (3 hrs)
COSC445 Compiler Construction (3 hrs)
COSC456 Microcomputer Graphics (3 hrs)
COSC461 Heuristic Programming (3 hrs)
COSC471 Database Principles (3 hrs)
COSC481 Software Engineering and Senior Project (3 hrs)

Minor Total ........................................................................... 21 hours

Computer Science Education Minor (CSCT)

Secondary, K-12 and Special Education-Secondary Teacher Certification

Successful completion of this program, in conjunction with other teacher education requirements, qualifies students for recommendation for the Michigan Department of Education Provisional Certificate endorsed in computer science, certification code NR, and an additional endorsement dependent on the major or minor selected. The Michigan Test for Teacher Certification (MTTC) covering this field is #50. "Computer Science.

Students must be accepted into the College of Education before enrolling in COSC342 Programming Languages for Educators, COSC303 Applications in Computer Science and COSC306 Methods of Teaching Computer Science in the Secondary Schools.

Required Courses ........................................................................ 24 hours
COSC101 Computer Science Concepts and Practical Applications (3 hrs)
COSC111 Introduction to Programming (3 hrs)
COSC211 Programming Data Structures (3 hrs)
COSC221 Computer Organization I (3 hrs)
COSC223 Exploration in Internet-based Computing (3 hrs)

Minor Requirements .......................................................................... 13-25 hours
Select a minor from the approved list of minors for secondary, K-12 and special education-secondary programs.

University Elective Courses ........................................................................ 0 hours

Program Total ........................................................................... 132 hours

Note: *This course satisfies both the general education and a major requirement.
The Department of Economics offers majors and minors in economics, with diversified areas of specialization, and in labor studies. A major in actuarial science and economics is offered in a joint program with the Department of Mathematics. The department also participates in other University programs such as language and international trade, international business, social studies offered in the Department of History and Philosophy, the minor in conservation and resource use in the Department of Biology and the Women's Studies Program.

Students have access to personal computers and software through the department's own statistical laboratory and through facilities available at various locations on campus.

The department presents six annual student awards: the Murg Award for outstanding service to the Department of Economics; the Gockerman Award for an outstanding paper on a subject related to economics; two Hagan Awards for outstanding papers in econometrics; the Moore Award for an outstanding essay in law and economics; the Rowan Award for an economics major with a superior academic record who is interested in a government service career; the Labour Studies Award for superior course work, outstanding research effort, public service, and/or commitment to the Labour Studies Program and its goals; and the Student Achievement Award for the highest grade point average in economics.

The department sponsors the chapter of Omicron Delta Epsilon honor society in economics, established in 1975 to recognize students who demonstrate ability in the study of economics at an institute where sound economics programs are offered. The Economics Club sponsors economic and social events for students interested in economics as a major or minor or complementary field.

Graduate study leads to a master's degree in three different programs: master of arts in economics, master of arts in applied economics, and master of arts in trade and development. For more information consult the graduate catalog.

Advising Information
For departmental advising, please see:
David Cray
703-G Pray-Harrold
734.487.0001
dcray@umich.edu

BACHELOR OF BUSINESS ADMINISTRATION IN ECONOMICS (ECBB)

The bachelor of business administration in economics degree is available to those admitted to the College of Business (see page 156). The program is designed to provide professional training in economics applicable to business management for students contemplating administrative or research careers in business or government. This program provides an additional career program option for students by permitting them to major in economics while taking the same foundation courses required of all business students.

Students enrolling in this program are required to follow the business administration curriculum in addition to fulfilling the 24 credit hours in economics.

Assessment: As a condition of graduation, all majors are required to maintain and submit a portfolio reflecting their program of study. Contents may include annual progress reports, copies of term papers, opinion statements about the program and inquiries. Details are available from the coordinator of advising.

General Education Requirements 32 hours

Area I Symbolic and Communication
1. See page 23
2. See page 23

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. Logic or ethics is strongly recommended.
4. See page 25

Physical Education/Graduation Requirement 2 hours

Major Requirements 33 hours

Required Courses 18 hours

One course from the following:
*MATH1118 Linear Models and Probability
*MATH1122 Elementary Linear Algebra
*ECON201 Principles of Macroeconomics
*ECON202 Principles of Microeconomics

Restricted Elective Courses 15 hours

Although any 15 credit hours of 400-level or above electives in econmics will complete the requirements for the major, students should select courses most closely related to business applications. Students selecting this economics major are encouraged to include at least one 400-level course offered in the College of Business as an elective.

Business and Business Administration Core Courses 36 hours

*ACC240 Principles of Financial Accounting (3 hrs)
*ACC241 Principles of Managerial Accounting (3 hrs)
*COB290 Introduction to Business (3 hrs)
*FIN201 Legal Environment of Business (3 hrs)
*MKT202 Business Communication (3 hrs)
*IS215 End-User Computing (3 hrs)
*DS205 Business Statistics I (3 hrs)
*FIN350 Principles of Finance (3 hrs)
*MKT360 Principles of Marketing (3 hrs)
*MKT380 Organizational Behavior and Theory (3 hrs)
*ECO374 Introduction to Production/Operations Management (3 hrs)
*MKT490 Business Policy (3 hrs)

Minor Requirements 0 hours

No minor is required.

University Elective Courses 21 hours

Program Total 124 hours

Note:
*This course satisfies both a general education and a major requirement.
**Actuarial Science and Economics Major (ASEC)**

Actuarial science and economics is a joint program of the Mathematics and Economics departments. In addition to following a prescribed series of courses, students are expected to pass the first two actuarial examinations. The examinations are sponsored by leading actuarial societies and administered in numerous U.S. locations. MATH372 and MATH472 are designed to prepare students for these examinations.

All majors must meet with the undergraduate advising coordinator in the Department of Mathematics to fill out a program sheet before graduation. At least 15 credit hours in the program, at the 300-level or above, must be taken at Eastern Michigan University.

**General Education Requirements** ........................................ 35 hours

**Area I Symbolics and Communication**
1. See page 23
2. See page 23
3. See page 23
4. MATH120 Calculus I
5. One course from the following:
   - COSC145 Introduction to FORTRAN Programming
   - COSC111 Introduction to Programming
   - COSC237 Computer Programming and Numeric Methods

**Area II Science and Technology**
1. See page 24
2. See page 24
3. See page 24
4. One course from the following:
   - MATH118 Linear Models and Probability
   - MATH119 Applied Calculus
   - MATH120 Calculus I

**Area III Social Sciences**
1. See page 24
2. See page 24
3. ECON201 Principles of Macroeconomics
4. ECON202 Principles of Microeconomics

**Area IV Art and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. See page 25

**Physical Education/Graduation Requirement** ................. 2 hours

**Major Requirements** .................................................. 62 hours

**Required Courses** .................................................... 12 hours

- ACC220 Principles of Financial Accounting (3 hrs)
- ACC241 Principles of Managerial Accounting (3 hrs)

One course from the following:
- COSC145 Introduction to FORTRAN Programming (3 hrs)
- COSC111 Introduction to Programming (3 hrs)
- COSC237 Computer Programming and Numeric Methods (3 hrs)

One course from the following:
- FIN330 Principles of Finance (3 hrs)
- ECON361 Corporation Finance (3 hrs)

**Required Mathematics Courses** .................................... 26 hours

- MATH120 Calculus I (4 hrs)
- MATH121 Calculus II (4 hrs)
- MATH122 Elementary Linear Algebra (3 hrs)
- MATH123 Multivariable Calculus (4 hrs)
- MATH124 Probability and Statistics I (4 hrs)
- MATH125 Probability and Statistics II (3 hrs)
- MATH222 Problems in Actuarial Studies I (2 hrs)
- MATH223 Problems in Actuarial Studies II (2 hrs)

**Required Economic Courses** ......................................... 18 hours

- ECON201 Principles of Macroeconomics (3 hrs)
- ECON202 Principles of Microeconomics (3 hrs)
- ECON301 Intermediate Macroeconomic Analysis (3 hrs)
- ECON302 Intermediate Microeconomic Analysis (3 hrs)
- ECON405 Economic Analysis for Business (3 hrs)
- ECON415 Introduction to Econometrics (3 hrs)

**Restricted Elective Courses** ......................................... 6 hours

Any combination of electives from:
- Courses at the 300-level or above in mathematics
- ECON340 Money and Banking (3 hrs)
- ECON445 Economic Fluctuation and Forecasting (3 hrs)
- ECON655 Cost-benefit Analysis (3 hrs)

**Minor Requirements** .................................................. 25 hours

University Elective Courses ........................................... 25 hours

**Program Total** ....................................................... 124 hours

Note: This course satisfies both a general education and a major requirement.

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**Economics Major (ECN)**

The major in economics requires 30 credit hours, of which 15 are elected from economics courses with no restriction, or as a concentration of courses in one of the following areas: business economics, economics of finance, labor economics, governmental economics, comparative economic systems, or theoretical and quantitative economics.

**General Education Requirements** .................................. 41 hours

**Area I Symbolics and Communication**
1. See page 23
2. See page 23
3. See page 23
4. One course from the following:
   - MATH118 Linear Models and Probability
   - MATH119 Applied Calculus
   - MATH120 Calculus I

**Area II Science and Technology**
1. See page 24
2. See page 24
3. See page 24
4. One course from the following:
   - MATH118 Linear Models and Probability
   - MATH119 Applied Calculus
   - MATH120 Calculus I

**Area III Social Sciences**
1. See page 24
2. See page 24
3. See page 24
4. See page 24

**Area IV Art and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. See page 25

**Physical Education/Graduation Requirement** .................. 2 hours

**Major Requirements** .................................................. 30 hours

**Required Courses** .................................................... 15 hours

- ECON201 Principles of Macroeconomics (3 hrs)
- ECON202 Principles of Microeconomics (3 hrs)
- ECON301 Intermediate Macroeconomic Analysis (3 hrs)
- ECON302 Intermediate Microeconomic Analysis (3 hrs)

One course from the following:
- ECON310 Economic Statistics (3 hrs)
- ECON415 Introduction to Econometrics (3 hrs)

**Elective Courses** .................................................... 15 hours

Although any 15 credit hours of electives in economics will complete the requirements for the major, students should choose courses related to the career path they wish to pursue. Inquire at the Department of Economics regarding suggested concentration, suggested career paths and course selection.
Economics Education Major (ECNT)

Secondary Teacher Certification

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate (Mathematics, Economics, or Business Administration). Students should select courses with the director of labor studies and/or the specified advising constituent.

General Education Requirements

1. Area I: Symbolic and Communication
   - 1. See page 23
   - 2. See page 23
   - 3. See page 23
   - 4. See page 23
   - 5. See page 23
2. Area II: Science and Technology
   - 1. See page 24
   - 2. See page 24
   - 3. See page 24
3. Area III: Social Sciences
   - 1. See page 24
   - 2. See page 24
   - 3. See page 24
4. Area IV: Arts and Humanities
   - 1. See page 25
   - 2. See page 25
   - 3. See page 25
   - 4. See page 25

Major Requirements

Required Courses
- ECON310 Economics Statistics (3 hrs)
- ECON320 Labor Economics (3 hrs)
- ACC240 Principles of Financial Accounting (3 hrs)
- ECON383 Labor and Government (3 hrs)
- ECON341 Unionism in the Public Sector (3 hrs)
- ECON325 Collective Bargaining (3 hrs)
- ECON327/WMST328 Economics of Women (3 hrs)
- ECON420 Comparative Labor Unions (3 hrs)
- ECON352 Communicating in Negotiation (5 hrs)
- HIST405 United States Labor History (3 hrs)
- LAW403 Employment Law (3 hrs)
- MGMT384 Human Resource Management (3 hrs)
- PLS235 Labor in American Politics (3 hrs)
- PSY351 Industrial Psychology (3 hrs)
- SSCI307 Sociology of the Workplace (3 hrs)

Restricted Elective Courses
- 21 hours

Minor Requirements

Required Courses
- ECON201 Principles of Macroeconomics (3 hrs)
- ECON202 Principles of Microeconomics (3 hrs)
- ECON301 Intermediate Microeconomic Analysis (3 hrs)
- ECON302 Intermediate Macroeconomic Analysis (3 hrs)
- One course from the following:
  - ECON300 Contemporary Economics (3 hrs)
  - ECON303 Consumer Economics (3 hrs)
  - ECON337 Economics of Poverty, Inequality, and Discrimination (3 hrs)
  - ECON375 Economic History of the United States (3 hrs)
  - ECON385 Economic Development (3 hrs)
  - ECON480 International Economics (3 hrs)

Elective Courses
- 15 hours

Minor Studies

Pre-Admission Phase: The Learner and the Community

EDPS322 Human Development and Learning (4 hrs)
FETE201 Field Experience I (1 hr)
SPGN231 Education of Students with Exceptionalities (3 hrs)
ECONOMICS MINOR (ECNT)
Secondary, K-12 and Special Education-Secondary Teacher Certification

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in economics, certification code CA. The Michigan Test for Teacher Certification (MTTC) covering this field is #07, "Economics."

Required Courses ..................................................6 hours
ECON201 Principles of Macroeconomics (3 hrs)
ECON202 Principles of Microeconomics (3 hrs)

Restricted Elective Courses ..................................14 hours
Fourteen hours from any economics courses. ECON301 and ECON302 are highly recommended.

Minor Total ..........................................................20 hours

Note:
*ECON301 and ECON302 are also recommended.

DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

Campus Address: 612 Pray-Harrold
Internet: www.emich.edu/public/english/index.html
Telephone: 734.487.4220
E-mail: rissell.larson@emich.edu

See pages 281, 311, 313 and 314 for course descriptions.

The programs offered by the Department of English Language and Literature are designed to enhance a student's understanding and skill in literature, English language and composition, and written communication. These programs also prepare students for a broad range of careers, especially those that are media-related and require the ability to read carefully, write clearly and understand the complexities of style and structure variations in the language.

Advising is available from faculty advisors whose names and office hours are posted in the English department office.

Special requirements for students seeking admission to the written communication major include evidence that their GPA is at least 2.5 at the end of the sophomore year.

Students who score above 550 on the verbal part of the SAT or 25 on the English section of the ACT and whose high school GPA was 2.5 or above may choose to enroll in a basic language course in a foreign language (FRNH/GERN/SPNH121, 122, 221, or 222) instead of ENGL121 Composition II: Researching the Public Experience.
LANGUAGE, LITERATURE AND WRITING MAJOR (LIW)

General Education Requirements ............................................ 41 hours

Area I Symbolics and Communication
1. See page 23
2. See page 23
3. One course from the following:
   *ENGL225 Writing in a Changing World
   *ENGL227 Writing about Literature
   *ENGL323 Writing in the Professional World
   *ENGL324 Principles of Technical Communication
   *ENGL356 Research Writing
4. See page 25
5. See page 25

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. One course from the following:
   *LITR204 Native American Literature
   *LITR260 African American Literature
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ............................ 2 hours

Major Requirements .................................................................. 36 hours

Required Courses .......................... 6 hours
LING201 An Introduction to Linguistics (3 hrs)
*ENGL227 Writing about Literature (3 hrs)

Restricted Elective Courses .................................................. 30 hours

One course from the following:
LING401 Introduction to Linguistic Science (3 hrs)
LING402 Modern English Grammar (3 hrs)
LING431 The History of the English Language (3 hrs)

One course from the following:
ENGL328 Writing, Style, and Technology (3 hrs)
ENGL417 Writing about Controversies (3 hrs)

One course from the following:
*LITR204 Native American Literature (3 hrs)
*LITR260 African American Literature (3 hrs)

One course from Literature before 1800:
LITR312 English Literature in the Middle Ages (3 hrs)
LITR314 English Renaissance Prose and Poetry 1500-1660 (3 hrs)
LITR315 Literature of the Neo-Classical Period 1660-1798 (3 hrs)

One course from Literature after 1800:
LITR309 The Development of American Literature (3 hrs)
LITR310 Modern American Literature (3 hrs)
LITR316 Romantic Rebellion in Britain 1798-1832 (3 hrs)
LITR317 Victorian and Edwardian Literature 1832-1914 (3 hrs)
LITR360 Recent Trends in British and American Literature (3 hrs)

One course from Major Authors:
LITR405 Shakespeare (3 hrs)
LITR413 The Poetry of Chaucer (3 hrs)
LITR450 Major Authors (3 hrs)

One course from Genre:
LITR411 Studies in Epic and Romance (3 hrs)

One course from Literature and Culture:
LITR443 Women in Literature (3 hrs)
LITR480 Studies in Literature and Culture (3 hrs)

Minor Requirements ........................................................... 20 hours

University Elective Courses ................................................. 25 hours

Program Total ...................................................................... 124 hours

Note:
*This course satisfies both a general education and a major requirement.

ENGLISH LANGUAGE MAJOR (ENGL)

General Education Requirements ............................................ 44 hour

Area I Symbolics and Communication
1. See page 23
2. See page 23
3. ENGL324 Principles of Technical Communication*
4. See page 23
5. See page 23

Area II Science and Technology:
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ......................... 2 hours

Major Requirements ................................................................ 30 hours

Required Courses .................................................................. 19-21 hours
*ENGL324 Principles of Technical Communication (3 hrs)
ENGL428 Writing, Style, and Technology (3 hrs)
ENGL417 Writing about Controversies (3 hrs)
LITR201 An Introduction to Linguistics (3 hrs)
LITR402 Modern English Grammar (3 hrs)

One course from the following:
LING205 English Words (3 hrs)
LITR261 The History of the English Language (3 hrs)

One course from the following:
ENGL484 Seminar in Written Communications (3 hrs)
LING497/498/499 Independent Study (1/2/3 hrs)
Restricted Elective Courses 9-12 hours
LING310 African American Language (3 hrs)
LING340 Language and Culture (3 hrs)
ENGL225 Writing in a Changing World (3 hrs)
ENGL326 Research Writing (3 hrs)
ENGL387/487 Cooperative Education in English (3 hrs)
ENGL424 Technical Writing (3 hrs)
ENGL427 Technical Editing (3 hrs)
ENGL428 Writing Computer Documentation (3 hrs)
JRNL215 News Writing and Reporting (3 hrs)
JRNL306 Feature Writing (3 hrs)
JRNL307 Copy Editing (3 hrs)
JRNL314 Writing for Public Relations (3 hrs)
JRNL423 Magazine Article Writing (3 hrs)
JRNL453 Advanced Reporting (3 hrs)
Any other LING course approved by the undergraduate adviser

Minor Requirements .............................................. 20 hours

University Elective Courses .................................. 28 hours

Program Total .................................................... 124 hours

Note:
*This course satisfies both a general education and a major requirement.

ENGLISH LINGUISTICS MAJOR (LING)

General Education Requirements ................................ 47 hours

Area I Symbolics and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement .................. 2 hours

Major Requirements ............................................. 30 hours

Required Courses 12 hours
LING201 Introduction to Linguistics (3 hrs)
LING401 Introduction to Linguistic Science (3 hrs)
LING420 Introduction to Phonology (3 hrs)
LING425 Introduction to Syntax (3 hrs)

Restricted Elective Courses 9 hours
Three courses from the following:
LING205 English Words (3 hrs)
LING310 African American Language (3 hrs)
LING322 Languages of the World (3 hrs)
LING340/ANTH340 Language and Culture (3 hrs)
LING402 Modern English Grammar (3 hrs)
LING415 Language and Gender (3 hrs)
LING421 History of the English Language (3 hrs)
LING426 Topics in Linguistics (3 hrs)
LING434 Linguistic Analysis of Literature (3 hrs)
PHIL600 Philosophy of Language (3 hrs)

Elective Courses 9 hours
Three courses from the following:
CTAC356 Argumentation and Debate (3 hrs)
COSC211 Programming Data Structures (3 hrs)
ENGL417 Writing About Controversies (3 hrs)
LING425 Second Language Acquisition (3 hrs)
GEOG450 Cultural Geography (3 hrs)
PHIL281 Symbolic Logic (3 hrs)
MATH170 Elementary Statistics (3 hrs)
PSY301 Introductory Experimental Psychology (4 hrs)
SOC190 Social Stabilization (3 hrs)
ANTH340/ANTH340 Social and Cultural Change (3 hrs)

Any relevant upper-level course, as approved by the undergraduate adviser for Linguistics

Any course in foreign language or in Old or Middle English

Any upper-level course in the literature, history, geography, or anthropology of specific cultural group or region

Minor Requirements ............................................. 20 hours

University Elective Courses .................................... 25 hours

Program Total .................................................... 124 hours

LITERATURE MAJOR (LITR)

General Education Requirements ................................ 41 hours

Area I Symbolics and Communication
1. See page 23
2. See page 23
3. ENGL227 Writing about Literature
4. See page 23
5. See page 23

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. One course from the following:
   *LITR204 Native American Literature
   *LITR206 African American Literature
3. See page 25
4. See page 25

Physical Education/Graduation Requirement .................. 2 hours

Major Requirements ............................................. 30 hours

Required Basic Literature Course 3 hours
ENGL227 Writing about Literature (3 hrs)

Restricted Elective Courses 21 hours
One course from the following:
*LITR204 Native American Literature (3 hrs)
*LITR206 African American Literature (3 hrs)
One course from Literature before 1800:
LITR312 English Literature in the Middle Ages (3 hrs)
LITR314 English Renaissance Prose and Poetry 1500-1660 (3 hrs)
LITR315 Literature of the Neo-Classical Period 1660-1798 (3 hrs)
One course from Literature of the Nineteenth Century:
LITR309 The Development of American Literature (3 hrs)
LITR316 Romantic Rebellion in Britain 1798-1832 (3 hrs)
LITR317 Victorian and Edwardian Literature 1832-1914 (3 hrs)

One course from Literature of the Twentieth Century:
LITR310 Modern American Literature (3 hrs)
LITR360 Recent Trends in British and American Literature (3 hrs)

One course from Major Authors:
LITR405 Shakespeare (3 hrs)
LITR413 The Poetry of Chaucer (3 hrs)
LITR450 Major Author (3 hrs)

One course from Course:
LITR411 Studies in Epic and Romance (3 hrs)
LITR420 Studies in the British Novel (3 hrs)
LITR421 Studies in the American Novel (3 hrs)
LITR422 Studies in the Novel in Global Perspective (3 hrs)
LITR430 Studies in Drama (3 hrs)
LITR440 Genre Studies (3 hrs)
LITR470 Studies in Poetry (3 hrs)

One course from Literature and Culture:
LITR443 Women in Literature (3 hrs)
LITR480 Studies in Literature and Culture (3 hrs)

Elective Course: 3 hours
One course from the following:
Any course listed above but not taken.
LITR210 Introduction to Shakespeare (3 hrs)
LITR251 The Bible as Literature (3 hrs)
LITR260 Narrative in Literature and Film (3 hrs)

Capstone Course: 3 hours
LITR490 Senior Seminar (3 hrs)

Minor Requirements ........................................... 20 hours

University Elective Courses ................................... 31 hours

Program Total .................................................... 124 hours

Note: *This course satisfies both a general education and a major requirement.

WRITTEN COMMUNICATION MAJOR — CONCENTRATION IN IMAGINATIVE WRITING (WRCM IW)

General Education Requirements .................................. 44 hours
Area I Symbolic and Communication
1. See page 23
2. See page 23
3. One course from the following:
   *ENGL225 Writing in a Changing World
   *ENGL325 Research Writing
4. See page 23
5. See page 23
Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24
4. See page 24
Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24
Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement .................................. 2 hours

Major Requirements .................................................. 30 hours
Required Courses ..................................................... 12 hours
*ENGL335 Imaginative Writing (3 hrs)
*ENGL422 Writer's Workshop Fiction or Poetry (3 hrs)
Two 300- or 400-level literature courses (6 hrs)

Restricted Elective Courses ......................................... 18 hours
Six courses from the following:
*ENGL336 Research Writing (3 hrs)
ENGL338 Writing, Style and Technology (3 hrs)
*ENGL335 Imaginative Writing (3 hrs)
ENGL417 Writing about Controversies (3 hrs)
*ENGL422 Writer's Workshop Fiction or Poetry (3 hrs)
ENGL444 Writing for the World Wide Web (3 hrs)
LING402 Modern English Grammar (3 hrs)
LING421 The History of the English Language (3 hrs)
JRL215 News Writing and Reporting (3 hrs)
JRL306 Feature Writing (3 hrs)
JRL429 Magazine Article Writing (3 hrs)

Minor Requirements ................................................... 20 hours

University Elective Courses ......................................... 28 hours

Program Total ....................................................... 124 hours

Note: *This course satisfies both a general education and a major requirement.
†Course may be repeated for additional credit if topic is different.

WRITTEN COMMUNICATION MAJOR — CONCENTRATION IN PROFESSIONAL WRITING (WRCM PW)

General Education Requirements .................................. 41 hours
Area I Symbolic and Communication
1. See page 23
2. See page 23
3. ENGL324 Principles of Technical Communication
4. See page 23
5. INDT201 Microcomputer Applications in Technology
Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24
4. See page 24
Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24
Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement .................................. 2 hours

Major Requirements ..................................................... 30 hours
Required Courses ..................................................... 21 hours
JRL215 News Writing and Reporting (3 hrs)
*ENGL324 Principles of Technical Communication (3 hrs)
JRL306 Feature Writing (3 hrs)
JRL312 Introduction to Public Relations (3 hrs)
ENGL424 Technical Writing (3 hrs)
ENGL427 Technical Editing (3 hrs)
ENGL484 Seminar in Written Communications (3 hrs)
**Restricted Elective Courses**

*Three courses from the following:

- ENGL225 Writing in a Changing World (3 hrs)
- ENGL326 Research Writing (3 hrs)
- ENGL328 Writing, Style, and Technology (3 hrs)
- ENGL387/487 Cooperative Education in English (3 hrs)
- ENGL335 Imaginative Writing (3 hrs)
- ENGL417 Writing about Computers (3 hrs)
- ENGL422 Writer's Workshop: Fiction or Poetry (3 hrs)
- ENGL428 Writing Computer Documentation (3 hrs)
- ENGL444 Writing for the World Wide Web (3 hrs)
- ENGL488/489/490 Internship in Technical Writing (1/2/3 hrs)
- JRN1305 Editorial, Column, and Review Writing (3 hrs)
- JRN1314 Writing for Public Relations (3 hrs)
- JRN1397/467 Cooperative Education in Journalism/Public Relations (3 hrs)
- JRN1423 Magazine Article Writing (3 hrs)
- JRN1488/489/490 Internship in Journalism/Public Relations (1/2/3 hrs)
- IND121: Graphic Communication (3 hrs)
- IND1204 Photographic Communication (3 hrs)
- IND1436 Electronic Publishing Technology (3 hrs)

**Minor Requirements** .................................................. 20 hours

**University Elective Courses** ...................................... 31 hours

**Program Total** .......................................................... 124 hours

*Note: This course satisfies both a general education and a major requirement.

**Written Communication Major — Concentration in Technical Communications (WRCM TECM)**

**General Education Requirements** .................................. 41 hours

*Area I: Symbolics and Communication

1. See page 23
2. See page 23
3. ENGL324 Principles of Technical Communication*
4. See page 23
5. One course from the following:
   - IND1201 Microcomputer Applications in Technology
   - CADM105 Computer Applications for Industry
   - COSC111 Introduction to Programming

*Area II: Science and Technology

1. See page 24
2. See page 24
3. See page 24
4. See page 24

*Area III: Social Sciences

1. See page 24
2. See page 24
3. See page 24
4. See page 24

*Area IV: Arts and Humanities

1. See page 25
2. See page 25
3. See page 25
4. See page 25

**Physical Education/Graduation Requirement** ....................... 2 hours

**Major Requirements** .................................................. 30 hours

*Required Courses* ....................................................... 21 hours

- ENGL324 Principles of Technical Communication (3 hrs)
- ENGL328 Writing, Style, and Technology (3 hrs)
- ENGL424 Technical Writing (3 hrs)
- ENGL427 Technical Editing (3 hrs)
- ENGL428 Writing Computer Documentation (3 hrs)
- IND1436 Electronic Publishing Technology (3 hrs)
- ENGL484 Seminar in Written Communications (3 hrs)

*Restricted Elective Courses* .......................................... 9 hours

*Three courses from the following:

- ENGL225 Writing in a Changing World (3 hrs)
- ENGL326 Research Writing (3 hrs)
- ENGL328 Writing, Style, and Technology (3 hrs)
- ENGL387/487 Cooperative Education in English (3 hrs)
- ENGL417 Writing about Computers (3 hrs)
- ENGL422 Writer's Workshop: Fiction or Poetry (3 hrs)
- ENGL428 Writing Computer Documentation (3 hrs)
- ENGL444 Writing for the World Wide Web (3 hrs)
- ENGL488/489/490 Internship in Technical Writing (1/2/3 hrs)
- JRN1305 Editorial, Column, and Review Writing (3 hrs)
- JRN1314 Writing for Public Relations (3 hrs)
- JRN1397/467 Cooperative Education in Journalism/Public Relations (3 hrs)
- JRN1423 Magazine Article Writing (3 hrs)
- JRN1488/489/490 Internship in Journalism/Public Relations (1/2/3 hrs)
- ENGL524 Advanced Technical Writing and Research (3 hrs)
- JRN1215 News Writing and Reporting (3 hrs)
- JRN1216 Feature Writing (3 hrs)
- JRN1314 Writing for Public Relations (3 hrs)
- CTAC227 Interpersonal Communication (3 hrs)
- ART165 Graphic Design for Non-Majors (3 hrs)
- IND1201 Graphic Communication (3 hrs)
- IND1204 Photographic Communication (3 hrs)
- IND1436 Electronic Publishing Technology (3 hrs)
- CADM105 Computer Applications for Industry (3 hrs)

**Minor Requirements** .................................................. 20 hours

**University Elective Courses** ...................................... 31 hours

**Program Total** .......................................................... 124 hours

*Note: This course satisfies both a general education and a major requirement.

**Journalism Major (JRNL)**

Students will be required to complete 30 credit hours in professional journalism and writing courses (see below), plus a 20-hour minor in a specified field. Admission to the program will require a 2.5 GPA.

**General Education Requirements** .................................. 44 hours

*Area I: Symbolics and Communication

1. See page 23
2. See page 23
3. ENGL324 Principles of Technical Communication*
4. See page 23
5. See page 23

*Area II: Science and Technology

1. See page 24
2. See page 24
3. See page 24
4. See page 24

*Area III: Social Sciences

1. See page 24
2. See page 24
3. See page 24
4. See page 24

*Area IV: Arts and Humanities

1. See page 25
2. See page 25
3. See page 25
4. See page 25

**Physical Education/Graduation Requirement** ....................... 2 hours
INTERDISCIPLINARY MAJOR IN PUBLIC RELATIONS (PURL)

Admission to the program will require a 2.8 GPA, which must be maintained in the major as well as in the minor selected. Admission is granted by the Department of English Language and Literature. Courses from both the Department of English Language and Literature and the Department of Communication and Theatre Arts are offered as requirements and restricted elective courses.

General Education Requirements ........................................ 40 hours

Area I Symbolics and Communication
1. See page 23
2. One course from the following:
   * CTAS121 Fundamentals of Speech
   * CTAS124 Fundamentals of Speech
3. One course from the following:
   * CTAC224 Public Speaking
   * CTAC227 Interpersonal Communication
4. See page 23
5. See page 23

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. ART165 Graphic Design for Non-majors

Major Requirements .................................................. 33 hours

Required Courses ................................................................ 24 hours
JRN1213 Introduction to the Print Media (3 hrs)
JRN1215 News Writing and Reporting (3 hrs)
JRN1306 Feature Writing (3 hrs)
JRN1307 Copy Editing (3 hrs)
JRN1313 History of American Journalism (3 hrs)
JRN453 Advanced Reporting (3 hrs)
JRN454 Contemporary Problems in Journalism (3 hrs)
JRN455 Journalism and the Law (3 hrs)

Restricted Elective Courses ........................................... 9 hours
Three courses from the following:
JRN1305 Editorial, Column, and Review Writing (3 hrs)
JRN1311 Newspaper Layout and Design (3 hrs)
JRN1312 Introduction to Public Relations (3 hrs)
JRN1314 Writing for Public Relations (3 hrs)
JRN1423 Magazine Article Writing (3 hrs)
JRN387/487 Cooperative Education in Journalism/Public Relations (3 hrs)
JRN488/489/490 Internship in Journalism/Public Relations (1/2/3 hrs)
*ENGL324 Principles of Technical Communication (3 hrs)
ENGL328 Writing, Style and Technology (3 hrs)
ENGL444 Writing for the World Wide Web (3 hrs)

Minor Requirements ..................................................... 20 hours

University Elective Courses ............................................ 20 hours

Program Total .............................................................. 124 hours

Note: *This course satisfies both a general education and a major requirement.

Physical Education/Graduation Requirement .................... 2 hours

Major Requirements .................................................. 48 hours

Required Fundamental Courses ................................. 17-18 hours
JRN1215 News Writing and Reporting (3 hrs)
JRN1312 Introduction to Public Relations (3 hrs)
JRN1314 Writing for Public Relations (3 hrs)
CTAT141 Introduction to Radio-TV-Film Production (3 hrs)
One course from the following:
*CTAC224 Public Speaking (3 hrs)
CTAC350 Persuasion (3 hrs)
One course from the following:
*CTAS121 Fundamentals of Speech (2 hrs)
*CTAS124 Fundamentals of Speech (2 hrs)

Required Advanced Courses .................................... 18 hours
JRN1306 Feature Writing (3 hrs)
JRN1408 Case Studies in Public Relations (3 hrs)
CTAC175 Research in Speech Communication (3 hrs)
One course from the following:
JRN1490 Internship in Journalism/Public Relations (3 hrs)
JRN1487 Cooperative Education in Journalism/Public Relations (3 hrs)
One course from the following:
CTAT334 Radio-Television News (3 hrs)
CTAT344 Continuity Writing for Radio-Television-Film (3 hrs)
One course from the following:
CTAC354 Organizational Communication (3 hrs)
CTAC357 Interviewing as Communication (3 hrs)

Restricted Elective Courses ........................................... 12 hours
ENGL322 Writing in the Professional World (3 hrs)
ENGL444 Writing for the World Wide Web (3 hrs)
JRN1307 Copy Editing (3 hrs)
JRN1311 Newspaper Layout and Design (3 hrs)
JRN155 Journalism and the Law (3 hrs)
*ART165 Graphic Design for Non-majors (3 hrs)
INDT204 Photographic Communication (3 hrs)
INDT436 Electronic Publishing Technology (3 hrs)
One course from the following:
*CTAC224 Public Speaking (3 hrs)
CTAC350 Persuasion (3 hrs)
One course from the following:
*CTAC227 Interpersonal Communication (3 hrs)
CTAC359 Small Group Communication (3 hrs)
CTAT241 Radio-Television-Film Announcing (3 hrs)
One course from the following:
CTAT334 Radio-Television News (3 hrs)
CTAT344 Continuity Writing for Radio-Television-Film (3 hrs)

Maximum of 3 credit hours from the following:
CTAC387/388/389 Cooperative Education in Communication (1/2/3 hrs)
CTAC487/488/489 Internship in Communication (1/2/3 hrs)
JRN1387/487 Cooperative Education in Journalism/Public Relations (3 hrs)
JRN1488/499/490 Internship in Journalism/Public Relations (1/2/3 hrs)

Minor Requirements ..................................................... 20 hours

University Elective Courses ............................................ 20 hours

Program Total .............................................................. 124 hours

Note: *This course satisfies both a general education and a major requirement.
INTERDISCIPLINARY MAJOR IN CHILDREN’S LITERATURE AND DRAMA/THEATRE FOR THE YOUNG (CDTY)

General Education Requirements .................................................. 37 hours
Area I: Symbolic and Communication
1. See page 23
2. CIAS121/124 Fundamentals of Speech*
3. See page 23
4. See page 23
5. See page 23
Area II: Science and Technology
1. See page 24
2. See page 24
3. See page 24
Area III: Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24
Area IV: Arts and Humanities
1. One course from the following:
   * LITR100 The Reading of Literature
   * LITR101 The Reading of Literature: Fiction
   * LITR102 The Reading of Literature: Poetry
   * LITR103 The Reading of Literature: Drama
2. One course from the following:
   * LITR100 The Reading of Literature
   * LITR101 The Reading of Literature: Fiction
   * LITR102 The Reading of Literature: Poetry
   * LITR103 The Reading of Literature: Drama
   * LITR204 Native American Literature
   * LITR250 African American Literature
3. See page 25
4. CIAR222 Drama and Play in Human Experience*

Physical Education/Graduation Requirement .................................. 2 hours

Major Requirements ................................................................. 36 hours
Required Courses ................................................................... 26-27 hours
* CIAR222 Drama and Play in Human Experience (3 hrs)
* CIAR223 Improvising and Role-Play (3 hrs)
* CIAR224 Oral Interpretation of Literature for the Young (3 hrs)
* LITR207 Introduction to Children’s Literature (3 hrs)
Two courses from the following:
   * LITR100 The Reading of Literature (3 hrs)
   * LITR101 The Reading of Literature: Fiction (3 hrs)
   * LITR102 The Reading of Literature: Poetry (3 hrs)
   * LITR103 The Reading of Literature: Drama (3 hrs)
   * LITR204 Native American Literature (3 hrs)
   * LITR250 African American Literature (3 hrs)
   * LITR251 The Bible is Literature (3 hrs)
One course from the following:
   ENGL450 Children’s Literature: Criticism and Response (3 hrs)
   ENGL451 Writing about Controversy in Literature for the Young (3 hrs)
One course from the following:
   LITR351 World Mythology (3 hrs)
   LITR352 Folk Literature: Ballads and Folk Tales (3 hrs)
One course from the following:
   * CIAS121 Fundamentals of Speech (3 hrs)
   * CIAS124 Fundamentals of Speech (3 hrs)

Restricted Elective Courses ....................................................... 9-10 hours
* LITR204 Native American Literature (3 hrs)
* LITR210 Introduction to Shakespeare (3 hrs)
* LITR251 The Bible as Literature (3 hrs)
* LITR351 World Mythology (3 hrs)

Minor Requirements ................................................................. 20 hours
University Elective Courses ...................................................... 29 hours
Program Total ........................................................................ 124 hours

Note:
*This course satisfies both a general education and a major requirement.

LANGUAGE, LITERATURE AND WRITING MAJOR (LLWT)
Secondary Teacher Certification

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in English, certification code BA, and, depending on the minor selected, an additional endorsement. This program of studies meets all requirements of the National Council of Teachers of English. The Michigan Year for Teacher Certification (MYTC) covering this field is #02, “English.”

General Education Requirements .............................................. 41 hours
Area I: Symbolic and Communication
1. See page 23
2. See page 23
3. ENGL227 Writing about Literature*
4. See page 23
5. See page 23
Area II: Science and Technology
1. See page 24
2. See page 24
3. See page 24
4. See page 24
Area III: Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24
Area IV: Arts and Humanities
1. See page 23
2. One course from the following:
   * LITR204 Native American Literature
   * LITR250 African American Literature
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ................................ 2 hours

Major Requirements ................................................................. 36 hours
Required Courses ................................................................. 24 hours
* LING201 An Introduction to Linguistics (3 hrs)
* ENGL227 Writing about Literature (3 hrs)
* ENGL408 Writing for Writing Teachers (3 hrs)
Restricted Elective Courses ...................................................... 24 hours
One course from the following:
* LING401 Introduction to Linguistic Science (3 hrs)
* LING402 Modern English Grammar (3 hrs)
* LING421 The History of the English Language (3 hrs)
One course from the following:
ENGL328 Writing, Style, and Technology (3 hrs)
ENGL417 Writing about Controversies (3 hrs)

One course from the following:
* LITR204 Native American Literature (3 hrs)
* LITR260 African American Literature (3 hrs)

One course from Literature before 1800:
LITR312 English Literature in the Middle Ages (3 hrs)
LITR314 English Renaissance Prose and Poetry 1500-1660 (3 hrs)
LITR315 Literature of the Neo-Classical Period 1660-1798 (3 hrs)

One course from Literature after 1800:
LITR302 The Development of American Literature (3 hrs)
LITR310 Modern American Literature (3 hrs)
LITR316 Romantic Revolution in Britain 1798-1832 (3 hrs)
LITR317 Victorian and Edwardian Literature 1832-1914 (3 hrs)
LITR360 Recent Trends in British and American Literature (3 hrs)

One course from Major Authors:
LITR422 Shakespeare (3 hrs)
LITR423 The Poetry of Chaucer (3 hrs)
LITR450 Major Authors (3 hrs)

One course from Genre:
LITR411 Studies in Epic and Romance (3 hrs)
LITR421 Studies in the British Novel (3 hrs)
LITR422 Studies in the American Novel (3 hrs)
LITR422 Studies in the Novel in Global Perspective (3 hrs)
LITR430 Studies in Drama (3 hrs)

One course from Ancient Studies:
LITR434 Women in Literature (3 hrs)
LITR480 Studies in Literature and Culture (3 hrs)

Elective Course 3 hours

One course from the following:
ENGL323 Writing in the Professional World (3 hrs)
* ENGL324 Principles of Technical Communication (3 hrs)
* ENGL326 Research Writing (3 hrs)
ENGL335 Imaginative Writing (3 hrs)
JRNL315 News Writing and Reporting (3 hrs)
LING205 English Words (3 hrs)
LING310 African American Language (3 hrs)
LING340 Language and Culture (3 hrs)
LITR210 Introduction to Shakespeare (3 hrs)
LITR251 The Bible as Literature (3 hrs)
LITR300 Narrative in Literature and Film (3 hrs)

Any course listed in Restricted Electives but not taken

Professional Studies: Pre-Admission Phase: The Learner and the Community 39 hours

Pre-Admission Phase: The Learner and the Community 8 hours
EDPS322 Human Development and Learning (4 hrs)
FETR201 Field Experience I (1 hr)
SPGN251 Education of Students with Exceptionalities (3 hrs)

The following courses require formal admission to the teacher education program:

Phase I: Curriculum, Assessment and the Social Context 10 hours
SOFD328 Schools in a Multicultural Society (3 hrs)
CURR305 Curriculum and Methods: Secondary (3 hrs)
FETE302 Field Experience I: Secondary (1 hr)
EDPS340 Introduction to Assessment and Evaluation (3 hrs)

Phase II: Content Methods, Literacy and Technology 9 hours
RDNG311 Teaching Reading in the Secondary School (3 hrs)
FETE450 Field Experience III: Secondary (1 hr)
EDMT330 Instructional Applications of Media and Technology (2 hrs)
ENGL409 Teaching English in the Secondary Schools (3 hrs)

Phase III: Capstone Experience
EDUC392 Student Teaching (12 hrs)

Minor Requirements: 13-25 hours
Select a minor from the approved list of minors for secondary, K-12, and special education-secondary programs.

University Elective Courses: 0 hours

Program Total: 131 hours

Note: *This course satisfies both a general education and a major requirement.

**LANGUAGE, LITERATURE AND WRITING MINOR (LLW)**

Required Courses:

ENGL227 Writing about Literature (3 hrs)
LING201 An introduction to Linguistics (3 hrs)

Restricted Elective Courses: 18 hours

One course from the following:
LITR204 Native American Literature (3 hrs)
LITR205 Multicultural Children's Literature (3 hrs)
LITR260 African American Literature (3 hrs)

One period course from the following:
LITR309 The Development of American Literature (3 hrs)
LITR310 Modern American Literature (3 hrs)
LITR312 English Literature in the Middle Ages (3 hrs)
LITR314 English Renaissance Prose and Poetry 1500-1660 (3 hrs)
LITR315 Literature of the Neo-Classical Period 1660-1798 (3 hrs)
LITR316 Romantic Revolution in Britain 1798-1832 (3 hrs)
LITR317 Victorian and Edwardian Literature 1832-1914 (3 hrs)
LITR360 Recent Trends in British and American Literature (3 hrs)

One course from major authors, genres or literature and culture:
LITR405 Shakespeare (3 hrs)
LITR411 Studies in Epic and Romance (3 hrs)
LITR415 The Poetry of Chaucer (3 hrs)
LITR421 Studies in the British Novel (3 hrs)
LITR422 Studies in the American Novel (3 hrs)
LITR422 Studies in the Novel in Global Perspective (3 hrs)
LITR430 Studies in Drama (3 hrs)
LITR440 Genre Studies (3 hrs)
LITR443 Women in Literature (3 hrs)
LITR450 Major Authors (3 hrs)
LITR470 Studies in Poetry (3 hrs)
LITR480 Studies in Literature and Culture (3 hrs)

One course from the following:
LING205 English Words (3 hrs)
LING310 African American Language (3 hrs)
LING340 Language and Culture (3 hrs)
LING401 Introduction to Linguistic Science (3 hrs)
LING402 Modern English Grammar (3 hrs)
LING421 The History of the English Language (3 hrs)

One writing course from the following:
ENGL328 Writing, Style and Technology (3 hrs)
ENGL417 Writing about Controversies (3 hrs)

A second writing course from the following:
ENGL328 Writing, Style and Technology (3 hrs)
ENGL329 Writing in the Professional World (3 hrs)
ENGL324 Principles of Technical Communication (3 hrs)
ENGL326 Research Writing (3 hrs)
ENGL328 Writing, Style, and Technology (3 hrs)
ENGL417 Writing about Controversies (3 hrs)
JRNL215 News Writing and Reporting (3 hrs)
JRNL314 Writing for Public Relations (3 hrs)

Minor Total: 24 hours

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ENGLISH LANGUAGE MINOR (ENGL)

Required Courses .......................................................... 12 hours
ENGL324 Principles of Technical Communication (3 hrs)
LING201 An Introduction to Linguistics (3 hrs)
One course from the following:
ENGL328 Writing, Style and Technology (3 hrs)
ENGL417 Writing about Controversies (3 hrs)

One course from the following:
LING205 English Words (3 hrs)
LING402 Modern English Grammar (3 hrs)
LING421 The History of the English Language (3 hrs)

Restrict Elective Courses .............................................. 9 hours
LING310 African American Language (3 hrs)
LING340 Language and Culture (3 hrs)
LING407 Independent Study (3 hrs)
Any other LING course approved by the undergraduate advisor
ENGL225 Writing in a Changing World (3 hrs)
ENGL326 Research Writing (3 hrs)
ENGL387/487 Cooperative Education in English (3 hrs)
ENGL424 Technical Writing (3 hrs)
ENGL427 Technical Editing (3 hrs)
ENGL428 Writing Computer Documentation (3 hrs)
ENGL484 Research in Written Communications (3 hrs)
JRN215 News Writing and Reporting (3 hrs)
JRN306 Feature Writing (3 hrs)
JRN307 Copy Editing (3 hrs)
JRN314 Writing for Public Relations (3 hrs)
JRN423 Magazine Article Writing (3 hrs)
JRN453 Advanced Reporting (3 hrs)

Minor Total ................................................................. 21 hours

ENGLISH LINGUISTICS MINOR (LING)

Required Courses .......................................................... 6 hours
LING201 An Introduction to Linguistics (3 hrs)
LING401 Introduction to Linguistic Science (3 hrs)

Restrict Elective Courses .............................................. 15 hours
LITR312 English Literature in the Middle Ages (3 hrs)
LITR413 The Poetry of Chaucer (3 hrs)
Any LING course

Minor Total ................................................................. 21 hours

LITERATURE MINOR (LITR)

Required Course .......................................................... 3 hours
ENGL227 Writing about Literature (3 hrs)

Restrict Elective Courses .............................................. 15 hours
One course from the following:
LITR204 Native American Literature (3 hrs)
LITR260 African American Literature (3 hrs)

One course from the following:
LITR309 The Development of American Literature (3 hrs)
LITR310 Modern American Literature (3 hrs)
LITR312 English Literature in the Middle Ages (3 hrs)
LITR314 English Renaissance Pros. and Poetry 1500-1660 (3 hrs)
LITR315 Literature of the Neo-Classical Period 1660-1798 (3 hrs)
LITR316 Romantic Rebellion in Britain 1798-1832 (3 hrs)
LITR317 Victorian and Edwardian Literature 1832-1914 (3 hrs)
LITR360 Recent Trends in British and American Literature (3 hrs)

One course from the following:
LITR405 Shakespeare (3 hrs)
LITR413 The Poetry of Chaucer (3 hrs)
LITR450 Major Authors (3 hrs)

Minor Total ................................................................. 21 hours

JOURNALISM MINOR (JRNL)

Required Courses .......................................................... 18 hours
JRN215 Introduction to the Print Media (3 hrs)
JRN218 News Writing and Reporting (3 hrs)
JRN306 Feature Writing (3 hrs)
JRN307 Copy Editing (3 hrs)
JRN313 History of American Journalism (3 hrs)
JRN454 Contemporary Problems in Journalism (3 hrs)

Restrict Elective Courses .............................................. 6 hours
Two courses from the following:
ENGL324 Principles of Technical Communication (3 hrs)
ENGL328 Writing, Style and Technology (3 hrs)
ENGL424 Technical Writing (3 hrs)
JRN305 Editorial, Column, and Review Writing (3 hrs)
JRN311 Newspaper Layout and Design (3 hrs)

One course from the following:
LITR411 Studies in Epic and Romance (3 hrs)
LITR420 Studies in the British Novel (3 hrs)
LITR421 Studies in the American Novel (3 hrs)
LITR422 Studies in the Novel in Global Perspective (3 hrs)
LITR430 Studies in Drama (3 hrs)
LITR440 Genre Studies (3 hrs)
LITR470 Studies in Poetry (3 hrs)

One course from the following:
LITR443 Women in Literature (3 hrs)
LITR480 Studies in Literature and Culture (3 hrs)

Elective Course ........................................................... 3 hour
Any course listed above but not taken

Minor Total ................................................................. 21 hours
CHILDREN'S LITERATURE MINOR (CLT)

Required Courses .................................................. 21 hours
LITR207 Introduction to Children's Literature (3 hrs)
One course from the following:
ENGL350 Children's Literature: Criticism and Response (3 hrs)
ENGL451 Writing about Controversy in Literature for the Young (3 hrs)
Two courses from the following:
LITR101 The Reading of Literature (3 hrs)
LITR102 The Reading of Literature: Fiction (3 hrs)
LITR103 The Reading of Literature: Poetry (3 hrs)
LITR104 The Reading of Literature: Drama (3 hrs)
One course from the following:
LITR201 Native American Literature (3 hrs)
LITR206 Multicultural Children's Literature (3 hrs)
LITR220 African American Literature (3 hrs)
Three courses from the following:
ENGL205 Children's Literature: Criticism and Response (3 hrs)
ENGL451 Writing about Controversy in Literature for the Young (3 hrs)
LITR251 The Bible as Literature (3 hrs)
LITR351 World Mythology (3 hrs)
LITR352 Folk Literature: Ballads and Folktale (3 hrs)
LITR453 Children's Literature: Picture Books (3 hrs)
LITR454 Children's Literature: Fiction (3 hrs)

Minor Total ............................................................ 21 hours

Note: Both ENGL350 and ENGL451 can not be counted toward the minor.

LANGUAGE, LITERATURE AND WRITING MINOR (LIWT)
Elementary, Secondary, K-12, Special Education-Elementary and Special Education-Secondary Teacher Certification

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in English, certification code 01A. The Michigan Test for Teacher Certification (MTTC) covering this field is #02, "English."

Required Courses .................................................. 9 hours
ENGL227 Writing about Literature (3 hrs)
ENGL408 Writing for Writing Teachers (3 hrs)
LING201 An Introduction to Linguistics (3 hrs)

Restricted Elective Courses ...................................... 13 hours
One course from the following:
LITR204 Native American Literature (3 hrs)
LITR220 African American Literature (3 hrs)
LITR309 The Development of American Literature (3 hrs)
LITR310 Modern American Literature (3 hrs)
LITR312 English Literature in the Middle Ages (3 hrs)
LITR314 English Renaissance prose and Poetry 1500-1660 (3 hrs)
LITR315 Literature of the Neo-Classical Period 1660-1798 (3 hrs)
LITR316 Romanticism in Britain 1798-1832 (3 hrs)
LITR317 Victorian and Edwardian Literature 1852-1914 (3 hrs)
LITR360 Recent Trends in British and American Literature (3 hrs)

One course from the following:
LITR405 Shakespeare (3 hrs)
LITR411 Studies in Epic and Romance (3 hrs)
LITR412 The Poetry of Chaucer (3 hrs)
LITR420 Studies in the British Novel (3 hrs)
LITR421 Studies in the American Novel (3 hrs)
LITR422 Studies in the Novel in Global Perspective (3 hrs)
LITR430 Studies in Drama (3 hrs)
LITR440 Genre Studies (3 hrs)
LITR443 Women in Literature (3 hrs)
LITR450 Major Authors (3 hrs)
LITR470 Studies in Poetry (3 hrs)
LITR480 Studies in Literature and Culture (3 hrs)

Minor Total ............................................................ 24 hours

DEPARTMENT OF FOREIGN LANGUAGES AND BILINGUAL STUDIES

Campus Address: 215 Alexander
Internet: www.emich.edu/public/foreignlanguages/fi_welcome.html
Telephone: 734.487.0130
E-mail: elizabeth.morgan@emich.edu

See pages 260, 263, 267, 269, 292, 295, 310, 312, 334 and 335 for course descriptions.

The Department of Foreign Languages and Bilingual Studies offers a variety of traditional and innovative majors and minors in French, German, Japanese, Spanish and English as a second language-a minor in classical studies, a group minor in bilingual-bicultural education leading to either elementary or secondary certification; a group minor in teaching English to speakers of other languages; a group major in language and international trade; and a joint degree program (B.A./B.B.A.) in language and world business.

Students in the language and international trade program with concentrations in business French, German and Spanish are eligible to take examinations administered by Eastern Michigan University leading to certification in their fields.

A placement test is given at the beginning of the fall and winter terms and is required of all students of foreign language unless they are taking their first course in a foreign language or have completed their last course in that language at EMU. It is also recommended for students whose last course in a language was completed more than one year previously. Further details on testing are available in the department office. Students should consult advising coordinators for interpreting test results and creating a schedule.
Any course for which a student registers prior to receiving placement test results will be considered provisional. The Department of Foreign Languages and Bilingual Studies will require students to change their registration to the appropriate course, when necessary, without incurring financial penalties.

Listed below are approximate guidelines for preliminary registration. They do not consider important factors such as actual grades received, academic standards, amount of time elapsed since completing the course, etc.

- One to two years of high school would probably place in 121.
- Three years of high school would probably place in 122.
- More than three years of high school would probably place in 221 (except in Spanish) and/or 233. In Spanish, most would probably place in 201.
- For every year elapsed between the present and the last completed course in your foreign language, go down one level (e.g. from 200 to 100, etc.).

Students placing at the 100- or 200-level may need up to 16 additional credit hours of language study before beginning courses required for a major in foreign language.

Department Residency Requirements:
1. Residence for the purposes of this section, means registering for, attending, and successfully completing the required courses.
2. Major or minor in Language, Business Language, Literature or Culture (not Language and International Trade): Department residency requirements are that majors in a foreign language must complete at EMU 12 credit hours consisting of the appropriate courses at the 300- or 400-level for the major chosen. Minors in the foreign language must complete either (a) 343 and 344, or (b) six credit hours at the 400-level for which the student has the prerequisites.
3. Language and international trade majors:
   Students must complete at EMU the following nine credit hours in French, German, Japanese or Spanish: 361, 446 and 447.

Oral proficiency interview requirement:
All students on teaching curricula in Foreign Languages and Bilingual Studies shall be tested in the last semester prior to graduation through an interview conducted by an oral proficiency tester certified by ETII-ACFIL.

Graduate study leads to the master of arts degree in Spanish (bilingual-cultural education): in language and international trade; in foreign language with concentrations in French, German and Spanish; and in Tesol (Teaching English to Speakers of Other Languages). A major emphasis in French, German or Spanish also can be developed through the master's degree in secondary school teaching or the master's degree in individualized studies. The M.A. degrees are described in the graduate catalog.

English as a Second Language
English as a Second Language (ESL) courses are taught in the Department of Foreign Languages and Bilingual Studies. These courses carry academic credit and are calculated in the total GPA.

Admission status is based on the first English proficiency score that students send to the University. If a later test results in a higher score, it also should be sent to the Admissions Office. All scores must arrive two weeks before the first day of the term.

Students will be given ESL conditional admission if they are admitted to the University, but score below the minimum scores required below:

- Undergraduate TOEFL (CBT) 173
- Undergraduate TOEFL (PBT) 500
- Undergraduate TOEFL (IBT) TBD
- Undergraduate MELAB 72
- Undergraduate IELTS 6.5

Note:
Some graduate programs require higher scores. Check with the program department.

Students with an ESL conditional admission must take ESL classes in the first semester in which they are enrolled. Placement into ESL classes will be determined by the sub-scores achieved on the TOEFL or MELAB.

Contact the ESL Office for more information.

Once placed into ESL courses students must complete each course with a grade of C or higher to advance to the next level. Students who receive a grade of C- or lower for a course must repeat that course in the next semester in which they are enrolled. Students must continue ESL courses each semester until they finish the 400 level for undergraduate students, or the 500 level for graduate students.

When students are at the 500 or 500 level of ESL, they may take other courses in the University at the same time.

When students have successfully completed the required ESL courses, their admission status is changed from conditional to regular.

Regular University academic probation and dismissal policies apply to students in ESLN courses.

GROUP MAJOR IN LANGUAGE AND INTERNATIONAL TRADE FRENCH (LGIT FRNH)

Depending on initial placement, students may need to take up to 16 additional credit hours of 100 and 200-level classes in the language before they can begin courses required in the major.

The major in language and international trade is designed to integrate the study of modern foreign languages and cultures with preparation in the field of international business. The major objective of the program is to provide students with the skills, knowledge and understanding needed to function in a foreign environment and in professional dealings with business people and clients who speak foreign languages. Students completing this group major will have met the major and minor requirements for graduation. No outside minor is needed.

Qualified students in French may have the option of participating in a cooperative work-exchange in an area of the world where French is spoken.

General Education Requirements

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<tr>
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<td>1. Calcuate page 23</td>
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<td>2. See page 23</td>
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<tr>
<td>3. FRNH 112, 1122 Beginning French (10 hrs)</td>
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<td>4. See page 23</td>
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<td>5. See page 23</td>
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<th>Area II Science and Technology</th>
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<th>Area III Social Sciences</th>
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<tbody>
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<td>1. See page 24</td>
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<tr>
<td>2. One course from the following:</td>
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<tr>
<td>HIST 101 Western Civilization to 1648 (3 hrs)</td>
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<td>HIST 102 Western Civilization, 1648 to World War I (3 hrs)</td>
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<tr>
<td>3. ECON 201 Principles of Macroeconomics (3 hrs)</td>
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<td>4. ECON 202 Principles of Microeconomics (3 hrs)</td>
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<th>Area IV Arts and Humanities</th>
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**GROUP MAJOR IN LANGUAGE AND INTERNATIONAL TRADE GERMAN (LGIT GERN)**

Depending on initial placement, students may need to take up to 16 additional credit hours of 100- and 200-level classes in the language before they can begin courses required in the major.

The major in language and international trade is designed to integrate the study of modern foreign languages and cultures with preparation in the field of international business. The major objective of the program is to provide students with the skills, knowledge and understanding needed to function in a foreign environment and in professional dealings with business people and clients who speak foreign languages. Students completing this group major will have met the major and minor requirements for graduation. No outside minor is needed.

Qualified students in German may have the option of participating in a cooperative work exchange in an area of the world where German is spoken. Students may take examinations leading to foreign certification in business German.

### General Education Requirements

<table>
<thead>
<tr>
<th>Area</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>I: Symbolic and Communication</td>
<td>54 hours</td>
</tr>
<tr>
<td>II: Science and Technology</td>
<td>27 hours</td>
</tr>
<tr>
<td>III: Social Sciences</td>
<td>27 hours</td>
</tr>
<tr>
<td>IV: Art and Humanities</td>
<td>27 hours</td>
</tr>
</tbody>
</table>

### Additional Requirements

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG110 World Regions</td>
<td>3 hours</td>
</tr>
<tr>
<td>Physical Education/Graduation Requirements</td>
<td>2 hours</td>
</tr>
</tbody>
</table>

### Major Requirements

<table>
<thead>
<tr>
<th>Business Minor</th>
<th>57 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students must complete requirements for a minor in an operational area of business of their choosing. These areas include: economics, marketing, management, accounting, finance, business computer systems, general business and office administration, among others. Special combinations of business courses equivalent to a minor are possible in consultation with an advisor.</td>
<td></td>
</tr>
</tbody>
</table>

### Additional Required Business Courses

| MKTG460 International Marketing (3 hrs) |
| ECON370 Comparative Economic Systems (3 hrs) |
| ECON480 International Economics (3 hrs) |

### Language and Area Studies Courses

| FRNH343 French Composition (3 hrs) |
| FRNH361 French for International Trade (3 hrs) |
| FRNH446 Business French I (3 hrs) |
| FRNH447 Business French II (3 hrs) |
| One FRNH at the 300- or 400-level (3 hrs) |
| One FRNH at the 400-level (3 hrs) |
| HIST160/ECON160 History and Geography of Modern Europe (3 hrs) |

### Field Experience

| FLAN489 Internship in Language and International Trade (3 hrs) |
| FLAN387/487 Cooperative Education in Foreign Language (3 hrs) |

### Minor Requirements

| 9 hours |
| No minor is required. |

### University Elective Courses

| 8 hours |

### Program Total

| 125 hours |

---

**Notes:** Students with prior language study or knowledge will be placed at an appropriate level in consultation with an advising coordinator.
Major Requirements ........................................... 0 hours
No minor is required.

University Elective Courses .................................. 8 hours

Program Total .................................................. 124 hours

Note:
Students with prior language study or knowledge will be placed at an appropriate level in consultation with an advising coordinator.

**GROUP MAJOR IN LANGUAGE AND INTERNATIONAL TRADE JAPANESE (LGIT JPNE)**

Depending on initial placement, students may need to take up to 16 additional credit hours of 100- and 200-level classes in the language before they can begin courses required in the major.

The major in language and international trade is designed to integrate the study of modern foreign languages and cultures with preparation in the field of international business. The major objective of the program is to provide students with the skills, knowledge and understanding needed to function in a foreign environment and in professional dealings with business people and clients who speak foreign languages. Students completing this group major will have met the major and minor requirements for graduation. No outside minor is needed.

Qualified students in Japanese may have the option of participating in a cooperative work exchange in an area of the world where Japanese is spoken.

General Education Requirements ................................ 54 hours

Area I: Symbolic and Communication
1. See page 23
2. See page 23
3. JPNE111/121 Beginning Japanese (10 hrs)
4. See page 23
5. See page 23

Area II: Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III: Social Sciences
1. See page 24
2. One course from the following:
   HIST103 20th-Century Civilization (3 hrs)
   HIST106 Asian and African Civilizations (3 hrs)
3. ECON201 Principles of Microeconomics (3 hrs)
4. ECON202 Principles of Macroeconomics (3 hrs)

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Additional Requirements ..................................... 3 hours
GEOG110 World Regions (3 hrs)

Physical Education/Graduation Requirement .................. 2 hours

Minor Requirements ......................................... 57 hours

**Business Minor** ............................................ 21 hours
Students must complete requirements for a minor in an operational area of business of their choosing. These areas include economics, marketing, management, accounting, finance, business computer systems and general business, among others. Special combinations of business courses equivalent to a minor are possible in consultation with an advisor.

Additional Required Business Courses ..................... 6 hours
MKTG460 International Marketing (3 hrs)
One course from the following:
   ECON370 Comparative Economic Systems (3 hrs)
   ECON480 International Economics (3 hrs)

Language and Area Studies Courses ......................... 27 hours
JPNE345 Japanese Composition (3 hrs)
JPNE361 Japanese for International Trade (3 hrs)
JPNE446 Business Japanese I (3 hrs)
JPNE447 Business Japanese II (3 hrs)
One JPNE at the 200- or 400-level (3 hrs)
One JPNE at the 600-level (3 hrs)
HIST326/GEOS326 History and Geography of Modern Asia (3 hrs)

One Political Science course from the following:
PLSC211 Introduction to Comparative Government (3 hrs)
PLSC212 Introduction to International Politics (3 hrs)
PLSC341 International Law (3 hrs)
PLSC342 International Organizations (3 hrs)
PLSC354 Government and Politics of Canada (3 hrs)
PLSC676 Latin American Politics (3 hrs)
PLSC412 Comparative Legal Systems (3 hrs)

Field Experience ............................................. 3 hours
One course from the following:
FINA489 Internship in Language and International Trade (3 hrs)
FINA387/487 Cooperative Education in Foreign Language (3 hrs)

Minor Requirements ......................................... 0 hours
No minor is required.

University Elective Courses .................................. 8 hours

Program Total .................................................. 124 hours

Note:
Students with prior language study or knowledge will be placed at an appropriate level in consultation with an advising coordinator.

**GROUP MAJOR IN LANGUAGE AND INTERNATIONAL TRADE SPANISH (LGIT SPNH)**

Depending on initial placement, students may need to take up to 16 additional credit hours of 100- and 200-level classes in the language before they can begin courses required in the major.

The major in language and international trade is designed to integrate the study of modern foreign languages and cultures with preparation in the field of international business. The major objective of the program is to provide students with the skills, knowledge and understanding needed to function in a foreign environment and in professional dealings with business people and clients who speak foreign languages. Students completing this group major will have met the major and minor requirements for graduation. No outside minor is needed.

Qualified students in Spanish may have the option of participating in a cooperative work exchange in an area of the world where Spanish is spoken. Students may take examinations leading to foreign certification in business Spanish.

General Education Requirements ................................ 54 hours

Area I: Symbolic and Communication
1. See page 23
2. See page 23
3. SPNH121/122 Beginning Spanish (10 hrs)
4. See page 23
5. See page 23
FRENCH MAJOR (FRNH)

Depending on initial placement, students may need to take up to 16 additional credit hours of 100- and 200-level classes in the language before they can begin courses required in the major.

General Education Requirements ........................................ 41 hours

Area I: Symbolic and Communication
1. See page 23
2. See page 23
3. See page 23
4. One course from the following:
   - FRNH121 Beginning French I (5 hrs)
   - FRNH122 Beginning French II (5 hrs)
   - FRNH233 Intermediate French Conversation, Composition and Grammar (3 hrs)
   - FRNH234 Intermediate French Conversation, Composition and Grammar (3 hrs)
5. See page 23
6. See page 23

Area II: Science and Technology
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area III: Social Sciences
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Major Requirements ....................................................... 57 hours

Business Minor .......................................................... 21 hours

Students must complete requirements for a minor in an operational area of business of their choosing. These areas include economics, marketing, management, accounting, finance, business computer systems and general business, among others. Special combinations of business courses equivalent in a minor are possible in consultation with an advisor.

Additional Required Business Courses .............................. 6 hours

One course from the following:
- ECON370 Comparative Economic Systems (3 hrs)
- ECON480 International Economics (3 hrs)

Language and Area Studies Courses ................................. 27 hours

FRNH343 Spanish Composition (3 hrs)
FRNH361 Spanish for International Trade (3 hrs)
FRNH446 Business Spanish I (3 hrs)
FRNH447 Business Spanish II (3 hrs)
One SPNH at the 300- or 400-level (3 hrs)
One SPNH at the 400-level (3 hrs)

One course from the following:
- PLSC211 Introduction to Comparative Government (3 hrs)
- PLSC212 Introduction to International Politics (3 hrs)
- PLSC341 International Law (3 hrs)
- PLSC382 International Organizations (3 hrs)
- PLSC54 Government and Politics of Canada (3 hrs)
- PLSC66 Latin American Politics (3 hrs)
- PLSC67 Latin American Politics (3 hrs)
- PLSC68 Latin American Politics (3 hrs)

Field Experience ......................................................... 3 hours

One course from the following:
- FLAN489 Internship in Language and International Trade (3 hrs)
- FLAN387/487 Cooperative Education in Foreign Language (3 hrs)

Minor Requirements ....................................................... 0 hours

No minor is required.

University Elective Courses ........................................... 8 hours

Program Total .......................................................... 124 hours

Note:
*This course satisfies both a general education and a major requirement.

GERMAN LANGUAGE AND LITERATURE MAJOR (GRLL)

Depending on initial placement, students may need to take up to 16 additional credit hours of 100- and 200-level classes in the language before they can begin courses required in the major.
General Education Requirements ........................................... 41 hours

Area I Symbolics and Communication
1. See page 23
2. See page 23
3. One course from the following:
   - GERN121 Beginning German I (3 hrs)
   - GERN122 Beginning German II (5 hrs)
   - GERN233 Intermediate German Conversation, Composition and Grammar (3 hrs)
   - GERN234 Intermediate German Conversation, Composition and Grammar (3 hrs)
   - See page 23
4. See page 23
Area II Science and Technology
1. See page 24
2. See page 24
Area III Social Sciences
1. See page 24
2. One course from the following:
   - HIST103 20th-Century Civilization (3 hrs)
   - HIST116 Asian and African Civilizations (3 hrs)
   - ECON201 Principles of Macroeconomics (3 hrs)
   - ECON202 Principles of Microeconomics (3 hrs)
Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement .......................... 2 hours

Major Requirement ...................................................... 30 hours

Required Courses 18 hours
* GERN141 Survey of German Literature (3 hrs)
* GERN142 Survey of German Literature (3 hrs)
  GERN143 German Composition on Cultures and Civilization (3 hrs)
  GERN144 Principles of German Phonetics and Composition (3 hrs)
  GERN1443 German Syntax and Advanced Composition (3 hrs)
  GERN1444 Advanced German Conversation (3 hrs)
Restricted Elective Courses 12 hours
  Six hours in German at the 400-level
  Six hours in German at any level

Minor Requirements ...................................................... 20 hours

University Elective Courses ........................................... 31 hours

Program Total .......................................................... 124 hours

Note: *This course satisfies both a general education and a major requirement.

JAPANESE LANGUAGE AND CULTURE MAJOR (JPNE)

Depending on initial placement, students may need to take up to 16 additional credit hours of 100- and 200-level classes in the language before they can begin courses required in the major.

General Education Requirements ..................................... 49 hours

Area I Symbolics and Communication
1. See page 23
2. See page 23
3. JPNE111 Intermediate Japanese (5 hrs)
4. See page 23
5. See page 23

Area II Science and Technology
1. See page 24
2. See page 24

Area III Social Sciences
1. See page 24
2. One course from the following:
   - JAPAN151 History of the United States (3 hrs)
   - JAPAN152 History of Japan (3 hrs)
   - JAPAN153 History of the World (3 hrs)
Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Major Requirements ...................................................... 30 hours

Required Courses 18 hours
  - JPNE241 Japanese Conversation (3 hrs)
  - JPNE245 Japanese Composition (3 hrs)
  - JPNE261 Japanese for International Trade (3 hrs)
  - JPNE266 Japanese Business Japanese (5 hrs)
  - JPNE268 Seminar in Japanese Studies (3 hrs)

Restricted Elective Courses 12 hours
  Twelve hours from the following:
  - JPNE212 Intermediate Japanese II (5 hrs)
  - JPNE271 Business Japanese III (3 hrs)
  - JPNE297 Independent Study (3 hrs)
  - ANTH104 Culture of Japan (3 hrs)
  - LING223 Introduction to Language (3 hrs)
  - CTAG193 Intercultural Communication (3 hrs)

Minor Requirements ...................................................... 20 hours

University Elective Courses ........................................... 23 hours

Program Total .......................................................... 124 hours

SPANISH MAJOR (SPNH)

Depending on initial placement, students may need to take up to 16 additional credit hours of 100- and 200-level classes in the language before they can begin courses required in the major.

The courses listed below meet the minimum requirements only; it is recommended that students specializing in Spanish, or planning to continue with graduate work, carry their undergraduate study beyond the minimum. Many graduate schools require additional course work in literature.

General Education Requirements ..................................... 47 hours

Area I Symbolics and Communication
1. See page 23
2. See page 23

Area II Science and Technology
1. See page 24
2. See page 24

Area III Social Sciences
1. See page 24
2. One course from the following:
   - SPNH121 Beginning Spanish I (5 hrs)
   - SPNH122 Beginning Spanish II (5 hrs)
   - SPNH123 Intermediate Spanish I (3 hrs)
   - SPNH124 Intermediate Spanish II (3 hrs)
   - SPNH125 Intermediate Spanish III (3 hrs)
  3. See page 23
4. See page 23
5. See page 23

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Note: *This course satisfies both a general education and a major requirement.
FRENCH MAJOR (FRNT)
Secondary Teacher Certification

Depending on initial placement, students may need to take up to 16 additional credit hours of 100- and 200-level classes in the language before they can begin courses required in the major.

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in French, certification code FA, and, depending on the minor selected, an additional endorsement. The Michigan Test for Teacher Certification (MTTC) covering this field is #23, "French."

General Education Requirements

<table>
<thead>
<tr>
<th>Area</th>
<th>Symbolics and Communication</th>
<th>41 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>See page 23</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>See page 23</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>One course from the following: FRNH121 Beginning French I (5 hrs) FRNH122 Beginning French II (5 hrs) FRNH233 Intermediate French Conversation, Composition and Grammar (3 hrs) FRNH234 Intermediate French Conversation, Composition and Grammar (5 hrs)</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Area</th>
<th>Science and Technology</th>
<th>12 hours</th>
</tr>
</thead>
<tbody>
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<td>1</td>
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<td></td>
</tr>
<tr>
<td>2</td>
<td>See page 24</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>See page 24</td>
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<table>
<thead>
<tr>
<th>Area</th>
<th>Social Science</th>
<th>20 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>See page 24</td>
<td></td>
</tr>
</tbody>
</table>

Physical Education/Graduation Requirement

- 2 hours

Major Requirements

- 30 hours

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>12 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPNH343 Spanish Grammar and Composition (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPNH344 Spanish Conversation and Composition (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPNH444 Advanced Spanish Grammar and Composition (5 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Restricted Elective Courses</th>
<th>18 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twelve hours in Spanish at the 300-level or above</td>
<td></td>
</tr>
<tr>
<td>Six hours at any level in consultation with the advising coordinator</td>
<td></td>
</tr>
</tbody>
</table>

Minor Requirements

- 20 hours

University Elective Courses

- 25 hours

Program Total

- 124 hours

GERMAN LANGUAGE AND LITERATURE MAJOR (GRNT)
Secondary Teacher Certification

Depending on initial placement, students may need to take up to 16 additional credit hours of 100- and 200-level classes in the language before they can begin courses required in the major.

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for endorsement in German, certification code FB. The Michigan Test for Teacher Certification (MTTC) covering this field is #24, "German."
Japanese Language and Culture Teaching Major (JPNT)
K-12 Teacher Certification

Depending on initial placement, students may need to take up to 16 additional credit hours of 100- and 200-level classes in the language before they can begin courses required in the major. Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification by the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in Japanese, certification code FL. The Michigan Test for Teacher Certification (MTTC) covering this field has not yet been developed.

General Education Requirements .................................................. 49 hours

Area I Symbolics and Communication
1. See page 23
2. See page 23
3. One course from the following:
   GERM121 Beginning German I (3 hrs)
   GERM122 Beginning German II (3 hrs)
   GERM233 Intermediate German Conversation, Composition and Grammar (3 hrs)
   GERM234 Intermediate German Conversation, Composition and Grammar (3 hrs)
4. See page 23
5. See page 23

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. GERM341 Survey of German Literature
2. GERM342 Survey of German Literature
3. See page 25
4. See page 25

Program Total ................................................................. 125 hours

Note:
*This course satisfies both a general education and a major requirement.

Pre-Admission Phase: The Learner and the Community
EDPS322 Human Development and Learning (4 hrs)
FETE401 Field Experience I (1 hr)
SPGN251 Education of Students with Exceptionalities (3 hrs)

The following courses require formal admission to the teacher education program:
Phase I: Curriculum, Assessment and the Social Context
10 hours
SOFD328 Schools in a Multicultural Society (3 hrs)
CURR305 Curriculum and Methodological Secondary (3 hrs)
FETE302 Field Experience I: Secondary (1 hr)
EDPS340 Introduction to Assessment and Evaluation (3 hrs)

Phase II: Content Methods, Literacy, and Technology
9 hours
RDNG311 Teaching Reading in the Secondary School (3 hrs)
FETE402 Field Experience III: Secondary (1 hr)
EDMT330 Instructional Applications of Media and Technology (2 hrs)
FLAN411 Theory and Methods of Modern Language Teaching (3 hrs)

Phase III: Capstone Experience
12 hours
EDUC492 Student Teaching (12 hrs)

Additional Requirements ....................................................... 6 hours
ANTH135 Introduction to Cultural Anthropology (3 hrs)
GEOG110 World Region (3 hrs)

Physical Education/Graduation Requirement .................................. 2 hours

Major Requirements ......................................................... 30 hours
Required Courses ............................................................. 18 hours
JPNE344 Japanese Conversation (3 hrs)
JPNE345 Japanese Composition (3 hrs)
JPNE361 Japanese for International Trade (3 hrs)
JPNE444 Advanced Japanese Conversation (3 hrs)
JPNE446 Business Japanese I (3 hrs)
JPNE494 Seminar in Japanese Studies (3 hrs)

Elective Courses .............................................................. 12 hours
Twelve hours from the following:
ANTH385 Culture of Japan (3 hrs)
LING223 Introduction to Language (3 hrs)
CTAC374 Intercultural Communication (3 hrs)
Any Japanese course level 200 and above (1-12 hrs)

Professional Studies ......................................................... 39 hours
Pre-Admission Phase: The Learner and the Community
EDPS322 Human Development and Learning (4 hrs)
**CLASSIC STUDIES MINOR (CST)**

This course offers both a general overview and a more in-depth study.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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**Mandarin Chinese Minor (MIN)**

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<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Practice</td>
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**Spanish Major (SPN)**

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<th>Credits</th>
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</thead>
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<tr>
<td>Practice</td>
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**Hindi Minor (HIN)**

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</thead>
<tbody>
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<td>1.0</td>
</tr>
<tr>
<td>Practice</td>
<td>0.5</td>
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**Biology Minor (BIO)**

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Theory</td>
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<tr>
<td>Practice</td>
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**Music Theory Minor (MTY)**

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<tbody>
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<tr>
<td>Practice</td>
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**Mathematics Minor (MAT)**

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</thead>
<tbody>
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<td>1.0</td>
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<tr>
<td>Practice</td>
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**Cultural Studies Minor (CSM)**

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<th>Credits</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Practice</td>
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**Philosophy Minor (PHI)**

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<tbody>
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<td>Practice</td>
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**Psychology Minor (PSY)**

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<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Theory</td>
<td>1.0</td>
</tr>
<tr>
<td>Practice</td>
<td>0.5</td>
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**Social Studies Minor (SST)**

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<th>Course</th>
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</thead>
<tbody>
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<td>1.0</td>
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<tr>
<td>Practice</td>
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**Economics Minor (ECON)**

<table>
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<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Theory</td>
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</tr>
<tr>
<td>Practice</td>
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**Physics Minor (PHYS)**

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<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
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<td>Theory</td>
<td>1.0</td>
</tr>
<tr>
<td>Practice</td>
<td>0.5</td>
</tr>
</tbody>
</table>
**GROUP MINOR IN TEACHING ENGLISH AS A SECOND LANGUAGE (TESL)**

**Required Courses**
- LINGE223 Introduction to Language (3 hrs)
- CTAC374 Intercultural Communication (3 hrs)
- TSLN410 TESOL Methods (3 hrs)
- LINGE420 Materials and Test for TESOL (3 hrs)

**Restrict Elective Courses**

At least one course from each group:

I. **Linguistics Courses**
   - LING401 Introduction to Linguistic Science (3 hrs)
   - LING402 Modern English Grammar (3 hrs)

II. **Communication Courses**
   - CTAC225 Listening Behavior (3 hrs)
   - CTAC226 Nonverbal Communication (3 hrs)
   - PSY304 Learning (3 hrs)
   - CTAR233 Improvising and Role-Play (3 hrs)
   - ENGL328 Writing: Style and Language (3 hrs)
   - SPFL337 Language Acquisition (3 hrs)
   - CTAC359 Small Group Communication (3 hrs)

III. **Social Science Courses**
   - SOCL311/ANTH214 Racial and Cultural Minorities (3 hrs)
   - SOCL310 Social Stratification (3 hrs)
   - ANTT540/LING340 Language and Culture (3 hrs)

**Minor Total**: 15 hours

Note:
- Certain independent study and special topics courses may be counted as restricted elective courses with the approval of the advising coordinator.
- Undergraduate linguistics majors in the English department may not count Group 1 courses toward this minor. They must take two courses from either Group 2 or 3, and one course from the other.

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**ENGLISH AS A SECOND LANGUAGE FOR NONNATIVE SPEAKERS OF ENGLISH MINOR (ESL)**

This minor is limited to international students who are nonnative speakers of English and conditionally admitted to the University on the basis of English language proficiency. It is administered jointly by the Department of Foreign Languages and Bilingual Studies and the Department of English Language and Literature.

Students who have placed in the 300-level ESL classes will complete all of the following required courses. Students who place at the 400-level will begin this minor by taking ESLN412 Academic-ESL Writing and ESLN414 Academic-ESL Reading and ESLN416 Academic-ESL Speaking and Listening. These students must choose six credit hours from the restricted elective courses or other courses with the permission of the advisor.

**Required Courses**

- ESLN310 Advanced ESL Grammar (3 hrs)
- ESLN312 Advanced ESL Writing (3 hrs)

**Restrict Elective Courses**

- ESLN412 Academic-ESL Writing (3 hrs)
- ESLN414 Academic-ESL Reading (3 hrs)
- ESLN416 Academic-ESL Speaking and Listening (3 hrs)
- ENGL225 Writing in a Changing World (3 hrs)
- ENGL326 Research Writing (3 hrs)

**Minor Total**: 21 hours

Note:
- Certain independent study and special topics courses may be counted as restricted elective courses with the approval of the advising coordinator.

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**FRENCH LANGUAGE AND LITERATURE MINOR (FRLL)**

**Required Courses**

- FRNH341 Survey of French Literature (3 hrs)
- FRNH342 Survey of French Literature (3 hrs)
- FRNH343 French Composition (3 hrs)
- FRNH344 French Conversation (3 hrs)

**Restricted Elective Courses**

- Eight hours in French at any level selected in consultation with an advisor.

**Minor Total**: 12 hours

**FRENCH LANGUAGE MINOR (FRL)**

**Required Courses**

- FRNH343 French Composition (3 hrs)
- FRNH344 French Conversation (3 hrs)
- FRNH449 Advanced French Grammar and Composition (3 hrs)
- FRNH444 Advanced French Conversation (3 hrs)
Required Courses..................................................12 hours
GERN341 Survey of German Literature (3 hrs)
GERN342 Survey of German Literature (3 hrs)
Course in German literature at the 400-level (6 hrs)

Restricted Elective Courses..................................8 hours
Eight hours in German at any level selected in consultation with an advisor.

Minor Total.....................................................20 hours

GERMAN LITERATURE MINOR (GRT)

Required Courses..................................................12 hours
GERN31 Survey of German Literature (3 hrs)
GERN32 Survey of German Literature (3 hrs)
GERN33 Survey of German Literature at the 400-level (6 hrs)

Restricted Elective Courses..................................8 hours
Eight hours in German at any level selected in consultation with an advisor.

Minor Total.....................................................20 hours

BUSINESS GERMAN MINOR (GRNB)

Examinations listed under the major in Business German may also be taken by students minorin in this subject.

Required Courses..................................................12 hours
One course from the following:
GERN341 Survey of German Literature (3 hrs)
GERN342 Survey of German Literature (3 hrs)
GERN361 German for International Trade (3 hrs)
GERN443 German Syntax and Advanced Composition (3 hrs)

Restricted Elective Courses..................................8 hours
Eight hours in German at any level selected in consultation with an advisor.

Minor Total.....................................................20 hours

JAPANESE LANGUAGE MINOR (JPLN)

Required Courses..................................................12 hours
JPN34 Japanese Composition (3 hrs)
JPN36 Japanese for International Trade (3 hrs)
JPN44 Advanced Japanese Composition (3 hrs)

Restricted Elective Courses..................................8 hours
Eight hours in Japanese at any level selected in consultation with an advisor.

Minor Total.....................................................20 hours

SPANISH LANGUAGE MINOR (SPL)

Required Courses..................................................12 hours
SPN33 Advanced Spanish Grammar and Composition (3 hrs)
SPN34 Advanced Spanish Composition and Conversation (3 hrs)

Option I:
SPN34 Advanced Spanish Grammar and Composition (3 hrs)
SPN34 Advanced Spanish Composition and Conversation (3 hrs)

Option II:
SPN34 Advanced Spanish Grammar and Composition (3 hrs)
Addiitional courses in Spanish at the 300-level or above.

Restricted Elective Courses..................................8 hours
Eight hours in Spanish at any level selected in consultation with an advisor.

Minor Total.....................................................20 hours
SPANISH LITERATURE MINOR (SPT)

Required Courses .................................................. 12 hours

Two courses from the following:
SPNH341 Survey of Spanish Literature (3 hrs)
SPNH342 Survey of Spanish Literature (3 hrs)
SPNH351 Survey of Spanish-American Literature (3 hrs)
SPNH352 Survey of Spanish-American Literature (3 hrs)
Six hours in Spanish at the 300-level or above

Restricted Elective Courses .................................... 8 hours

Eight hours in Spanish at any level selected in consultation with an advisor.

Minor Total ..................................................... 20 hours

SPANISH CULTURE MINOR (SPCL)

Required Courses .................................................. 12 hours

SPNH301 The Cultures of Spain (3 hrs)
SPNH302 The Cultures of Spanish America (3 hrs)
Six hours in Spanish at the 300-level or above

Restricted Elective Courses .................................... 8 hours

Eight hours in Spanish at any level selected in consultation with an advisor.

Minor Total ..................................................... 20 hours

BUSINESS SPANISH MINOR (SPNB)

Examinations listed under the major in business Spanish may be taken by students minoring in this subject.

Language proficiency in both Spanish and English is required; proficiency will be determined by examination.

Required Courses .................................................. 12 hours

One course from the following:
SPNH301 The Cultures of Spain (3 hrs)
SPNH302 The Cultures of Spanish America (3 hrs)

One course from the following:
SPNH342 Survey of Spanish Literature (3 hrs)
SPNH352 Survey of Spanish-American Literature (3 hrs)
SPNH361 Spanish for International Trade (3 hrs)
SPNH446 Business Spanish (3 hrs)

Restricted Elective Courses .................................... 8 hours

Eight hours in Spanish at any level selected in consultation with an advisor.

Minor Total ..................................................... 20 hours

FRENCH LANGUAGE MINOR (FRLT)

Elementary, Secondary, K-12, Special Education-Elementary and Special Education-Secondary Teacher Certification

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in French, certification code FA. The Michigan Test for Teacher Certification (MTTC) covering this field is #23, "French.

Required Courses .................................................. 12 hours

FRNH343 French Composition (3 hrs)
FRNH344 French Conversation (3 hrs)
FRNH443 Advanced French Grammar and Composition (3 hrs)
FRNH444 Advanced French Conversation (3 hrs)

Restricted Elective Courses .................................... 8 hours

Eight hours in French at any level selected in consultation with an advisor.

Minor Total ..................................................... 20 hours

GERMAN LANGUAGE MINOR (GRLT)

Elementary, Secondary, K-12, Special Education-Elementary and Special Education-Secondary Teacher Certification

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in German, certification code FB. The Michigan Test for Teacher Certification (MTTC) covering this field is #24, "German.

Required Courses .................................................. 12 hours

GERN343 German Composition on Culture and Civilization (3 hrs)
GERN344 Principles of German Phonetics and Conversation (3 hrs)
GERN443 German Syntax and Advanced Composition (3 hrs)
GERN444 Advanced German Conversation (3 hrs)

Restricted Elective Courses .................................... 8 hours

Eight hours in German at any level selected in consultation with an advisor.

Minor Total ..................................................... 20 hours

BILINGUAL-BICULTURAL EDUCATION

SPANISH-ENGLISH MINOR (BISP)

Elementary, Secondary, K-12, Special Education-Elementary and Special Education-Secondary Teacher Certification

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in bilingual Spanish, certification code YF. The Michigan Test for Teacher Certification (MTTC) covering this field is #70, "Bilingual Spanish.

Language proficiency in both Spanish and English as determined by examination.

Required Courses .................................................. 15 hours

FLAN421 History of Bilingual Education (3 hrs)
FLAN422 Teaching Hispanic Culture and Language (3 hrs)
TSLN410 TESOL Methods (3 hrs)
SPNH471 Culture and Literature of the Hispanic Groups in the United States (3 hrs)
SPNH482 Language of the Hispanic Groups in the United States (3 hrs)

Restricted Elective Courses .................................... 9 hours

Nine hours from the following:
ANTH233 Peoples and Cultures of Mexico (3 hrs)
FLAN215 The Cultures of Mexican-Americans and Cubans in the United States (3 hrs)
LNGE221 Introduction to Language (3 hrs)
LING201 An Introduction to Linguistics (3 hrs)
LING401 Introduction to Linguistic Science (3 hrs)
LING402 Modern English Grammar (3 hrs)
GEOG321 Geography of Latin America (3 hrs)
HIST457 History of Mexico (3 hrs)
PSY340 Psychological Perspectives on Prejudice and Discrimination (3 hrs)
SOCSC144/ANTH144 Racial and Cultural Minorities (3 hrs)
SPNH443 Advanced Spanish Grammar and Composition (3 hrs)
SPNH444 Advanced Spanish Conversation and Composition (3 hrs)

Eight credit hours of student teaching must be with English-speaking pupils and four credit hours of student teaching must be in bilingual education.

Minor Total ..................................................... 24 hours
SPANISH LANGUAGE MINOR (SPLT)
Elementary, Secondary, K-12, Special Education-Elementary and Special Education-Secondary Teacher Certification

Successful completion of this minor, in the context of other programs required, qualifies the student for recommendation for endorsement in Spanish, certification code FE. The Michigan Test for Teacher Certification (MTTC) covering this field is test 28: "Spanish."

Required Courses
- SPNH343 Spanish Grammar and Composition (3 hrs)
- SPNH344 Spanish Conversation and Composition (3 hrs)
Select from either option I or option II:

Option I:
- SPNH443 Advanced Spanish Grammar and Composition (3 hrs)

Option II:
- SPNH444 Advanced Spanish Conversation and Composition (3 hrs)

Restricted Elective Courses
- Six hours in Spanish at the 300-level or above

Eight hours in Spanish at any level selected in consultation with an advisor.

Minor Total
20 hours

DEPARTMENT OF GEOGRAPHY AND GEOLOGY

Campus Address: 205 Strong
Internet: www.emich.edu/public/geo/welcome.html
Telephone: 734.487.0218
E-mail: geogandgeo@online.emich.edu

See page 284, 289 and 294 for course descriptions.

The Department of Geography and Geology's programs are designed to enhance student understanding and skills through courses having both theoretical and applied content. Where appropriate, students are directed to field and laboratory courses, which are important elements in all department programs. Internship and cooperative education opportunities are also encouraged.

The geology program includes a field camp. To support and encourage computer literacy in the department’s multiple disciplines, there is a Geographic Information Systems and Computer Mapping Laboratory. Among the programs listed below, the Department of Geography and Geology collaborates with other departments on the area studies, language and international trade, public administration, travel and tourism and urban and regional planning programs. The department also provides teacher preparation courses to serve pre-service teachers.

Department faculty regularly participate in the University Honors Program. Department students often contribute original work to the Undergraduate Symposium. The Geographical Bulletin, the journal associated with Gamma Theta Upsilon (national professional geography organization) is edited in the department.

Four student groups are associated with geography and geology: the Geo Club, Preservation Eastern, the Planning Awareness Club of Eastern (PLACE) and the Travel and Tourism Student Association.

EARTH SCIENCE MAJOR (ESC)

The earth science major is designed for those interested in pursuing a career as an earth science technician or interested in combining a background in earth science with other fields, including surveying and spatial analysis or even journalism and law. Students pursuing careers as professional earth scientists or considering graduate studies in this area should follow the Geology Major Professional Concentration and carefully select elective courses within that program, in consultation with an advisor, to provide complimentary training in either the atmosphere, hydrosphere, or biosphere, or some combination thereof, depending on the student's specific area of interest. Numerous minors complement the earth science major. These include, but are not limited to, the following: coastal environments, environmental analysis, chemistry, biology, physics and math.

General Education Requirements

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<tr>
<th>Area I: Symbolics and Communication</th>
<th>43 hours</th>
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<th>Area II: Science and Technology</th>
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<th>Area III: Social Sciences</th>
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<th>Area IV: Arts and Humanities</th>
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Physical Education/Graduation Requirement

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<th>30-32 hours</th>
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Major Requirements

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<th>20 hours</th>
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*ESSC110 The Dynamic Earth System (4 hrs)
*ESSC111 The Earth System Through Time (4 hrs)
*ESSC212 Weather, Climate and the Earth System (3 hrs)
*ESSC229 Rocks and Minerals (3 hrs)
*ESSC320 Oceansography (3 hrs)
*ESSC324 Weather (3 hrs)

Restricted Elective Courses

<table>
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<th>10-12 hours</th>
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This to eleven hours from the following:
- ESSC325 Geomorphology (4 hrs)
- ESSC326 Structural Geology (4 hrs)
- ESSC327 Soil Science (3 hrs)
- ESSC330 Sedimentology and Stratigraphy (4 hrs)
- ESSC331 Paleontology (4 hrs)
- ESSC370 Glacial Geology (4 hrs)
- ESSC424 Climatology (3 hrs)
- ESSC425 Severe and Unusual Weather (3 hrs)
- ESSC476 Geographic Information Systems (3 hrs)

Minor Requirements

<table>
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<th>20 hours</th>
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University Elective Courses

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Program Total

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GEOGRAPHY MAJOR (GEOG)

The geography major includes the study of physical landscapes, their origins and the processes that alter them; the impact of human activity on the earth’s surface; the complex relationships among places; and the application of technology to human resource identification, conservation and management.

General Education Requirements .................................................. 40 hours

AreaView I: Symbols and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

AreaView II: Science and Technology
1. See page 24
2. See page 24
3. ESSC110 The Dynamic Earth System*

AreaView III: Social Sciences
1. See page 24
2. See page 24
3. One course from the following:
   *GEOG107 Introduction to Geography
   *GEOG110 World Regions
   4. See page 24

AreaView IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ............................. 2 hours

Major Requirements ................................................................. 33 hours

Required Courses .................................................................. 18 hours
*GEOG107 Introduction to Geography (3 hrs)
*GEOG110 World Regions (3 hrs)
*ESSC110 The Dynamic Earth System (4 hrs)
ESSC227 Topographic Maps (2 hrs)
GEOG276 Principles of Geographic Information Systems (3 hrs)

One course from the following:
GEOG100 Human Geosciences (3 hrs)
GEOG235 Economic Geography (3 hrs)
GEOG360 Cultural Geography (3 hrs)

Specialization Courses ....................................................... 9 hours

Three courses from one of the following areas of specialization:

Geographic Techniques
ESSC203 Field Geophysics (3 hrs)
ESSC416 Geographic Information Systems (3 hrs)
ESSC465 Introduction to Remote Sensing (3 hrs)

Physical Geography
ESSC200 Introduction to Hydrology (3 hrs)
ESSC250 Introduction to Coastal Processes (3 hrs)
ESSC320 Oceanography (3 hrs)
ESSC324 Weather (3 hrs)
ESSC325 Geomorphology (4 hrs)
ESSC327 Soil Sciences (3 hrs)
ESSC350 Biogeography (3 hrs)
ESSC424 Climatology (3 hrs)
ESSC425 Severe and Unusual Weather (3 hrs)
ESSC450 Lake and Coastal Management (3 hrs)

Human Geography
GEOG212 Geography of Travel and Tourism (3 hrs)
GSPN215 Introduction to Urban and Regional Planning (3 hrs)
GEOG332 Urban Geography (3 hrs)
GEOG333 Settlement Geography (3 hrs)
GHPR333 Historic Preservation (3 hrs)
GEOG361 Geography of Population (3 hrs)
GEOG461 Transportation Geography and Planning (3 hrs)

Regional Geography
GEOG314 Geography of Russia and Neighboring States (3 hrs)
GEOG328 Geography of Asia (3 hrs)
GEOG319 Geography of Europe (3 hrs)
GEOG320 Geography of the United States and Canada (3 hrs)
GEOG321 Geography of Latin America (3 hrs)
GEOG322 Geography of Africa (3 hrs)

Restricted Elective Courses .................................................. 6 hours

Select two departmental courses outside of the selected area of specialization.

Minor Requirements ............................................................. 20 hours

University Elective Courses .................................................. 29 hours

Program Total ................................................................. 124 hours

Note:
*This course satisfies both a general education and a major requirement.

GEOLOGY MAJOR — GENERAL GEOLOGY CONCENTRATION (GEL)

This concentration is for those who seek a general liberal arts education in geology or who are interested in a career combining geology with fields such as business, patent law, technical writing or industrial health and safety. Students planning to pursue a career as a professional geologist or who are interested in graduate training in geology should elect the professional concentration.

General Education Requirements ........................................... 43 hours

AreaView I: Symbols and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

AreaView II: Science and Technology
1. See page 24
2. See page 24
3. ESSC110 The Dynamic Earth System*

AreaView III: Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

AreaView IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ......................... 2 hours

Major Requirements ............................................................ 32 hours

*ESSC110 The Dynamic Earth System (4 hrs)
ESSC111 The Earth System Through Time (4 hrs)
ESSC228 Mineralogy (4 hrs)
ESSC235 Geomorphology (4 hrs)
ESSC326 Structural Geology (4 hrs)
GEOLOGY MAJOR — PROFESSIONAL CONCENTRATION (GEL PROF)

This concentration provides the necessary background for students planning to become professional geologists. Students who successfully complete the curriculum are prepared to enter positions in industry or to undertake graduate study in geology. The program includes a group minor composed of the required courses in mathematics, chemistry, and physics. No other minor is needed to meet graduation requirements.

Required courses and elective courses in science and mathematics are listed below. Additional general education and elective courses totaling 124 hours are required to complete a degree.

**General Education Requirements**

*Area I: Symbolics and Communication*

1. See page 23
2. See page 23
3. See page 23

4. One course from the following:
   *MATH 120 Calculus I*
   *MATH 121 Calculus II*

5. See page 23

*Area II: Science and Technology*

1. One course from the following:
   *CHEM 121/122 General Chemistry I with lab
   *PHY 221/222 Mechanics and Sound*
2. See page 24
3. ESSC110 The Dynamic Earth System*

*Area III: Social Sciences*

1. See page 24
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**Physical Education/Graduation Requirement**

2 hours

**Major Requirements**

*ESSC110 The Dynamic Earth System (4 hrs)*
*ESSC111 The Earth System Through Time (4 hrs)*
*ESSC226 Mineralogy (4 hrs)*
*ESSC228 Structural Geology (4 hrs)*
*ESSC320 Igneous and Metamorphic Petrology (4 hrs)*
*ESSC330 Sedimentology and Stratigraphy (4 hrs)*
*ESSC331 Palaeontology (4 hrs)*
*ESSC335 Field Geology I (2 hrs)*
*ESSC336 Field Geology II (3 hrs)*
*CHEM 121/122 General Chemistry I with lab (4 hrs)*
*CHEM 223/224 General Chemistry II with lab (4 hrs)*
*MATH 120 Calculus I (4 hrs)*
*MATH 121 Calculus II (4 hrs)*

One course from the following:

*MATH 120 Calculus I*
*MATH 121 Calculus II*

University Elective Courses: 27 hours

Program Total: 124 hours

**Elective Courses**

9-12 hours

Three courses from the following:

*ESSC220 Oceanography (3 hrs)*
*ESSC225 Geomorphology (4 hrs)*
*ESSC237 Soil Science (3 hrs)*
*ESSC370 Glacial Geology (3 hrs)*
*ESSC387 Cooperative Education in Geoscience (3 hrs)*
*ESSC428 Optical Mineralogy (3 hrs)*
*ESSC430 Petroleum Geology (3 hrs)*
*ESSC439 Economic Geology (3 hrs)*
*ESSC448 Hydrogeology (3 hrs)*
*ESSC470 Quantitative Methods in Geography and Geology (3 hrs)*
*ESSC476 Geographic Information Systems (3 hrs)*
*ESSC487 Cooperative Education in Geoscience (3 hrs)*
*ESSC488/489/490 Internship (6/7/8 hrs)*
*ESSC490 Independent Study (undergraduate research) (3 hrs)*

Minor Requirements: 0 hours

No minor is required.

University Elective Courses: 16 hours

Program Total: 124 hours

GEOLOGY MAJOR — HYDROGEOLOGY CONCENTRATION (GEL HYDR)

The hydrogeology concentration prepares students for graduate study or employment in the hydrogeology industry. It focuses on those aspects of geology and related sciences that pertain to the occurrence, movement, supply and quality of water. The program is designed to provide a strong technical base. Students will be educated in skills that are required to gather and process data with particular attention to water-related problems. The program includes a group minor composed of the required courses in mathematics, chemistry, and physics. No other minor is needed to meet graduation requirements.

**General Education Requirements**

*Area I: Symbolics and Communication*

1. See page 23
2. See page 23
3. See page 23

4. One course from the following:
   *MATH 120 Calculus I*
   *MATH 121 Calculus II*

5. See page 23

*Area II: Science and Technology*

1. One course from the following:
   *CHEM 121/122 General Chemistry I with lab
   *PHY 221/222 Mechanics and Sound*
2. See page 24
3. ESSC110 The Dynamic Earth System*

*Area III: Social Sciences*

1. See page 24
2. See page 24
3. See page 24
4. See page 24

*Area IV: Arts and Humanities*

1. See page 25
2. See page 25
3. See page 25
4. See page 25

*CHEM 121/122 General Chemistry I with lab
*PHY 221/222 Mechanics and Sound*

*Area III: Social Sciences*

1. See page 24
2. See page 24
3. See page 24
4. See page 24

*Area IV: Arts and Humanities*

1. See page 25
2. See page 25
3. See page 25
4. See page 25

*CHEM 121/122 General Chemistry I with lab
*PHY 221/222 Mechanics and Sound*
Physical Education/Graduation Requirement ........................................ 2 hours

Major Requirements ................................................................. 65-67 hours

*ESSC110 The Dynamic Earth System (4 hrs)
ESSC111 The Earth System Through Time (4 hrs)
ESSC200 Introduction to Hydrology (3 hrs)
ESSC228 Mineralogy (4 hrs)
ESSC225 Geomorphology (4 hrs)
ESSC226 Structural Geology (4 hrs)
ESSC229 Igneous and Metamorphic Petrology (4 hrs)
ESSC320 Sedimentology and Stratigraphy (4 hrs)
ESSC355 Field Geology I (2 hrs)
ESSC356 Field Geology II (3 hrs)
ESSC448 Hydrogeology (3 hrs)

+Field Hydrogeology (2 hrs)
CHEM121/122 General Chemistry I with lab (4 hrs)
CHEM123/124 General Chemistry II with lab (4 hrs)
MATH120 Calculus I (4 hrs)
MATH121 Calculus II (4 hrs)

One course from the following:
PHYS221 Mechanics, Sound and Heat (4 hrs)
PHYS223 Mechanics and Sound (5 hrs)

One course from the following:
PHYS222 Electricity and Light (4 hrs)
PHYS224 Electricity and Light (5 hrs)

Minor Requirements ................................................................. 0 hours

No minor is required.

University Elective Courses ....................................................... 20 hours

Program Total ............................................................................ 124 hours

Note:
*This course satisfies both a general education and a major requirement.
+The hydrogeology field course may be selected from a number of universities with approval from a geology advisor.

GEODEG MAJOR — TOURISM
GEODEG CONCENTRATION (GEOG TOUR)

A geographic approach to tourism represents a distinctly different emphasis from the traditional business approach to the travel industry. The traditional business approach to travel necessarily sees an industry that must be efficiently managed for maximum sustainability of profit. The tourism geography approach, by contrast, focuses upon the physical and human geographic setting of the tourism experience. In addition, it focuses upon the intimate connection of the "internal" tourist experience with the "external" geography of the destination.

The tourism geography specialist asks, "Specifically, what geographic images and expectations might the tourist carry internally, images and expectations that will color their transactions with the physical setting and culture of that destination? Further, what planning and interpretative means will most successfully allow the tourist to fully experience and remember the destination's unique geography?" G

This tourism geography approach represents an excellent example of applied human geography. Upon completion of the concentration, students will be well prepared as tourism geography specialists.

General Education Requirements ................................................ 40 hours

Area I Symbolic and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

Area II Science and Technology
1. See page 24
2. See page 24
3. ESSC110 The Dynamic Earth System

Area III Social Sciences
1. See page 24
2. See page 24
3. One course from the following:
   *GEOG107 Introduction to Geography
   *GEOG110 World Regions

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ........................................ 2 hours

Major Requirements ................................................................. 57 hours

Required Courses .................................................................... 30 hours

*GEOG107 Introduction to Geography (3 hrs)
*GEOG110 World Regions (3 hrs)
ESSC110 The Dynamic Earth System (4 hrs)
ESSC227 Topographic Maps (2 hrs)
ESSC276/GPLN276 Principles of Geographic Information Systems (3 hrs)
GEOG360 Cultural Geography (3 hrs)

One course from the following:
GEOG100 Human Geosciences (3 hrs)
GEOG235 Economic Geography (3 hrs)

One course from the following:
GPLN215 Introduction to Urban and Regional Planning (3 hrs)
GEOG332 Urban Geography (3 hrs)
GEOG335 Historic Preservation (3 hrs)
GEOG441 Transportation Geography and Planning (3 hrs)

Two courses from the following:
GEOG314 Geography of Russia and Neighboring States (3 hrs)
GEOG318 Geography of Asia (3 hrs)
GEOG319 Geography of Europe (3 hrs)
GEOG320 Geography of the United States and Canada (3 hrs)
GEOG321 Geography of Latin America (3 hrs)
GEOG322 Geography of Africa (3 hrs)

Concentration Courses .............................................................. 21 hours

GEOG112 Introduction to Travel and Tourism (3 hrs)
GEOG113 Foundations of Guest Service (3 hrs)
GEOG212 Geography of Travel and Tourism (3 hrs)
GEOG315 Travel and Tourism: The European Scene (3 hrs)
GEOG326 Tourism and Socioeconomic Development (3 hrs)
GEOG445 Cultural Tourism Resources (3 hrs)
GEOG446 Heritage Interpretation and Tourism (3 hrs)

Elective Courses ....................................................................... 6 hours

Six hours from the following:
RECR100 Introduction to Recreation and Leisure (3 hrs)
ERM103 Introduction to the Hospitality Industry (2 hrs)
ESSC114 National Parks and Monuments (2 hrs)
GEOG115 Observing the Human Landscape (2 hrs)
COSC101 Computer Science Concepts and Practical Applications (3 hrs)
HPLD210 American Red Cross (2 hrs)
ESSC224 Weather (3 hrs)
MKTG350 Principles of Marketing (3 hrs)
CTAC374 Inter-cultural Communication (3 hrs)
ESSC424 Climatology (3 hrs)

One course from the following:
GEOG387/487 Cooperative Education in Geography (6 hrs)
GEOG448 Internship (4 hrs)
### Minor Requirements
No minor is required.

### University Elective Courses
25 hours

### Program Total
124 hours

---

**Note:** This course satisfies both a general education and a major requirement.

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## URBAN AND REGIONAL PLANNING
**Major (URPL)**

This interdisciplinary major studies the current situation in urban and regional planning, including land use, zoning, problems of urban growth and local decision-making. The program is designed to prepare students for positions in public planning agencies, private planning firms or other positions where planning skills are needed and relevant. Courses provide necessary skills to develop zoning ordinances, analyze site plans, critique general development plans, administer local planning regulations as well as prepare and review grant applications, environmental impact statements and policy planning programs.

### General Education Requirements
44 hours

**Area I Symbolics and Communication**
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. SOCL250 Social Statistics I

**Area II Science and Technology**
1. See page 24
2. See page 24
3. See page 24

**Area III Social Sciences**
1. See page 24
2. See page 24
3. See page 24
4. See page 24

**Area IV Arts and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. See page 25

### Physical Education/Graduation Requirement
2 hours

### Major Requirements
36 hours

**Required Courses**
- 27 hours
  - GPLN215 Introduction to Urban and Regional Planning (3 hrs)
  - GPLN216 Readings in Urban Planning (2 hrs)
  - GPLN276 Principles of Geographic Information Systems (3 hrs)
  - GPLN306 Comprehensive Planning and Zoning (3 hrs)
  - GPLN401/GHPR801 Planning/Preservation Graphics (3 hrs)
  - GPLN410 Site Planning Studio (4 hrs)
  - GPLN425 History of Urban Form and Function (3 hrs)
  - GPLN495 Environmental Assessment and Planning (3 hrs)
  - PLSC270 Public Administration (3 hrs)

**Restricted Electives Courses**
9 hours

Nine hours from the following selected in consultation with the advising coordinator:
- GEOG332 Urban Geography (3 hrs)
- GEOG441 Transportation Geography and Planning (3 hrs)
- ESSC303 Field Geography (3 hrs)
- GEOG405 Aerial Photo Interpretation (3 hrs)
- GEOG576 Geographic Information Systems Analysis (3 hrs)
- GEOG4276 Geographic Information Systems (3 hrs)
- GHPR335 Historic Preservation (3 hrs)
- GPLN409 Professional Practice for Planners (3 hrs)
- GPLN387/487 Cooperative Education (3/3 hrs)
- GPLN488/498/490 Internship (4/5/6 hrs)
- GPLN497/498/499 Independent Study (1/2/3 hrs)

*SOCL250 Social Statistics I (3 hrs)

### University Elective Courses
22 hours

### Program Total
124 hours

---

## EARTH SCIENCE
**Major (ESCT)**

Secondary Teacher Certification

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in earth science/geology, certification code DHL. The Michigan Test for Teacher Certification (MTTC) covering this field is # 20, "Geology/Earth Science." Consult a department advisor before you declare this major.

### General Education Requirements
41 hours

**Area I Symbolics and Communication**
1. See page 23
2. See page 23
3. See page 23
4. One course from the following:
   - MATH120 Calculus I (4 hrs)
   - MATH170 Calculus II (3 hrs)
   - See page 23

**Area II Science and Technology**
1. CHEM112/112S General Chemistry I with Lab (4 hrs)
2. BIOL110 Introductory Biology I (3 hrs)
3. ESSC110 The Dynamic Earth System

**Area III Social Sciences**
1. See page 24
2. See page 24
3. See page 24
4. See page 24

**Area IV Arts and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. See page 25

### Additional Requirements
4 hours

- PHY221 Mechanics, Sound and Heat (4 hrs)

### Physical Education/Graduation Requirement
2 hours

### Major Requirements
33 hours

**Required Courses**
- 33 hours
  - ASTR205 Principles of Astronomy (4 hrs)
  - *ESSC110 The Dynamic Earth System (4 hrs)
  - ESSC111 The Earth System Through Time (4 hrs)
  - ESSC212 Weather, Climate and the Earth System (3 hrs)
  - ESSC229 Rocks and Minerals (3 hrs)
  - ESSC320 Oceanoogy (3 hrs)
  - ESSC324 Weather (3 hrs)
  - ESSC351 Paleontology (4 hrs)
  - ESSC405 Nature of Science (1 hr)
  - One course from the following:
    - ESSC315 Geomorphology (4 hrs)
    - ESSC370 Glacial Geology (4 hrs)
<table>
<thead>
<tr>
<th>Professional Studies</th>
<th>39 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-admission phase: The Learner and the Community</td>
<td>8 hours</td>
</tr>
<tr>
<td>EDPS322 Human Development and Learning (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>FETE201 Field Experience I (1 hr)</td>
<td></td>
</tr>
<tr>
<td>SPGN251 Education of Students with Exceptionalities (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>The following courses require formal admission to the teacher education program:</td>
<td></td>
</tr>
<tr>
<td>Phase I: Curriculum, Assessment and the Social Context</td>
<td>10 hours</td>
</tr>
<tr>
<td>SOFD328 Schools in a Multicultural Society (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>CURR305 Curriculum and Methods Secondary (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>FETE302 Field Experience II: Secondary (1 hr)</td>
<td></td>
</tr>
<tr>
<td>EDPS340 Introduction to Assessment and Evaluation (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>Phase II: Content Methods, Literacy and Technology</td>
<td>9 hours</td>
</tr>
<tr>
<td>RDNG311 Teaching Reading in the Secondary School (3 hrs)</td>
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<tr>
<td>FETE402 Field Experience III: Secondary (1 hr)</td>
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</tr>
<tr>
<td>EDMT330 Instructional Applications of Media and Technology (2 hrs)</td>
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</tr>
<tr>
<td>ESSC347 Teaching Earth Science and Physical Geography (5 hrs)</td>
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</tr>
<tr>
<td>Phase III: Capstone Experience</td>
<td>12 hours</td>
</tr>
<tr>
<td>EDUC492 Student Teaching (12 hrs)</td>
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</tr>
<tr>
<td>Minor Requirements</td>
<td>9-24 hours</td>
</tr>
<tr>
<td>Select a minor from the approved list of minors for secondary K-12 and special education secondary programs.</td>
<td></td>
</tr>
<tr>
<td>University Elective Courses</td>
<td></td>
</tr>
<tr>
<td>Program Total</td>
<td>127 hours</td>
</tr>
<tr>
<td>Note: *This course satisfies both a general education and a major requirement. <strong>PHY406 or BIOL206 may be substituted.</strong></td>
<td></td>
</tr>
</tbody>
</table>

**GEOGRAPHY MAJOR (GEOT)**

Secondary Teacher Certification

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification by the Michigan Department of Education Secondary Provisional Certificate endorsed in geography, certification code CB, and, depending on the minor selected, endorsement in economics (CA), history (CC), political science (CD), psychology (CE), sociology (CF), or social studies (RX). The Michigan Test for Teacher Certification (MTTC) covering this field is #08. "Geography."

**General Education Requirements**

<table>
<thead>
<tr>
<th>Area I Symbols and Communication</th>
<th>40 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. See page 23</td>
<td></td>
</tr>
<tr>
<td>2. See page 25</td>
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<tr>
<td>3. See page 23</td>
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<tr>
<td>4. See page 23</td>
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<tr>
<td>5. See page 23</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Area II Science and Technology</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. See page 24</td>
<td></td>
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<tr>
<td>2. See page 24</td>
<td></td>
</tr>
<tr>
<td>3. ESSC110 The Dynamic Earth System*</td>
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</table>

<table>
<thead>
<tr>
<th>Area III Social Sciences</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. See page 24</td>
<td></td>
</tr>
<tr>
<td>2. HIST102 Western Civilization, 1648 to World War I (3 hrs)</td>
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</tr>
<tr>
<td>3. GEOG110 World Regions*</td>
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</tr>
<tr>
<td>4. HIST103 20th Century Civilization (3 hrs)</td>
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</table>

<table>
<thead>
<tr>
<th>Area IV Arts and Humanities</th>
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</tr>
</thead>
<tbody>
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<td>1. See page 25</td>
<td></td>
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<tr>
<td>2. See page 25</td>
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<tr>
<td>3. See page 25</td>
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<tr>
<td>4. See page 25</td>
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</tbody>
</table>

**Additional Requirements**

<table>
<thead>
<tr>
<th>0-3 hours</th>
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</thead>
<tbody>
<tr>
<td>A course in economics, if not included in the minor (3 hrs)</td>
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</table>

**Physical Education/Graduation Requirement**

<table>
<thead>
<tr>
<th>2 hours</th>
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</thead>
<tbody>
<tr>
<td>Major Requirements</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>15 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG107 Introduction to Geography (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>&quot;ESSC110 The Dynamic Earth System (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>&quot;ESSC110 World Regions (3 hrs)</td>
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<tr>
<td>GEOG133 Geography of Michigan (2 hrs)</td>
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<tr>
<td>GEOG320 Geography of the United States and Canada</td>
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</table>

<table>
<thead>
<tr>
<th>Restricted Elective Courses</th>
<th>15 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>One course from each of the following four areas:</td>
<td></td>
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</tbody>
</table>

**Geographic Techniques**

| GEOG276 Principles of Geographic Information Systems (3 hrs) | |
| ESSC103 Field Geography (3 hrs) | |

**Physical Geography**

| ESSC205 Introduction to Hydrology (3 hrs) | |
| ESSC250 Introduction to Coastal Processes (3 hrs) | |
| ESSC230 Oceanography (3 hrs) | |
| ESSC232 Weather (3 hrs) | |
| ESSC235 Geomorphology (4 hrs) | |
| ESSC237 Soil Science (3 hrs) | |
| ESSC238 Soil Biology (3 hrs) | |

**Human Geography**

| GEOG108 Human Geosciences (3 hrs) | |
| GEOG235 Economic Geography (3 hrs) | |
| GEOG332 Urban Geography (3 hrs) | |
| GEOG333 Settlement Geography (3 hrs) | |
| GHP335 Historic Preservation (3 hrs) | |
| GEOG340 Cultural Geography (3 hrs) | |
| GEOG341 Geography of Population (3 hrs) | |

**Regional Geography**

| Two courses from the following: | |
| GEOG111 Regions and Resources (3 hrs) | |
| GEOG314 Geography of Russia and Neighboring States (3 hrs) | |
| GEOG230 Geography of Asia (3 hrs) | |
| GEOG319 Geography of Europe (3 hrs) | |
| GEOG321 Geography of Latin America (3 hrs) | |
| GEOG322 Geography of Africa (3 hrs) | |

**Program Total**

<table>
<thead>
<tr>
<th>127 hours</th>
</tr>
</thead>
</table>

Note: *This course satisfies both a general education and a major requirement. **PHY406 or BIOL206 may be substituted.*
Minor Requirements ........................................... 15-21 hours
Select a teaching minor from the following: economics, history, political science, psychology and sociology.

University Elective Courses .................................. 0 hours

Program Total ..................................................... 126 hours

Note: *This course satisfies both a general education and major requirement.

**CARITOGRAHY AND REMOTE SENSING MINOR (CRS)**

Cartography (map-making) is an ancient science designed to depict the earth's features and human activities. Today maps are made with several significant functions in mind to understand spatial phenomena, to store information, and to analyze areal relationships.

Remote sensing uses space-age technology to sense, record and transmit information about the biosphere and atmosphere. Satellite imagery is an important element in collecting remote sensing data. Remote sensing information is often used in constructing modern maps, whether by hand or through the use of computer mapping and geographic information system software.

The goal of the minor is to provide an employment track for undergraduates to entry-level positions as cartographers and remote sensing technicians. The minor provides balanced training between traditional cartographic work and computer maps. Emphasis is on map properties, spatial concepts, mapping techniques, drafting skills, graphic storage and display of data. A strongly recommended aspect of this training is the internship or cooperative education experience at nearby private and public agencies.

Required Courses ............................................... 15 hours

- GEOG405 Aerial Photograph Interpretation (3 hrs)
- GRLN215/GEOG215 Planning/Preservation Graphics (3 hrs)
- GEOG276/SPLN276 Principles of Geographic Information Systems (3 hrs)
- GEOG376 Geographic Information Systems Analysis (3 hrs)
- GIS or CRS 485 Introduction to Remote Sensing (3 hrs)

Restricted Elective Courses .................................... 5 hours

- Five hours from the following:
  - GEOG227 Topographic Maps (3 hrs)
  - GEOG233 Field Geology I (2 hrs)
  - GEOG287/GEOP287 Cooperative Education in Geoscience (3 hrs)
  - GEOG297/497/498/499/4980 Internship (4/5/6/7/8 hrs)
  - MATH205 College Algebra (3 hrs)
  - MATH207 Plane Trigonometry (2 hrs)
  - ART165 Graphic Design for Non-majors (3 hrs)
  - INDI121 Graphic Communication (3 hrs)
  - CST206 Surveying (3 hrs)
  - CIDM221 Computer Graphic Programming for Industry (3 hrs)

- One course from the following:
  - GEOG215 End-User Computing (3 hrs)
  - COSC145 Introduction to FORTRAN Programming (3 hrs)
  - IS417 Systems Analysis and Design (3 hrs)

Minor Total ....................................................... 20 hours

**COASTAL ENVIRONMENTS MINOR (CENVY)**

Required Courses ............................................... 16 hours

- ESSC110 The Dynamic Earth System (4 hrs)
- ESSC250 Introduction to Coastal Processes (3 hrs)
- ESSC280 Oceanography (3 hrs)
- ESSC390 Biogeography (6 hrs)
- ESSC450 Lake and Coastal Management (3 hrs)

Restricted Elective Courses .................................... 6 hours

- Six hours from the following:
  - GRLN215 Introduction to Urban and Regional Planning (3 hrs)
  - ESSC208 Natural Environmental Hazards (3 hrs)
  - GEOG405 Aerial Photograph Interpretation (5 hrs)
  - ESSC325 Geomorphology (4 hrs)
  - ESSC330 Sedimentology and Stratigraphy (3 hrs)
  - ESSC495/GRLN495 Environmental Assessment and Planning (3 hrs)

Students, in consultation with the minor advisor, may choose other elective courses not listed above.

Minor Total ....................................................... 22 hours

**ENVIRONMENTAL ANALYSIS MINOR (ENAN)**

Required Courses ............................................... 24 hours

- GRLN215 Introduction to Urban and Regional Planning (3 hrs)
- GEOG376 Geographic Information Systems Analysis (3 hrs)
- GEOG405 Aerial Photograph Interpretation (3 hrs)
- ESSC370 Quantitative Methods in Geography and Geology (3 hrs)
- ESSC495/GRLN495 Environmental Assessment and Planning (3 hrs)
- GIS or CRS 485 Introduction to Remote Sensing (3 hrs)

Minor Total ....................................................... 24 hours

**EARTH SCIENCE MINOR (ESC)**

Required Courses ............................................... 17 hours

- ESSC110 The Dynamic Earth System (4 hrs)
- ESSC111 The Earth System through Time (4 hrs)
- ESSC212 Weather, Climate and the Earth System (3 hrs)
- ESSC226 Rocks and Minerals (3 hrs)
- ESSC320 Oceanography (3 hrs)
- ESSC425 Severe and Unusual Weather (3 hrs)
- ESSC476 Geographic Information Systems (3 hrs)

Minor Total ....................................................... 20-21 hours

**GEOGRAPHIC INFORMATION SYSTEMS MINOR (GIS)**

Required Courses ............................................... 15 hours

- GEOG276/GRLN276 Principles of Geographic Information Systems (3 hrs)
- GEOG376 Geographic Information Systems Analysis (3 hrs)
- GEOG405 Aerial Photograph Interpretation (3 hrs)
- GEOG476 Advanced Geographic Information Systems (3 hrs)
- GIS or CRS 480 Geographic Information Systems Projects (3 hrs)

Restricted Elective Courses .................................... 6-7 hours

- One course from the following:
  - GEOG107 Introduction to Geography (3 hrs)
  - ESSC108 Earth Science (4 hrs)
  - ESSC110 The Dynamic Earth System (4 hrs)
One course from the following:
GPLN215 Introduction to Urban and Regional Planning (3 hrs)
GEOG336 Population Geography (3 hrs)
ESSC485 Remote Sensing (3 hrs)

Minor Total ................................................. 21-22 hours

**Geography Minor (GEOG)**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>7 hours</th>
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</thead>
<tbody>
<tr>
<td>ESSC110 The Dynamic Earth System (4 hrs)</td>
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</tr>
<tr>
<td>GEOG110 World Regions (3 hrs)</td>
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</table>

<table>
<thead>
<tr>
<th>Restricted Elective Courses</th>
<th>13 hours</th>
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</thead>
<tbody>
<tr>
<td>Thirteen hours selected in consultation with a geography advisor.</td>
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Minor Total ................................................. 20 hours

**Geology Minor (GEL)**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>20 hours</th>
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</thead>
<tbody>
<tr>
<td>ESSC110 The Dynamic Earth System (4 hrs)</td>
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</tr>
<tr>
<td>ESSC111 The Earth System Through Time (4 hrs)</td>
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<tr>
<td>ESSC228 Mineralogy (4 hrs)</td>
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</tr>
<tr>
<td>ESSC326 Structural Geology (4 hrs)</td>
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<tr>
<td>ESSC329 Igneous and Metamorphic Petrology (4 hrs)</td>
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</table>

<table>
<thead>
<tr>
<th>Restricted Elective Courses</th>
<th>1 hour</th>
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<tbody>
<tr>
<td>One hour selected in consultation with a geology advisor.</td>
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Minor Total ................................................. 21 hours

**Historic Preservation Minor (HPRS)**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>21 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG360 Cultural Geography (3 hrs)</td>
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<tr>
<td>GEOG332 Urban Geography (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GEOG333 Settlement Geography (3 hrs)</td>
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</tr>
<tr>
<td>GHPR235 Historic Preservation (3 hrs)</td>
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<tr>
<td>GHPR475 Architectural Nomenclature (2 hrs)</td>
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<tr>
<td>HIST123 The United States to 1877 (3 hrs)</td>
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<tr>
<td>HIST124 The United States, 1877 to the Present (3 hrs)</td>
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</tr>
<tr>
<td>ART429 History of American Architecture (3 hrs)</td>
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</table>

<table>
<thead>
<tr>
<th>Restricted Elective Courses</th>
<th>4-6 hours</th>
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</thead>
<tbody>
<tr>
<td>Two courses from the following:</td>
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<tr>
<td>ANTH135 Introduction to Cultural Anthropology (3 hrs)</td>
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<tr>
<td>ANTH150 Introductory Archeology (3 hrs)</td>
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<tr>
<td>ECON238 Land Economics (3 hrs)</td>
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<tr>
<td>GPLN215 Introduction to Urban and Regional Planning (3 hrs)</td>
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<tr>
<td>GEOG235 Economic Geography (3 hrs)</td>
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</tr>
<tr>
<td>GEOG533 Geography of Michigan (2 hrs)</td>
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<tr>
<td>GEOG545 Geography of Resources (2 hrs)</td>
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<tr>
<td>GPLN400/GHPR401 Planning/Preservation Graphics (3 hrs)</td>
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<tr>
<td>IDE311 History of Interiors: Ancient-1800 (2 hrs)</td>
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<tr>
<td>IDE321 History of Interiors: 1800-Present (2 hrs)</td>
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<tr>
<td>HIST335 Native American History (3 hrs)</td>
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<tr>
<td>HIST336 The United States Urban History (3 hrs)</td>
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<tr>
<td>TEDU103 History of Industrial Technology (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>CNST201 Construction Systems (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>CNST228 Construction Drawing (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>PSY350 Environmental Psychology (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SOC105 Social Statistics I (3 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

| Note: |
| American history majors will substitute elective courses for HIST123 and HIST124. |

**Tourism Geography Minor (TOUR)**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>21-22 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG110 World Regions (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GEOG112 Introduction to Travel and Tourism (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GEOG113 Foundations of Guest Service (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GEOG212 Geography of Travel and Tourism (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GEOG445 Cultural Tourism Resources (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GEOG446 Heritage Interpretation and Tourism (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>One course from the following:</td>
<td></td>
</tr>
<tr>
<td>ESSC108 Earth Science for non-science majors (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>GPLN215 Introduction to Urban and Regional Planning (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GEOG335 Travel and Tourism: The European Scene (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GEOG332 Urban Geography (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GHPR335 Historic Preservation (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GEOG336 Tourism and Socioeconomic Development (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GEOG441 Transportation Geography and Planning (3 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

Minor Total ................................................. 21-22 hours

**Urban and Regional Planning Minor (URPL)**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>11 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPLN215 Introduction to Urban and Regional Planning (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GPLN216 Readings in Urban Planning (2 hrs)</td>
<td></td>
</tr>
<tr>
<td>GPLN306 Comprehensive Planning and Zoning (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GPLN425 History of Urban Form and Function (3 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Restricted Elective Courses</th>
<th>9 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nine hours from the following selected in consultation with the advising coordinator:</td>
<td></td>
</tr>
<tr>
<td>GEOG332 Urban Geography (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GEOG441 Transportation Geography and Planning (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>ESSC503 Field Geography (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GEOG276 Geographic Information Systems Analysis (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GHPR305 Historic Preservation (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GPLN276 Principles of Geographic Information Systems (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GPLN401/GHPR401 Planning/Preservation Graphics (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GPLN409 Professional Practice for Planners (2 hrs)</td>
<td></td>
</tr>
<tr>
<td>GPLN410 Site Planning Studio (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>GPLN495 Environmental Assessment and Planning (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GPLN387/ESSC487 Cooperative Education (3/3 hrs)</td>
<td></td>
</tr>
<tr>
<td>GPLN488/489/490 Internship (4/5/6 hrs)</td>
<td></td>
</tr>
<tr>
<td>GPLN497/498/499 Independent Study (1/2/3 hrs)</td>
<td></td>
</tr>
<tr>
<td>PLSC270 Public Administration (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SOC1250 Social Statistics I (3 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

Minor Total ................................................. 20 hours

**Earth Science Minor (ESCT)**

Secondary, K-12 and Special Education-Secondary Teacher Certification

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in geology/earth science. Certification code DH. The Michigan Test for Teacher Certification (MTTC) covering this field is #20, "Geology/Earth Science."

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>21 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESSC110 The Dynamic Earth System (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>ESSC111 The Earth System Through Time (4 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

Minor Total ................................................. 25-27 hours
AREA STUDIES MAJORS (AREA)

The interdisciplinary area studies minor helps students understand the background and specific problems of a world cultural or geopolitical area: Africa, Asia-Pacific, Latin America, Middle East and North Africa, or Russia and Eastern Europe. Courses drawn from several departments supply information on the area economy, geography, history, politics, society and general cultural background. The program also provides a foundation for graduate work in an area of specialization or preparation for careers in government service or private business.

Students can also utilize independent study courses available through some departments for one, two or three hours of credit to be applied as elective credit in the major area. Majors are required to minor in one of the following: anthropology, economics, geography, history, political science or sociology, except Latin America majors who may, instead, elect a minor in Spanish culture, Spanish language or Spanish literature.

AREA STUDIES MAJOR — AFRICA
(AREA AFR)

General Education Requirements ........................................ 41 hours

Area I: Symbolics and Communication

Area I: Symbolics and Communication

Area II: Science and Technology

Area II: Science and Technology

Area III: Social Sciences

Area III: Social Sciences

Area IV: Arts and Humanities

Area IV: Arts and Humanities

Physical Education/Graduation Requirement ................................ 2 hours

Major Requirements .................................................. 30 hours

Required Basic Courses .............................................. 9 hours

*ECN201 Principles of Macroeconomics (3 hrs)

*ECN202 Principles of Microeconomics (3 hrs)

*EGEO110 World Regions (3 hrs)

Required Area Courses ............................................... 15 hours

ANTH236 Peoples and Cultures of Africa (3 hrs)

ECON385 Economic Development (3 hrs)

EGEO322 Geography of Africa (3 hrs)

HIST347 Sub-Saharan Africa to 1885 (3 hrs)

HIST372 Government and Politics of Sub-Saharan Africa (3 hrs)

Area Elective Courses .................................................. 6 hours

Six hours from the following:

*ANTH235 Introduction to Cultural Anthropology (3 hrs)

*ANTH235/SOCL235 Social and Cultural Change (3 hrs)

ECON370 Comparative Economic Systems (3 hrs)

EGEO318 Problems of Sub-Saharan Africa (3 hrs)

HIST342 North Africa, 1798 to the Present (3 hrs)

HIST348 20th-Century Africa (3 hrs)

Minor Requirements .................................................. 20 hours

University Elective Courses ........................................... 20 hours

Program Total .......................................................... 124 hours
AREA STUDIES MAJOR — ASIA-FAR EAST (AREA ASFE)

General Education Requirements ............................................. 41 hours

**Area I: Symbols and Communication**
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

**Area II: Science and Technology**
1. ESSC108 Earth Science for non-science majors (4 hrs)
2. See page 24
3. See page 24

**Area III: Social Science**
1. See page 24
2. One course from the following:
   - HIST105 20th-Century Civilization (3 hrs)
   - HIST106 Asian and African Civilization (3 hrs)
3. ECON201 Principles of Macroeconomics*
4. ECON202 Principles of Microeconomics*

**Area IV: Arts and Humanities**
1. See page 23
2. See page 23
3. See page 23
4. See page 23

Physical Education/Graduation Requirement ................................ 2 hours

Major Requirements ............................................................ 30 hours

- **Required Basic Courses** ................................................. 6 hours
  - ECON201 Principles of Macroeconomics (3 hrs)
  - ECON202 Principles of Microeconomics (3 hrs)

- **Required Area Courses** .................................................. 14 hours
  - ECON385 Economic Development (3 hrs)
  - GEOG318 Geography of Asia (3 hrs)
  - One course from the following:
    - HIST441 The Far East to 1800 (3 hrs)
    - HIST442 Modern China (3 hrs)
    - HST555 Studies in Far Eastern History (2 hrs)
    - PLSC374 Asian Political Systems (3 hrs)

- **Area Elective Courses** ..................................................... 7 hours
  - ANTH135 Introduction to Cultural Anthropology (3 hrs)
  - ANTH336/SOC/336 Social and Cultural Change (3 hrs)
  - ART1421 History of Oriental Art (3 hrs)
  - HIST216 History and Geography of Modern Asia (6 hrs)
  - HIST307 The Religions of South and East Asia (3 hrs)
  - HIST441 The Far East to 1800 (3 hrs)
  - HIST442 Modern China (3 hrs)

Minors ..................................................................................... 20 hours

University Elective Courses .................................................... 31 hours

Program Total ........................................................................... 124 hours

Note:
*This course satisfies both a general education and a major requirement.

AREA STUDIES MAJOR — LATIN AMERICA (AREA LA)

Students electing the Latin American area studies major are strongly urged to minor in Spanish language, literature or culture.

General Education Requirements .............................................. 41 hours

**Area I: Symbols and Communication**
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

**Area II: Science and Technology**
1. See page 24
2. See page 24
3. See page 24

**Area III: Social Science**
1. See page 24
2. One course from the following:
   - HIST101 Western Civilization to 1648 (3 hrs)
   - HIST102 Western Civilization, 1648 to World War I (3 hrs)
3. ECON201 Principles of Macroeconomics*
4. ECON202 Principles of Microeconomics*

**Area IV: Arts and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement .................................. 2 hours

Major Requirements ............................................................... 30 hours

- **Required Basic Courses** ..................................................... 9 hours
  - ECON201 Principles of Macroeconomics (3 hrs)
  - ECON202 Principles of Microeconomics (3 hrs)
  - GEOG110 World Regions (3 hrs)

- **Required Area Courses** ...................................................... 15 hours
  - ANTH135 Introduction to Cultural Anthropology (3 hrs)
  - ANTH233 Peoples and Cultures of Mexico (3 hrs)
  - ECON385 Economic Development (5 hrs)
  - GEOG318 Geography of Latin America (3 hrs)
  - PLSC367 Latin American Politics (3 hrs)
  - One course from the following:
    - HIST101 Western Civilization to 1648 (3 hrs)
    - HIST102 Western Civilization, 1648 to World War I (3 hrs)

- **Area Elective Courses** ....................................................... 6 hours
  - ANTH135 Introduction to Cultural Anthropology (3 hrs)
  - ANTH233 Peoples and Cultures of Mexico (3 hrs)
  - ANTH336/SOC/336 Social and Cultural Change (3 hrs)
  - ECON370 Comparative Economic Systems (3 hrs)
  - GEOG317/HIST317 History and Geography of Spanish America (6 hrs)
  - GEOG512 Middle America and the Caribbean World (2 hrs)
  - GEOG513 South American Lands (2 hrs)
  - HIST101 Western Civilization to 1648 (3 hrs)
  - HIST102 Western Civilization, 1648 to World War I (3 hrs)
  - HIST103 New World History (3 hrs)
  - HIST206 History of Mexico (3 hrs)
  - HIST506 Studies in Latin American History (2 hrs)
  - SPNI102 The Cultures of Spanish America (3 hrs)
  - SPNI131 Survey of Spanish-American Literature I (3 hrs)
  - SPNI132 Survey of Spanish-American Literature II (3 hrs)
  - SPNI141 Spanish-American Prose (3 hrs)
  - SPNI144 Modernism in Spanish America (3 hrs)

Minors ..................................................................................... 20 hours

University Elective Courses ..................................................... 31 hours
Program Total ........................................ 124 hours

Note: "This course satisfies both a general education and a major requirement.

AREA STUDIES MAJOR — MIDDLE EAST AND NORTH AFRICA (AREA MENA)

General Education Requirements ........................................ 41 hours
Area I Symbolics and Communication
1. See page 23.
2. See page 23.
3. See page 23.
4. See page 23.
5. See page 23.

Area II Science and Technology
1. See page 24.
2. See page 24.

Area III Social Sciences
1. See page 24.
2. See page 24.

Area IV Arts and Humanities
1. See page 25.
2. See page 25.
3. See page 25.
4. See page 25.

Physical Education/Graduation Requirement ........................................ 7 hours

Major Requirements ........................................ 30 hours
Required Basic Courses ........................................ 9 hours
*ECON201 Principles of Microeconomics (3 hrs)
*ECON202 Principles of Microeconomics (3 hrs)
GEOG110 World Regions (3 hrs)

Required Area Courses ........................................ 9 hours
ECON385 Economic Development (3 hrs)
PLSC371 Government and Policies of the Middle East (3 hrs)

One course from the following:
HIST341 The Middle East, 1798 to the Present (3 hrs)
HIST342 North Africa, 1798 to the Present (3 hrs)

Area Elective Courses ........................................ 12 hours

Twelve hours from the following:
ANTH115 Introduction to Cultural Anthropology (3 hrs)
ANTH236 Peoples and Cultures of Africa (3 hrs)
ANTH336/SCI1336 Social and Cultural Change (3 hrs)
ECON865 Economic Growth and Development (3 hrs)
GEOG322 Geography of Africa (3 hrs)
HIST302 Near Eastern and Western Religions (3 hrs)
HIST339 Arab-Israeli Conflict (3 hrs)
HIST341 The Middle East, 1798 to the Present (3 hrs)
HIST342 North Africa, 1798 to the Present (3 hrs)
HIST343 Nationalism and Modernization in the Middle East and North Africa (3 hrs)
LITB331 World Mythology (3 hrs)

Minor Requirements ........................................ 20 hours

University Elective Courses ........................................ 31 hours

Program Total ........................................ 124 hours

Note: "This course satisfies both a general education and a major requirement.

AREA STUDIES MAJOR — RUSSIA AND EASTERN EUROPE (AREA RUS)

General Education Requirements ........................................ 41 hours
Area I Symbolics and Communication
1. See page 23.
2. See page 23.
3. See page 23.
4. See page 23.
5. See page 23.

Area II Science and Technology
1. See page 24.
2. See page 24.

Area III Social Sciences
1. See page 24.
2. See page 24.
3. ECON201 Principles of Macroeconomics
4. ECON202 Principles of Microeconomics

Area IV Arts and Humanities
1. See page 25.
2. See page 25.
3. See page 25.
4. See page 25.

Physical Education/Graduation Requirement ........................................ 7 hours

Major Requirements ........................................ 30 hours
Required Basic Courses ........................................ 9 hours
*ECON201 Principles of Macroeconomics (3 hrs)
*ECON202 Principles of Microeconomics (3 hrs)
GEOG110 World Regions (3 hrs)

Required Area Courses ........................................ 12 hours
GEOG314 Geography of Russia and Neighboring States (3 hrs)
HIST334 Russia since 1855 (3 hrs)
HIST347 19th-Century Ideological Background of the Russian Revolution (3 hrs)
PLSC361 Russian Politics in Transition (3 hrs)

Area Elective Courses ........................................ 9 hours
Nine hours from the following:
ECON370 Comparative Economic Systems (3 hrs)
GEOG316/HIST3 Modern History and Geography of Modern Europe (6 hrs)
GEOG316 Problems in Soviet Geography (3 hrs)
HIST332 Modern Europe 1815-1919 (3 hrs)
HIST333 Europe since 1919 (3 hrs)
HIST343 Russia to 1855 (3 hrs)
HIST350 20th-Century Russia (3 hrs)
PLSC662 Russian Foreign Relations

Minor Requirements ........................................ 20 hours

University Elective Courses ........................................ 31 hours

Program Total ........................................ 124 hours

Note: "This course satisfies both a general education and a major requirement.

HISTORY MAJOR (HST)

General Education Requirements ........................................ 41 hours
Area I Symbolics and Communication
1. See page 23.
2. See page 23.
3. See page 23.
4. See page 23.
5. See page 23.

Minor Requirements ........................................ 20 hours

University Elective Courses ........................................ 31 hours

Program Total ........................................ 124 hours

Note: "This course satisfies both a general education and a major requirement."
Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24
Area III Social Sciences
1. See page 24
2. One course from the following:
   * HIST101 Western Civilization to 1648
   * HIST102 Western Civilization, 1648 to World War I
   * HIST103 20th-Century Civilization
3. See page 24
4. One course from the following:
   * HIST123 The United States to 1877
   * HIST124 The United States, 1877 to the Present
Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement 2 hours

Major Requirements 30 hours
Required Courses 9 hours
One course from the following:
   * HIST101 Western Civilization to 1648 (3 hrs)
   * HIST102 Western Civilization, 1648 to World War I (3 hrs)
   * HIST103 20th-Century Civilization (3 hrs)
One course from the following:
   * HIST123 The United States to 1877 (3 hrs)
   * HIST124 The United States, 1877 to the Present (3 hrs)
HIST300 Researching and Writing History (3 hrs)

Restricted Elective Courses 15 hours
Six credit hours of history courses 300-level or above in two of the following areas and three hours in the remaining area. One course must be a Writing Intensive (WI) course:
- United States and Canada (includes HIST303)
- Europe
- Africa, Asia, Latin America, History of Religions
- Hist611, Hist302

Elective Courses 6 hours
No more than four 100-level courses may be counted toward the major. Hist100 The Comparative Study of Religion and Hist481 The Teaching of Social Studies may not be counted toward the major.

Minor Requirements 20 hours

University Elective Courses 31 hours

Program Total 124 hours

Note:
* This course satisfies both a general education and a major requirement.

PHILOSOPHY MAJOR (PHIL)
The philosophy major provides basic knowledge in the general field of philosophy and strikes a balance between topical philosophical groups. The program supplements those in many other disciplines, such as English, literature, the performing arts and the sciences. A philosophy major also prepares students for graduate work in philosophy, law, theology, literature, political science and other related liberal arts subjects. It is a non-teaching major.
The philosophy major consists of 33 credit hours. 24 of these hours must be at the 200-level or above. Majors must satisfactorily complete at least one course in each of the following four core areas, with a minimum of nine credit hours at the 300- or 400-level.

General Education Requirements 44 hours
Area I Symbolic and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23
Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24
Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24
Area IV Arts and Humanities
1. See page 25
2. See page 25
3. Any 100- or 200-level PHIL course
4. See page 25

Physical Education/Graduation Requirement 2 hours

Major Requirements 33 hours
Students must select a minimum of three hours from each of the four core areas:

I. Logic and Reasoning 3-6 hours
   At least one course from the following:
   PHIL130 Introduction to Logic (3 hrs)
   PHIL220 Introduction to Critical Reasoning (3 hrs)
   PHIL251 Symbolic Logic (3 hrs)

II. History of Philosophy 3-12 hours
   At least one course from the following:
   PHIL240 History of Philosophy: Ancient (3 hrs)
   PHIL251 History of Philosophy: Modern (3 hrs)
   PHIL252 History of Philosophy: 19th-Century (3 hrs)
   PHIL260 Existentialism (3 hrs)
   PHIL471 American Philosophy (3 hrs)

III. Values 3-24 hours
   At least one course from the following:
   PHIL121 Philosophy of Art (3 hrs)
   PHIL220 Ethics (3 hrs)
   PHIL221 Business Ethics (3 hrs)
   PHIL223 Medical Ethics (3 hrs)
   PHIL225 Political Philosophy (3 hrs)
   PHIL266 Feminist Philosophy (3 hrs)
   PHIL310 Aesthetics (3 hrs)
   PHIL355 Philosophy of Law (3 hrs)
   PHIL370 Philosophy and Narrative (3 hrs)
   PHIL426 Topics in Gender and Philosophy (3 hrs)
   PHIL470 Contemporary European Philosophy (3 hrs)

IV. Epistemology and Metaphysics 3-24 hours
   At least one course from the following:
   PHIL145 Philosophy of Religion (3 hrs)
   PHIL325 Theory of Knowledge (3 hrs)
   PHIL375 Metaphysics (3 hrs)
   PHIL380 Philosophy of Science (3 hrs)
   PHIL390 Phenomenology (3 hrs)
   PHIL426 Topics in Gender and Philosophy (3 hrs)
   PHIL442 Philosophy of Mind (3 hrs)
   PHIL460 Philosophy of Language (3 hrs)
   PHIL471 Contemporary British and American Philosophy (3 hrs)

Restricted Elective Courses 9-21 hours
- Special topics courses, independent study courses, or other courses approved by the philosophy section chair.

Minor Requirements 20 hours
University Elective Courses .............................................25 hours

Program Total .........................................................124 hours

Note:
*This course satisfies both a general education and a major requirement.

Social Science Major (SOCS)

The social science major requires a total of 36 credit hours, including elective courses, chosen from history, anthropology, sociology, economics, geography and political science.

The major must include at least eight hours in each of three areas from the seven areas of concentration listed below. Of the 36 hours, at least 14 must be in courses at the 300 level or above.

Students may not minor in any of the fields included in areas of concentration for their major.

General Education Requirements ......................................35 hours

Area I Symbols and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences
1. See page 24
2. One course from the following:
   *HIST101 Western Civilization to 1648
   *HIST102 Western Civilization, 1648 to World War I
   *HIST103 20th Century Civilization
   *HIST106 Asian and African Civilizations
   *HIST123 The United States to 1877
   *HIST124 The United States, 1877 to the Present
   *ANTH125 Introduction to Cultural Anthropology
   *SOCL105 Introductory Sociology
3. One course from the following:
   *ECON201 Principles of Macroeconomics
   *GEOG110 World Regions
   *HIST105 Introductory Sociology
   *ECON202 Principles of Microeconomics
   *HIST124 The United States, 1877 to the Present
   *Select a course from one of the seven areas below.

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ................................2 hours

Major Requirements ....................................................36 hours

Select three of the following areas:

1. World History .......................................................9 hours
   Two courses from the following:
   *HIST101 Western Civilization to 1648 (3 hrs)
   *HIST102 Western Civilization, 1648 to World War I (3 hrs)

History Major (HSTT)

Secondary Teacher Certification

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate in history, certification code CC and, depending on the minor selected, endorsement in economics (CA), geography (CD), political science (CD), psychology (CE), sociology (CF), or social studies (RII). This program of study meets all requirements of the National Council for the Social Studies. The Michigan Test for Teacher Certification (MTTC) covering this field is #09, "History."
General Education Requirements ........................................ 37 hours

Area I: Symbolics and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

Area II: Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III: Social Sciences
1. See page 25
2. One course from the following:
   * HIST101 Western Civilization to 1648
   * HIST109 World History since 1650
3. One course from the following:
   * GEOG107 Introduction to Geography
   * GEOG110 World Regions
4. HIST302 20th-Century Civilization

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ......................... 2 hours

Major Requirements ..................................................... 33-36 hours

Required Courses
HIST123 The United States to 1877 (3 hrs)
HIST124 The United States, 1877 to the Present (3 hrs)
HIST100 Researching and Writing History (Writing Intensive) (2 hrs)
One course from the following:
   * GEOG107 Introduction to Geography (3 hrs)
   * GEOG110 World Regions (3 hrs)
One course from the following:
   * HIST101 Western Civilization to 1648 (3 hrs)
   * HIST102 Western Civilization, 1648 to World War I (3 hrs)
   * HIST103 20th-Century Civilization (3 hrs)

Elective Courses .................................................................. 12 hours

Six hours of history courses 300-level or above in one of the following areas and three hours each in the remaining areas:

A. United States and Canada
B. Europe
C. Africa, Asia, Latin America, History of Religions
   (HIST301, HIST302)

Professional Studies ....................................................... 39 hours

Pre-Admission Phase: The Learner and the Community .............. 8 hours
   EDEP372 Human Development and Learning (4 hrs)
   EDET201 Field Experience I (1 hr)
   SPGN251 Education of Students with Exceptionalities (3 hrs)
The following course requires formal admission to the teacher education program:

Phase I: Curriculum, Assessment and the Social Context 10 hours
   SOED328 Schools in a Multicultural Society (3 hrs)
   CURR305 Curriculum and Methodology: Secondary (3 hrs)
   FETE302 Field Experience II: Secondary (1 hr)
   EDPS340 Introduction to Assessment and Evaluation (3 hrs)
Phase II: Content Methods, Literacy and Technology 9 hours
   RNDS311 Teaching Reading in the Secondary School (3 hrs)
   FETE402 Field Experience III: Secondary (1 hr)
   EDMT301 Instructional Applications of Media and Technology (2 hrs)
   HIST481 The Teaching of Social Studies (3 hrs)
Phase III: Capstone Experience ........................................ 12 hours
   EDUC492 Student Teaching (12 hrs)

Minor Requirements ....................................................... 13-21 hours

Select from economics, geography, political science, psychology, or sociology.

University Elective Courses ............................................. 9 hours

Program Elective Courses ............................................... 0 hours

Note:
* This course satisfies both a general education and a major requirement.

Social Studies Group Major (With a Minor in Economics, Geography, History or Political Science) (SST) Secondary Teacher Certification

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in social studies, certification code RX, and, depending on the minor selected, endorsement in economics (CA), geography (CB), history (CC), or political science (CD). This program of study meets all requirements of the National Council for the Social Studies. The Michigan Test for Teacher Certification (MTTC) covering this field is #84, "Social Studies."

General Education Requirements ...................................... 35 hours

Area I: Symbolics and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23
Area II: Science and Technology
1. ESSC108 Earth Science for non-science majors (4 hrs), is recommended
2. See page 24
3. See page 24
Area III: Social Sciences
1. See page 24
2. One course from the following:
   * HIST101 World History to 1500
   * HIST109 World History since 1500
   * HIST123 The United States to 1877
   * HIST124 The United States, 1877 to the Present
   * ECON201 Principles of Macroeconomics
   * ECON202 Principles of Microeconomics
Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ......................... 2 hours
Major/Minor Requirements ........................................ 56-63 hours

Social Studies Major with an Economics Minor 56 hours

Core Courses ...................................................... 30 hours

+ GEOG107 Introduction to Geography (3 hrs)
+ GEOG110 World Regions (3 hrs)
+ GEOG230 Geography of the United States and Canada (3 hrs)
+ *HIST109 World History to 1500 (3 hrs)
+ *HIST110 World History since 1500 (3 hrs)
+ *HIST123 The United States up to 1877 (3 hrs)
+ *HIST124 The United States, 1877 to the Present (3 hrs)
+ HIST150 Researching and Writing History (3 hrs)
+ *PLSC112/113 American Government (3 hrs)
+ PLSC301 The American Legal System (3 hrs)

Restricted Elective Courses ........................................ 6 hours

One international/multicultural elective in geography, history or political science (3 hrs)

One elective from any of the four RX disciplines at any level (consult a social studies adviser) (3 hrs)

Economics Minor ................................................... 20 hours

+ *ECON201 Principles of Macroeconomics (3 hrs)
+ *ECON202 Principles of Microeconomics (3 hrs)

Fourteen credit hours from any other economics courses (ECON301/302 highly recommended) (14 hrs)

Social Studies Major with a Geography Minor 57 hours

Core Courses ...................................................... 27 hours

+ *ECON201 Principles of Macroeconomics (3 hrs)
+ *ECON202 Principles of Microeconomics (3 hrs)
+ *HIST123 The United States up to 1877 (3 hrs)
+ *HIST124 The United States, 1877 to the Present (3 hrs)
+ *HIST109 World History to 1500 (3 hrs)
+ *HIST110 World History since 1500 (3 hrs)
+ HIST300 Researching and Writing History (3 hrs)
+ *PLSC112/113 American Government (3 hrs)
+ PLSC301 The American Legal System (3 hrs)

Restricted Elective Courses ........................................ 9 hours

One international/multicultural elective in economics, history or political science (3 hrs)

Two electives from any of the four RX disciplines at any level (consult a social studies adviser) (6 hrs)

Geography Minor ................................................... 21 hours

+ GEOG107 Introduction to Geography (3 hrs)
+ GEOG110 World Regions (3 hrs)
+ GEOG230 Geography of the United States and Canada (3 hrs)

Twelve hours from the following:

+ GEOG313 Geography of Michigan (2 hrs)
+ GEOG314 Geography of Russia and Neighboring States (3 hrs)
+ GEOG318 Geography of Asia (3 hrs)
+ GEOG319 Geography of Europe (3 hrs)
+ GEOG320 Geography of the United States and Canada (3 hrs)
+ GEOG321 Geography of Latin America (3 hrs)
+ GEOG322 Geography of Africa (3 hrs)

Social Studies Major with a History Minor 60 hours

Core Courses ...................................................... 24 hours

+ *ECON201 Principles of Macroeconomics (3 hrs)
+ *ECON202 Principles of Microeconomics (3 hrs)
+ GEOG107 Introduction to Geography (3 hrs)
+ GEOG110 World Regions (3 hrs)
+ GEOG230 Geography of the United States and Canada (3 hrs)
+ *PLSC112/113 American Government (3 hrs)
+ PLSC301 The American Legal System (3 hrs)
+ HIST300 Researching and Writing History (3 hrs)

Restricted Elective Courses ........................................ 12 hours

One international/multicultural elective in economics, history or political science (3 hrs)

Three electives from any of the four RX disciplines at any level (consult a social studies adviser) (9 hrs)

History Minor ..................................................... 21 hours

+ *HIST123 The United States up to 1877 (3 hrs)
+ *HIST124 The United States, 1877 to the Present (3 hrs)
+ *HIST109 World History to 1500 (3 hrs)
+ *HIST110 World History since 1500 (3 hrs)

Three upper-level (300-400) history courses, one each in A: U.S. and Canada; B: Europe; C: Rest of the World

Social Studies Major with a Political Science Minor 63 hours

Core Courses ...................................................... 33 hours

+ *ECON201 Principles of Macroeconomics (3 hrs)
+ *ECON202 Principles of Microeconomics (3 hrs)
+ GEOG107 Introduction to Geography (3 hrs)
+ GEOG110 World Regions (3 hrs)
+ GEOG230 Geography of the United States and Canada (3 hrs)
+ *HIST123 The United States up to 1877 (3 hrs)
+ *HIST124 The United States, 1877 to the Present (3 hrs)
+ *HIST109 World History to 1500 (3 hrs)
+ *HIST110 World History since 1500 (3 hrs)
+ HIST300 Researching and Writing History (3 hrs)
+ *PLSC112/113 American Government (3 hrs)

Restricted Elective Courses ........................................ 6 hours

One international/multicultural elective in economics, history or political science (3 hrs)

One elective from any of the four RX disciplines at any level (consult a social studies adviser) (3 hrs)

History Minor ..................................................... 24 hours

+ PLSC301 The American Legal System (3 hrs)

Two courses from the following:

+ PLSC210 Introduction to Political Analysis (3 hrs)
+ PLSC211 Introduction to Comparative Government (3 hrs)
+ PLSC212 Introduction to International Politics (3 hrs)
+ PLSC213 Introduction to Political Thought (3 hrs)
+ PLSC210 Methods of Political Research (3 hrs)

Five courses of restricted electives in political science to be chosen in consultation with a political science adviser

Profession Studies .................................................. 39 hours

Pre-Admission Phase: The Learner and the Community ........................................ 8 hours

+ EDP3322 Human Development and Learning (4 hrs)
+ FETE201 Field Experience I (1 hr)
+ SPGN221 Education of Students with Exceptionalities (3 hrs)

The following courses require formal admission to the teacher certification program:

Phase I: Curriculum, Assessment and the Social Context ........................................ 10 hours

+ SOFD328 Schools in a Multicultural Society (3 hrs)
+ CURR335 Curriculum and Methods Secondary (3 hrs)
+ FETE302 Field Experience II: Secondary (1 hr)
+ EDP340 Instructional Assessment and Evaluation (3 hrs)

Phase II: Content Methods, Literacy and Technology ........................................ 9 hours

+ RDN331 Teaching Reading in the Secondary School (3 hrs)
+ FETE502 Field Experience III: Secondary (1 hr)
+ DMT330 Instructional Applications of Media and Technology (2 hrs)
+ HIST481 The Teaching of Social Studies (3 hrs)

Phase III: Capstone Experience ...................................... 12 hours

+ EDUC492 Student Teaching (12 hrs)

University Elective Courses ........................................ 0 hours

Program Total ..................................................... 132-139 hours
**AREA STUDIES MINOR — AFRICA (AFR)**

**Required Area Courses** ........................................... 15 hours
ANTH236 Peoples and Cultures of Africa (3 hrs)
ECON385 Economic Development (3 hrs)
GEOG322 Geography of Africa (3 hrs)
HIST347 Sub-Saharan Africa to 1885 (3 hrs)
PLSC372 Government and Politics of Sub-Saharan Africa (3 hrs)

**Area Elective Courses** ........................................... 5 hours
Five hours from the following:
ANTH135 Introduction to Cultural Anthropology (3 hrs)
ANTH336/SOCL336 Social and Cultural Change (3 hrs)
ECON370 Comparative Economic Systems (3 hrs)
GEOG318 Problems of Sub-Saharan Africa (3 hrs)
HIST342 North Africa, 1798 to the Present (3 hrs)
HIST348 20th-Century Africa (3 hrs)

Certain independent study course and special topics course may be counted as restricted elective courses or elective course with the approval of the advising coordinator of area studies. No more than three of the seven courses in the minor may be chosen from a single area: fine arts, literature and history.

**Minor Total** ......................................................... 20 hours

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**AREA STUDIES MINOR — ASIA-FAR EAST (ASFE)**

**Required Area Courses** ........................................... 14 hours
ECON385 Economic Development (3 hrs)
GEOG318 Geography of Asia (3 hrs)
One course from the following:
HIST441 The Far East to 1800 (3 hrs)
HIST442 Modern China (3 hrs)
HIST555 Studies in Far Eastern History (2 hrs)
PLSC374 Asian Political Systems (3 hrs)

**Area Elective Courses** ........................................... 6 hours
Six hours from the following:
ANTH135 Introduction to Cultural Anthropology (3 hrs)
ANTH336/SOCL336 Social and Cultural Change (3 hrs)
ART421 History of Oriental Art (3 hrs)
HIST326 History and Geography of Modern Asia (3 hrs)
HIST301 The Religions of South and East Asia (3 hrs)
HIST441 The Far East to 1800 (3 hrs)
HIST442 Modern China (3 hrs)

**Minor Total** ......................................................... 20 hours

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**AREA STUDIES MINOR — LATIN AMERICA (LA)**

**Required Area Courses** ........................................... 15 hours
ANTH233 Peoples and Cultures of Mexico (3 hrs)
ECON385 Economic Development (3 hrs)
GEOG321 Geography of Latin America (3 hrs)

**Area Elective Courses** ........................................... 5 hours

One course from the following:
HIST355 Latin America: Colonial Period (3 hrs)
HIST356 Latin America: National Period (3 hrs)
HIST457 History of Mexico (3 hrs)
PLSC367 Latin American Politics (3 hrs)

**Area Elective Courses** ........................................... 5 hours
Five hours from the following:
ANTH135 Introduction to Cultural Anthropology (3 hrs)
ANTH236 Peoples and Cultures of Mexico (3 hrs)
ANTH336/SOCL336 Social and Cultural Change (3 hrs)
ECON370 Comparative Economic Systems (3 hrs)
GEOG317/HIST317 History and Geography of Spanish America (3 hrs)
GEOG512 Middle America and the Caribbean World (3 hrs)
GEOG513 South American Lands (3 hrs)
HIST355 Latin America: Colonial Period (3 hrs)
HIST356 Latin America: National Period (3 hrs)
HIST457 History of Mexico (3 hrs)
HIST560 Studies in Latin American History (3 hrs)
SPNH302 The Cultures of Spanish America (3 hrs)
SPNH351 Survey of Spanish-American Literature (3 hrs)
SPNH352 Survey of Spanish-American Literature (3 hrs)
SPNH445 Spanish-American Prose (3 hrs)
SPNH454 Modernism in Spain and America (3 hrs)

Certain independent study course and special topics course may be counted as restricted elective courses or elective course with the approval of the advising coordinator of area studies. No more than three of the seven courses in the minor may be chosen from a single area: fine arts, literature and history.

**Minor Total** ......................................................... 20 hours

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**AREA STUDIES MINOR — MIDDLE EAST AND NORTH AFRICA (ME)**

**Required Area Courses** ........................................... 9 hours
ECON385 Economic Development (3 hrs)
One course from the following:
HIST341 The Middle East, 1798 to the Present (3 hrs)
HIST342 North Africa, 1798 to the Present (3 hrs)
PLSC371 Government and Politics of the Middle East (3 hrs)

**Area Elective Courses** ........................................... 11 hours
Eleven hours from the following:
ANTH135 Introduction to Cultural Anthropology (3 hrs)
ANTH236 Peoples and Cultures of Africa (3 hrs)
ANTH336/SOCL336 Social and Cultural Change (3 hrs)
ECON585 Economic Growth and Development (3 hrs)
GEOG322 Geography of Africa (3 hrs)
HIST302 Near Eastern and Western Religions (3 hrs)
HIST339 Arab-Israeli Conflict (3 hrs)
HIST341 The Middle East, 1798 to the Present (3 hrs)
HIST342 North Africa, 1798 to the Present (3 hrs)
HIST543 Nationalism and Modernization in the Middle East and North Africa (3 hrs)
LITR351 World Mythology (3 hrs)

Certain independent study course and special topics course may be counted as restricted elective courses or elective course with the approval of the advising coordinator of area studies. No more than three of the seven courses in the minor may be chosen from a single area: fine arts, literature and history.

**Minor Total** ......................................................... 20 hours
AREA STUDIES MINOR — RUSSIA AND EASTERN EUROPE (RUS)

Required Area Courses .............................................. 12 hours
- GEOG314 Geography of Russia and Neighboring States (3 hrs)
- HIST344 Russia since 1855 (3 hrs)
- HIST347 19th Century Ideological Background of the Russian Revolution (3 hrs)
- PLSC361 Russian Politics in Transition (3 hrs)

Area Elective Courses ................................................. 8 hours
Eight hours from the following:
- ECON350 Comparative Economic Systems (3 hrs)
- GEOG316/HIST316 History and Geography of Modern Europe (3 hrs)
- GEOG316 Problems in Soviet Geography (3 hrs)
- HIST322 Modern Europe 1815-1919 (3 hrs)
- HIST333 Europe since 1919 (3 hrs)
- HIST344 Russia to 1855 (3 hrs)
- HIST350 20th Century Russia (3 hrs)
- PLSC462 Russian Foreign Relations (3 hrs)

Certain independent study courses and special topics courses may be counted as restricted elective courses or elective courses with the approval of the advising coordinator of area studies. No more than three of the seven courses in the minor may be chosen from a single area: fine arts, literature, and history.

Minor Total .................................................. 20 hours

HISTORY MINOR (HST)

Required Area Courses .............................................. 6 hours
One course from the following:
- HIST101 Western Civilization to 1648 (3 hrs)
- HIST102 Western Civilization, 1648 to World War I (3 hrs)
- HIST103 20th Century Civilization (3 hrs)

One course from the following:
- HIST123 The United States to 1877 (3 hrs)
- HIST124 The United States, 1877 to the Present (3 hrs)

Restrictive Elective Courses ......................................... 12 hours
Six hours of history courses at the 300-level or above in one of the following areas and three hours in each of the other two areas:
- A. United States and Canada
- B. Europe
- C. Africa, Asia, Latin America, History of Religions (HIST301, HIST302)

†Unrestricted Elective Courses ...................................... 2 hours

Minor Total .................................................. 20 hours

Note:
†No more than three 100-level courses may be counted toward the minor. HIST100 and HIST481 may not be counted. Secondary education certification requires at least eight hours of United States history.

PHILOSOPHY MINOR (PHIL)

The philosophy major consists of 24 credit hours, fifteen of those hours must be at the 200-level or above. Minors must satisfactorily complete at least one course in each of the following four core areas, with a minimum of six credit hours at the 300- or 400-level.

Minor Requirements .............................................. 24 hours
Students must select a minimum of three hours from each of the four core areas:

I. Logic and Reasoning .............................................. 3-6 hours
At least one course from the following:
- PHIL130 Introduction to Logic (3 hrs)
- PHIL120 Introduction to Critical Reasoning (3 hrs)
- PHIL281 Symbolic Logic (3 hrs)

II. History of Philosophy ............................................. 3-12 hours
At least one course from the following:
- PHIL230 History of Philosophy: Ancient (3 hrs)
- PHIL231 History of Philosophy: Modern (3 hrs)
- PHIL232 History of Philosophy: 19th-Century (3 hrs)
- PHIL260 Existentialism (3 hrs)
- PHIL471 American Philosophy (3 hrs)

III. Values .......................................................... 3-24 hours
At least one course from the following:
- PHIL212 Philosophy of Art (3 hrs)
- PHIL220 Ethics (3 hrs)
- PHIL221 Business Ethics (3 hrs)
- PHIL223 Medical Ethics (3 hrs)
- PHIL225 Political Philosophy (3 hrs)
- PHIL226 Feminist Philosophy (3 hrs)
- PHIL240 Aesthetics (3 hrs)
- PHIL355 Philosophy of Law (3 hrs)
- PHIL370 Philosophy and Narrative (3 hrs)
- PHIL426 Topics in Gender and Philosophy (3 hrs)
- PHIL470 Contemporary European Philosophy (3 hrs)

IV. Epistemology and Metaphysics ................................. 3-24 hours
At least one course from the following:
- PHIL213 Philosophy of Religion (3 hrs)
- PHIL325 Theory of Knowledge (3 hrs)

HISTORY MINOR (HSTT)
Secondary, K-12 and Special Education-Secondary Teacher Certification

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in history. Certification code CC. The certification test covering this field is E09, "History."
PHIL375 Metaphysics (3 hrs)
PHIL380 Philosophy of Science (3 hrs)
PHIL390 Phenomenology (3 hrs)
4 PHIL426 Topics in Gender and Philosophy (3 hrs)
PHIL442 Philosophy of Mind (3 hrs)
PHIL460 Philosophy of Language (3 hrs)
PHIL471 Contemporary British and American Philosophy (3 hrs)

Restricted Elective Courses 0-12 hours
Special Topic courses, Independent Study courses, or other courses approved by the Philosophy Section Chair.

Minor Total ........................................................................................................ 24 hours

Note:
Only one of PHIL100 Introduction to Philosophy or PHIL110 Philosophies of Life may be counted toward the major.
Only one of PHIL160 Introduction to Critical Thinking or PHIL130 introduction to Logic may be counted toward the major.

Religious Studies Minor (RLST)

Required Course: 3 hours
HIST100 The Compatitive Study of Religion (3 hrs)

Restricted Elective Courses 12 hours

Four courses from the following:
PHIL215 Philosophy of Religion (3 hrs)
ANTH335 Anthropology of Religion (3 hrs)
HIST301 The Religions of South and East Asia (3 hrs)
HIST302 Near Eastern and Western Religions (3 hrs)
HIST303 History of American Religion (3 hrs)
LITR251 The Bible as Literature (3 hrs)
PSY225 Psychology of Religion (3 hrs)
SOC1320 Sociology of Religion (3 hrs)

Elective Courses ................. 5-6 hours

Two courses from the restricted elective course list or from the following:
PHIL220 Ethics (3 hrs)
PHIL260 Existentialism (3 hrs)
ANTH335 Introduction to Cultural Anthropology (3 hrs)
CLAS301 Mythology (3 hrs)
ART107 Art History Survey I (3 hrs)
ART340 History of Classical Art (3 hrs)
ART341 History of Renaissance Art (3 hrs)
HIST277 Europe in Early Middle Ages 400-1050 (3 hrs)
HIST280 Europe in the Renaissance and Reformation (3 hrs)
LITR309 The Development of American Literature (3 hrs)
LITR351 World Mythology (3 hrs)
LITR354 English Renaissance Prose and Poetry 1500-1660 (3 hrs)

Certain independent study courses and special topics courses may be counted as restricted elective courses or elective courses with the approval of the advising coordinator of religious studies. No more than three of the seven courses in the minor may be chosen from a single area: fine arts, literature and history.

Minor Total ........................................................................................................ 20-21 hours

Social Science Group Minor (Non-Teaching) (SOCS)

The social science group minor requires a total of 24 credit hours chosen from history, anthropology, sociology, economics, geography and political science. The minor must include at least eight hours each in two of the areas of concentration listed below.

Of the 24 hours, at least eight must be at the 300-level or above. Students may not choose any courses from an area of concentration in which they are majoring.

This minor cannot be taken together with the social science major.

Areas of Concentration .................................................................................. 16-18 hours
Select two areas of concentration from the following:

I. World history .................. 8-9 hours
Two courses from the following:
HIST101 Western Civilization to 1648 (3 hrs)
HIST102 Western Civilization, 1648 to World War I (3 hrs)
HIST103 20th Century Civilization (3 hrs)
HIST106 Asian and African Civilizations (3 hrs)
One world history course at the 300-level or above (2-3 hrs)

II. United States history ........ 8-9 hours
HIST121 The United States to 1877 (3 hrs)
HIST124 The United States, 1877 to the Present (3 hrs)
One United States or Canadian history course at the 300-level or above (2-3 hrs)

III. Anthropology ................. 8-9 hours
ANTH135 Introduction to Cultural Anthropology (3 hrs)
An anthropology course at the 300-level or above (3 hrs)
Any other anthropology course (2-3 hrs)

IV. Sociology ...................... 8-9 hours
SOC105 Introductory Sociology (3 hrs)
A sociology course at the 300-level or above (3 hrs)
Any other sociology course (2-3 hrs)

V. Economics ..................... 8-9 hours
ECON201 Principles of Macroeconomics (3 hrs)
ECON202 Principles of Microeconomics (3 hrs)
An economics course at the 300-level or above (2-3 hrs)

VI. Geography .................... 8-9 hours
GEOG110 World Regions (3 hrs)
A geography course at the 300-level or above (3 hrs)
Any other geography course (2-3 hrs)

VII. Political science .......... 8-9 hours
One course from the following:
POLI121/113 American Government (3 hrs)
A political science course at the 300-level or above (3 hrs)
Any other political science course (2-3 hrs)

Elective Courses ................. 5-8 hours
Select courses from any of the above fields to complete the required 24 hours, except HIST100 and HIST481.

Minor Total ........................................................................................................ 24 hours

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The program in mathematics is designed to give majors certain basic courses, and to ensure a broad background, yet allow enough elective courses for students to adapt programs to any of the following areas of mathematics: junior and senior high school teaching, statistics, engineering, the physical sciences or graduate work in pure or applied mathematics.

Students needing general program advising should contact the appropriate undergraduate advising coordinator or the department secretaries, who will direct students to appropriate faculty members.

Without department permission, no student may receive credit in courses MATH104, MATH105, MATH107, MATH112 or MATH119 after credit for MATH100 has been earned.

Students majoring in mathematics must complete at least nine credit hours and minor must complete at least six credit hours from courses numbered 300 or above.

Placement Into Mathematics Classes

Students without credit in an EMU mathematics course, or equivalent transfer credit, will need to obtain placement into an appropriate mathematics course. Contact the Department of Mathematics for more information.

## Actuarial Science and Economics Major (ASEC)

Actuarial science and economics is a joint program of the Mathematics and Economics departments. In addition to following a prescribed series of courses, students are expected to pass the first two actuarial examinations. The examinations are sponsored by leading actuarial societies and administered in numerous U.S. locations. MATH272 and MATH472 are designed to prepare students for these examinations.

All majors must meet with the undergraduate advising coordinator in the Department of Mathematics to fill out a program sheet before graduation. At least 15 credit hours in the program at the 300-level or above must be taken at Eastern Michigan University.

### General Education Requirements

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<th>35 hours</th>
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<td>2. See page 23</td>
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<td>3. See page 23</td>
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<tr>
<td>4. MATH120 Calculus I</td>
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<td>5. One course from the following:</td>
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<tr>
<td>*COSCI11 Introduction to Programming</td>
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<td>*COSCI135 Introduction to FORTRAN Programming</td>
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<th>Area II Science and Technology</th>
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<th>Area III Social Sciences</th>
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<td>2. See page 24</td>
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<tr>
<td>3. ECONOM1 Principles of Macroeconomics*</td>
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<td>4. ECONOM2 Principles of Microeconomics*</td>
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### Area IV: Arts and Humanities

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<tr>
<th>Requirement</th>
<th>Hours</th>
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<tr>
<td>Physical Education/Graduation</td>
<td>2 hours</td>
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<tr>
<td>Major Requirements</td>
<td>62 hours</td>
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<tr>
<td>Required Courses</td>
<td>12 hours</td>
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<tr>
<td>ACC240 Principles of Financial Accounting (3 hrs)</td>
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<td>ACC241 Principles of Managerial Accounting (3 hrs)</td>
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<td>One course from the following:</td>
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<td>*COSCI11 Introduction to Programming (3 hrs)</td>
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<td>*COSCI45 Introduction to FORTRAN Programming (3 hrs)</td>
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<td>One course from the following:</td>
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<td>*FIN350 Principles of Finance (3 hrs)</td>
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<td>ECON361 Corporation Finance (3 hrs)</td>
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<tr>
<th>Requirement</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Required Mathematics Courses</td>
<td>26 hours</td>
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<tr>
<td>*MATH120 Calculus I (4 hrs)</td>
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<tr>
<td>MATH121 Calculus II (4 hrs)</td>
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<tr>
<td>*MATH122 Elementary Linear Algebra (3 hrs)</td>
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<tr>
<td>MATH223 Multivariable Calculus (4 hrs)</td>
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<tr>
<td>MATH370 Probability and Statistics I (4 hrs)</td>
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<td>MATH372 Problems in Actuarial Studies I (2 hrs)</td>
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<tr>
<td>MATH471 Probability and Statistics II (3 hrs)</td>
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<td>MATH472 Problems in Actuarial Studies II (2 hrs)</td>
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<tr>
<td>Required Economic Courses</td>
<td>18 hours</td>
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<tr>
<td>*ECON201 Principles of Macroeconomics (3 hrs)</td>
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<td>*ECON202 Principles of Microeconomics (3 hrs)</td>
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<tr>
<td>ECON201 Intermediate Macroeconomic Analysis (3 hrs)</td>
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<td>ECON302 Intermediate Microeconomic Analysis (3 hrs)</td>
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<tr>
<td>ECON405 Economic Analysis for Business (3 hrs)</td>
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<tr>
<td>ECON415 Introduction to Econometrics (3 hrs)</td>
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<tr>
<td>Restricted Elective Courses</td>
<td>6 hours</td>
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<tr>
<td>Any combination of electives from:</td>
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<tr>
<td>Courses at the 300-level or above in mathematics</td>
<td></td>
</tr>
<tr>
<td>ECON340 Money and Banking (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>ECON445 Economic Fluctuations and Forecasting (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>ECON445 Cost-benefit Analysis (3 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

### Minor Requirements

No minor is required.

### University Elective Courses

- 25 hours

### Program Total

- 124 hours

### Notes

*This course satisfies both a general education and a major requirement.

## Mathematics Major (MTH)

All majors must fill in a program sheet before graduation — see the undergraduate advising coordinator. At least nine credit hours in the major, at the 300-level or above, must be taken at Eastern Michigan University.

### General Education Requirements

<table>
<thead>
<tr>
<th>Area I Symbols and Communication</th>
<th>44 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. See page 25</td>
<td></td>
</tr>
<tr>
<td>2. See page 23</td>
<td></td>
</tr>
<tr>
<td>3. See page 25</td>
<td></td>
</tr>
<tr>
<td>4. MATH120 Calculus I</td>
<td></td>
</tr>
<tr>
<td>5. One course from the following:</td>
<td></td>
</tr>
<tr>
<td>*COSCI11 Introduction to Programming (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>*COSCI45 Introduction to FORTRAN Programming (3 hrs)</td>
<td></td>
</tr>
</tbody>
</table>
MATHEMATICS MAJOR WITH CONCENTRATION IN STATISTICS (MTHS)

All majors must fill out a program sheet before graduation — see the undergraduate advising coordinator. At least nine hours in the major, at 300-level or above, must be taken at Eastern Michigan University.

General Education Requirements ........................................... 44 hours

Area I Symbolics and Communication
1. See page 23
2. See page 23
3. See page 23
4. MATH120 Calculus I
5. One of the following:
   COSC111 Introduction to Programming (3 hrs)
   COSC145 Introduction to FORTRAN Programming (3 hrs)

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement .......................... 2 hours

Major Requirements ......................................................... 37 hours

Required Courses ................................................................ 25 hours
- MATH120 Calculus I (4 hrs)
- MATH121 Calculus II (4 hrs)
- MATH122 Elementary Linear Algebra (3 hrs)
- MATH211 Introduction to Mathematical Proof (3 hrs)
- MATH223 Multivariable Calculus (4 hrs)
- MATH370 Probability and Statistics I (4 hrs)

One course from the following:
- MATH411 Abstract Algebra (3 hrs)
- MATH416 Linear Algebra (3 hrs)
- MATH420 Introduction to Analysis (3 hrs)

Restricted Elective Courses ................................................. 12 hours

Twelve hours from the following:
- MATH467 Elementary Number Theory (3 hrs)
- MATH419 Mathematical Modeling (3 hrs)
- MATH425 Differential Equations (3 hrs)
- MATH434 College Geometry (3 hrs)
- MATH372 Problems in Actuarial Studies I (2 hrs)
- MATH406 Introduction to Computability (3 hrs)
- MATH411 Abstract Algebra (3 hrs)
- MATH416 Linear Algebra (3 hrs)
- MATH418 Modeling with Linear Algebra (3 hrs)
- MATH419 Advanced Mathematical Modeling (3 hrs)
- MATH420 Introduction to Analysis (3 hrs)
- MATH421 Introduction to Complex Variables (3 hrs)
- MATH425 Mathematics for Scientists (3 hrs)
- MATH426 Differential Equations II (3 hrs)
- MATH436 Introduction to Numerical Analysis (3 hrs)
- MATH460 Applied Survey Sampling (3 hrs)
- MATH461 Linear Regression Analysis (3 hrs)
- MATH462 Design and Analysis of Experiments (3 hrs)
- MATH471 Probability and Statistics II (3 hrs)
- MATH472 Problems in Actuarial Studies II (2 hrs)
- MATH474 Applied Statistics (3 hrs)

Minor Requirements ............................................................ 20 hours

University Elective Courses .................................................. 21 hours

Program Total ................................................................. 124 hours

Note:
*This course satisfies both a general education and a major requirement.
**MATHEMATICS MAJOR (MTHT)**

**Secondary Teacher Certification**

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification in mathematics, certification code EX, and, depending on the minor selected, an additional endorsement. This program of studies meets all requirements of the National Council of Teachers of Mathematics. The Michigan Test for Teacher Certification (MTTC) covering this field is #22, "Mathematics."

All majors must fill in a program sheet before graduation — see the undergraduate advising coordinator. At least nine hours in the major, at 300-level or above, must be taken at Eastern Michigan University.

---

**General Education Requirements**

<table>
<thead>
<tr>
<th>Area</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>I: Symbolic and Communication</td>
<td>44 hours</td>
</tr>
</tbody>
</table>

1. See page 23
2. See page 23
3. See page 23
4. MATH120 Calculus I*
5. One course from the following:
   - COSC111 Introduction to Programming (3 hrs)
   - COSC45 Introduction to FORTRAN Programming (3 hrs)

**Area II: Science and Technology**

1. See page 24
2. See page 24
3. See page 24

**Area III: Social Sciences**

1. See page 24
2. See page 24
3. See page 25
4. See page 25

**Area IV: Arts and Humanities**

1. See page 25
2. See page 25
3. See page 25
4. See page 25

---

**Physical Education/Graduation Requirement**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Requirement</td>
<td>34 hours</td>
</tr>
</tbody>
</table>

**Required Courses**

- MATH120 Calculus I (4 hrs)
- MATH121 Calculus II (4 hrs)
- MATH22 Elementary Linear Algebra (3 hrs)
- MATH2231 Introduction to Mathematical Proof (3 hrs)
- MATH1235 Multivariable Calculus (4 hrs)
- MATH31 College Algebra (3 hrs)
- MATH41 Abstract Algebra (3 hrs)
- MATH1370 Probability and Statistics I (4 hrs)

* MATH130 may be used with permission

**Restricted Elective Courses**

- MATH107 Elementary Number Theory (3 hrs)
- MATH139 Mathematical Modeling (3 hrs)
- MATH135 Differential Equations (3 hrs)
- MATH1372 Problems in Accusolary Studies I (2 hrs)
- MATH140 History and Development of Mathematics (3 hrs)
- MATH141 Linear Algebra (3 hrs)
- MATH142 Introduction to Analysis (3 hrs)
- MATH143 Introduction to Complex Variables (3 hrs)
- MATH145 Mathematics for Scientists (3 hrs)
- MATH171 Probability and Statistics II (3 hrs)

**Minor Requirements**

- Select a minor from the approved list of minors for secondary, K-12 and special education-secondary programs.

---

**Professional Studies**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>I: Curriculum, Assessment and the Social Context</td>
<td>10 hours</td>
</tr>
</tbody>
</table>
- SDMS200 Introduction to the Teacher Education Program (3 hrs)
- FETE20 Field Experience I: Secondary (1 hr)
- EDPS390 Introduction to Assessment and Evaluation (3 hrs)

**Phase II: Content Methods, Literacy and Technology**

- RDSG311 Teaching Reading to the Secondary School (3 hrs)
- EDPS402 Field Experience II: Secondary (1 hr)
- EDMT330 Instructional Applications of Media and Technology (2 hrs)
- MATH106 Teaching of High School Mathematics (3 hrs)

**Phase III: Capstone Experience**

- EDUC492 Student Teaching (12 hrs)

**University Elective Courses**

- 131 hours

---

**Note:**

*This course satisfies both a general education and a major requirement.

(Credits in mathematics, not including MATH106, must at least total 31 hours."

---

**MATHEMATICS MAJOR FOR THE ELEMENTARY TEACHING CERTIFICATE (MTHE)**

**Elementary and Special Education-Elementary Teacher Certification**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in mathematics, certification code EX. This program of studies meets all requirements of the National Council of Teachers of Mathematics. The Michigan Test for Teacher Certification (MTTC) covering this field is #89, "Mathematics (Elementary)." At least nine credits hours in the major must be taken at Eastern Michigan University.

---

**General Education Requirements**

<table>
<thead>
<tr>
<th>Area</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>I: Symbolic and Communication</td>
<td>45 hours</td>
</tr>
</tbody>
</table>

1. See page 23
2. See page 23
3. See page 23
4. MATH120 Calculus I*
5. See page 23

**Area II: Science and Technology**

1. PHY100 Physics for Elementary Teachers (3 hrs)
2. PSY101/02 General Psychology (3-4 hrs)
3. CHEM101 Chemistry for Elementary Teachers (3 hrs)

**Area III: Social Sciences**

1. See page 24
2. See page 24
3. See page 24
4. See page 24

**Area IV: Arts and Humanities**

1. See page 25
2. See page 25
3. See page 25
4. MUSC104 Elements of Music (2 hrs)
**Mathematics Minor (MTH)**

All minors must fill in a program sheet before graduation — see the undergraduate advising coordinator. At least six hours in the minor at 300-level or above, must be taken at Eastern Michigan University.

**Required Courses**

- MATH120 Calculus I (4 hrs)
- MATH121 Calculus II (4 hrs)
- MATH212 Elementary Linear Algebra (3 hrs)

One course from the following:

- MATH211 Introduction to Mathematical Proof (3 hrs)
- MATH360 Statistical Methods (3 hrs)
- MATH370 Probability and Statistics I (4 hrs)

**Restricted Elective Courses**

5 to 6 hours from the following:

- MATH205 Mathematical Structures for Computer Science (4 hrs)
- MATH223 Multivariable Calculus (4 hrs)
- MATH407 Elementary Number Theory (3 hrs)
- MATH319 Mathematical Modeling (3 hrs)
- MATH325 Differential Equations (3 hrs)
- MATH341 College Geometry (3 hrs)
- MATH360 Statistical Methods (3 hrs)
- MATH370 Probability and Statistics I (4 hrs)
- MATH372 Problems in Actuarial Studies I (2 hrs)
- MATH406 Introduction to Computability (3 hrs)
- MATH411 Abstract Algebra (3 hrs)
- MATH416 Linear Algebra (3 hrs)
- MATH418 Modeling with Linear Algebra (3 hrs)
- MATH419 Advanced Mathematical Modeling (3 hrs)
- MATH420 Introduction to Analysis (3 hrs)
- MATH424 Introduction to Complex Variables (3 hrs)
- MATH425 Mathematics for Scientists (3 hrs)
- MATH426 Differential Equations II (3 hrs)
- MATH436 Introduction to Numerical Analysis (3 hrs)
- MATH460 Applied Survey Sampling (3 hrs)
- MATH461 Linear Regression Analysis (3 hrs)
- MATH462 Design and Analysis of Experiments (3 hrs)
- MATH471 Probability and Statistics II (3 hrs)

**Minor Total**

139 hours

Note: This course satisfies both a general education and a major requirement.

**Mathematics Minor with Concentration in Statistics (MTHS)**

All minors must fill in a program sheet before graduation — see the undergraduate advising coordinator. At least six hours in the minor at 300-level or above, must be taken at Eastern Michigan University.

**Required Courses**

- MATH120 Calculus I (4 hrs)
- MATH121 Calculus II (4 hrs)

**Minor Total**

159 hours

Note: This course satisfies both a general education and a major requirement.
MATH122 Elementary Linear Algebra (3 hrs)
One course from the following:
  MATH350 Statistical Methods (3 hrs)
  MATH370 Probability and Statistics I (4 hrs)

Restricted Elective Courses ........................................... 9 hours
Nine hours from among the following, at least six of which must be taken
from the statistics elective courses:

Statistics Elective Courses:
  MATH460 Applied Survey Sampling (3 hrs)
  MATH461 Linear Regression Analysis (3 hrs)
  MATH462 Design and Analysis of Experiments (3 hrs)
  MATH471 Probability and Statistics II (3 hrs)
  MATH474 Applied Statistics (3 hrs)

Mathematics Elective Courses:
  MATH205 Mathematical Structures for Computer Science (4 hrs)
  MATH211 Introduction to Mathematical Proof (3 hrs)
  MATH221 Multivariable Calculus (4 hrs)

Minor Total ................................................. 23 hours

Additional Requirement .......................................... 3 hours
One course from the following:
  COSC111 Introduction to Programming (3 hrs)
  COSC145 Introduction to FORTRAN Programming (3 hrs)

Note: Students cannot count both MATH205 and MATH211 toward the minor.

MATHEMATICS MINOR (MTHT)
K-12, Secondary and Special Education-Secondary Teacher Certification

Successful completion of this minor, in the context of other program
requirements, qualifies the student for recommendation for endorsement in
mathematics certification code EX. The Michigan Test for Teacher Certification
(MTTC) covering this field is #99, "Mathematics (Elementary)." At
least six hours in the minor, at 300-level or above, must be taken at Eastern
Michigan University.

Required Courses .................................................. 22-24 hours
  MATH130 Calculus I (5 hrs)
  MATH131 Calculus II (4 hrs)
  MATH172 Elementary Linear Algebra (3 hrs)
  MATH211 Introduction to Mathematical Proof (3 hrs)
  MATH301 College Geometry (3 hrs)
  One course from the following:
    MATH450 Statistical Methods (3 hrs)
    MATH470 Probability and Statistics I (4 hrs)
    MATH471 Probability and Statistics II (3 hrs)
    MATH474 Applied Statistics (3 hrs)
  One course from the following:
    MATH304 Middle School Mathematics Methods and Content (3 hrs)
    MATH305 Teaching of High School Mathematics (3 hrs)

Restricted Elective Courses ........................................... 2-3 hours
  Sufficient credits (normally three) to bring the total to 26 hours (not
  including the COSC requirement):
    MATH221 Multivariable Calculus (4 hrs)
    MATH408 Elementary Number Theory (3 hrs)
    MATH419 Mathematical Modeling (5 hrs)
    MATH425 Differential Equations (3 hrs)
    MATH480 History and Development of Mathematics (3 hrs)
    MATH411 Abstract Algebra I (5 hrs)
    MATH412 Abstract Algebra II (3 hrs)
    MATH420 Introduction to Analysis (3 hrs)
    MATH424 Introduction to Complex Variables (3 hrs)

Minor Total ................................................. 26 hours

Additional Requirement .......................................... 3 hours
One course from the following:
  COSC111 Introduction to Programming (3 hrs)
  COSC145 Introduction to FORTRAN Programming (3 hrs)

MATHEMATICS MINOR FOR THE ELEMENTARY TEACHING CERTIFICATE (MTHE)
Elementary and Special Education-Elementary Teacher Certification

Successful completion of this minor, in the context of other program
requirements, qualifies the student for recommendation for endorsement in
mathematics certification code EX. The Michigan Test for Teacher Certification
(MTTC) covering this field is #99, "Mathematics (Elementary)." At
least six hours in the minor, at 300-level or above, must be taken at Eastern
Michigan University.

Required Courses .................................................. 15 hours
  MATH108 Mathematics for Elementary Teachers I (3 hrs)
  MATH109 Mathematics for Elementary Teachers II (3 hrs)
  MATH210 Algebra for Elementary Teachers (3 hrs)
  MATH240 Geometry for Elementary Teachers (3 hrs)
  MATH301 Advanced Topics in Elementary Mathematics (3 hrs)

Restricted Elective Courses ........................................... 5 hours
  Five hours from the following, with at least three hours at the 300- or
  400-level:
    MATH110 Mathematical Reasoning (3 hrs)
    MATH118 Linear Models and Probability (3 hrs)
    MATH120 Calculus I (4 hrs)
    MATH122 Elementary Linear Algebra (3 hrs)
    MATH170 Elementary Statistics (3 hrs)
    MATH322 Calculus and Analytic Geometry II (3 hrs)
    MATH400 Mathematics and its History for Elementary Teachers (3 hrs)
    MATH403 Current Research in Elementary School Mathematics (3 hrs)
  Or other mathematics courses as approved by the advising
  coordinator for elementary mathematics education.

Minor Total ................................................. 20 hours

DEPARTMENT OF MUSIC AND DANCE

Campus Address: N101 Alexander
Internet: http://music.emich.edu
Telephone: 734.487.4380
E-mail: dave.wolfe@emich.edu

See page 274 and 325 for course descriptions.

The Eastern Michigan University Department of Music and Dance strives to
promote lifelong musical learning, to prepare students for professional
careers in music, and to advance the cultural life of the campus, community
and beyond.
Departmental Values

- Teaching and learning
- Performance
- Scholarship
- Outreach
- Service

Guiding Principles

- Musicianship
- Excellence
- Accessibility
- Relevance
- Partnership

Programs

- Bachelor of Music Education (instrumental and vocal)
- Bachelor of Music Therapy
- Bachelor of Music (Performance)
- Bachelor of Arts, bachelor of science (music major and dance majors in pre-dance therapy, studio management, or performance)
- Master of Arts with concentrations in music education, performance, piano pedagogy and theory/literature
- The Music Therapy Equivalency certificate

The Department of Music and Dance is a member of the National Association of Schools of Music.

Applications

Enrollment in any music or dance curriculum will be determined by the results of an audition process. All prospective students should contact the department well in advance of their intended registration date to arrange these auditions and examinations. Transfer students may apply at the same time for advanced standing in music or dance.

Address all correspondence to:
Department of Music and Dance
N101 Alexander Music Building
Eastern Michigan University
Ypsilanti, MI 48197

Advising

Students are strongly encouraged to seek music advising. Group advising sessions are held during the week before open course enrollment each fall or winter term. The names of advisors are posted each term in the department office or the coordinator of music advising may be contacted for further information.

David M. Pierce, coordinator of Music Advising
N101 Alexander
734.487.4380
E-mail: david.pierce@emich.edu

Sherry Jerome, coordinator of Dance Advising
318 Porter
734.487.2229
E-mail: sherry.jerome@emich.edu

Applied Music

The bachelor's degrees require varying credit hours of work on the principal applied music instrument as indicated in the course requirement listings for each curriculum and major. Students may be admitted to the 100-level applied music at different degrees of competency; therefore, some students may require more time to achieve the proficiency needed for admission to 300-level applied music. Permission to advance to 300-level applied music is given by the faculty jury with the permission of the chair.

Applied music is a requirement of each degree program and is offered in the following areas of specialization:

- Bassoon (INST)
- Clarinet (INCA)
- Flute (VFLT)
- Harp (ARHP)
- Horn (AHNR)
- Organ (ORG)
- Piano (APNO)
- String Bass (ABBS)
- Trumpet (ATPT)
- Violin (AVLN)
- Voice (AVOC)
- Cello (AVCL)
- Euphonium (AEPH)
- Guitar (AGTR)
- Harpsichord (AHPS)
- Oboe (AOBO)
- Percussion (APER)
- Saxophone (ASAX)
- Trombone (ATRB)

Students who do not qualify by audition for admission to a curriculum in music may, at the discretion of the department, be assigned preparatory work until ready for University-level applied music study. It should be understood that delayed admission as a departmental major may extend the time normally required to satisfy graduation requirements.

Transfer students may be granted credit for applied music study accomplished at another institution or with a recognized private teacher. Eligibility for credit will be determined by audition. A course of study designed to satisfy Department of Music and Dance graduation requirements will be recommended at that time.

Applied Music Fees

Fees are charged for applied music according to the following schedule:

- Music majors: $60 per semester (maximum) for all instruction.
- Music minors and other University students: $60 per semester for a two-credit applied music, $30 per semester for one-credit applied music ($60 maximum per semester).

Recitals

Student recitals are a participatory expectation of all applied music students. These performances may take place in studio classes, informal departmental recitals or in public recitals, where required.

A senior recital to fulfill requirements of graduation must be prepared and approved by an appropriate faculty committee. Chamber music may be included on the programs. In such an event, the recitalist must have a principal solo role in the music performed. Additional approval of senior recital programs for public performance will rest with the committee's recommendation.

All public recitals are subject to prior review and approval by a faculty committee.

Recital-Attendance Requirement

Each undergraduate music major must attend a total of 80 recitals/concerts (events) during their time of undergraduate study; they will receive credit for no more than 25 events per academic year. Students who fail to meet this requirement will not be permitted to graduate. The number of events that transfer students and students seeking a second baccalaureate degree must attend will be pro-rated, based on the number of semesters of work remaining at the time of their matriculation. Normally each semester the student will attend at least 10 musical events of which five are usually the Department of Music and Dance recitals that take place each Term, or 11 a.m. Recital attendance credit will be earned for attendance at any Department of Music and Dance event for which recital attendance cards are distributed and collected. Students must present for an entire event to receive credit. Late-comers will not be given a card. The cards are collected at the end of the program. A student who is performing in an event may receive recital attendance credit for that event if the student performs in less than 50 percent of the event. Attendance at many non-departmental musical events may be credited toward the recital-attendance requirement.

To obtain credit for a non-departmental event, please bring a ticket stub and program to the music office. The head of the Department of Music and Dance will determine whether or not the event qualifies for recital credit.

Graduate Study

Graduate study leads to the master of arts degree in music. For description of graduate courses, see the graduate catalog.
DANCE CURRICULUM (DANC)

The dance curriculum is uniquely designed, offering students of dance a choice of three career-track options. This curriculum leads to a bachelor of science degree. The three tracks are: (1) pre-dance therapy; (2) studio management; and (3) performance and choreography. Students are not required to choose a minor, with the exception of studio management.

Students planning admission to the dance major must officially enroll in the program at the Academic Advising Center and complete the following:

1. A technical assessment and audition into the program;
2. An application into the dance program at 318-319 Porter;
3. A course of study planned with a dance adviser based on track recommendations.

All students must meet the General Education Requirements and the other courses specified in each area below. Suitable adjustments can be made in consultation with a dance faculty adviser. Some of the track required courses can be used to fulfill General Education Requirements.

Dance majors need to enroll in a technique class every semester while attending Eastern Michigan University; Ballet or modern technique classes may be repeated for credit.

General Education Requirements .......................................................... 47 hours

Area I: Symbolism and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

Area II: Science and Technology
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area III: Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ........................................... 2 hours

Major Requirements ................................................................................. 54-75 hours

Dance Core ................................................................................................. 37 hours

DANC 107 Rhythmic Analysis and Dance Accompaniment (3 hrs)
DANC 208 Classical Ballet Technique III (3 hrs)
DANC 209 Classical Ballet Technique IV (3 hrs)
DANC 210 Modern Dance Technique III (3 hrs)
DANC 211 Modern Dance Technique IV (3 hrs)
DANC 245 Elements of Dance Composition (3 hrs)
DANC 255 Dance Production (3 hrs)
DANC 250 History of Dance (3 hrs)
DANC 304 Methods and Materials in Teaching of Dance (3 hrs)
DANC 450 Advanced Dance Composition (4 hrs)
DANC 455 Seminar in Dance (2 hrs)
DANC 420 Dance Workshop (1 hr)
DANC 422 Dance Workshop (2 hrs)
DANC 407 Senior Project (1 hr)

Select from one of the following tracks:

Track I: Pre-Dance Therapy (DANC FTHY) .................................................. 39 hours
EDPS 325 Life Span Human Growth and Development (4 hrs)
PHED 200 Anatomy and Physiology (5 hrs)
PHED 204 Kinesiology (biomechanics of Physical Activity) (3 hrs)
PHED 209 Bio-Fitness (3 hrs)
PSY 309 Social Psychology (3 hrs)
PSY 360 Abnormal Psychology (3 hrs)
PSY 361 Psychotherapy (3 hrs)
RECR 250 Fieldwork in Recreation/Therapeutic Recreation (1 hr)
DANC 231 Service Teaching (1 hr)
One course from the following:
PSY 321 Child Psychology (3 hrs)
PSY 322 Health Psychology of Adolescence (3 hrs)
PSY 323 Psychology of Human Aging (3 hrs)

One course from the following:
PSY 326 The Psychology of Stress and Relaxation (3 hrs)
PSY 365 Behavior Modification (3 hrs)

Seven hours from the following:
PHED 330 Adapted Physical Education (3 hrs)
RECR 200 Recreation for Persons with Disabilities (3 hrs)
MUSC 105 Introduction to Music Therapy (2 hrs)
CTAR 326 Drama/Theatre for Persons with Disabilities (2 hrs)

Others in consultation with adviser.

Track II: Studio Management (DANC STMG) .............................................. 17 hours
DANC 231 Service Teaching (1 hr)
DANC 333 Service Teaching (1 hr)
DANC 456 Creative Dance for Children (2 hrs)
PENN 102 Aerobic Dance (1 hr)
PENN 103 Couple, Squared, and Ballroom Dancing (1 hr)
DANC 103 Tap I (2 hrs)
PENN 277 Special Topics: Intermediate Aeriobics (1 hr)
PHED 204 Kinesiology (biomechanics of Physical Activity) (3 hrs)
PHED 200 Anatomy and Physiology (3 hrs)

Track III: Performance (DANC PERF) ........................................................ 25 hours
CTAR 102 Voice Development (1 hr)
CTAR 158 Fundamentals of Acting (3 hrs)
CTAR 204 Stage Makeup (1 hr)
CTAR 457 Audition (3 hrs)
CTAR 461 Musical Theatre Acting (2 hrs)
MUSC 232 Voice Class (1 hr)
PHED 204 Kinesiology (biomechanics of Physical Activity) (3 hrs)
DANC 103 Tap I (2 hrs)
DANC 201 Jazz I (2 hrs)
DANC 320 Dance Workshop (1 hr)
DANC 322 Dance Workshop (2 hrs)
PHED 200 Anatomy and Physiology (3 hrs)

Minor Requirements ................................................................................. 20-21 hours*?

University Elective Courses ................................................................... 1-16 hours†

Program Total .......................................................................................... 124 hours

Note:
*The studio management track must select a minor from business or management (21 credit hours).
†The studio management track requires one course in elective courses, other tracks require 16 credit hours in elective courses.
**Music Performance Major (Instrumental) (MPRI)**

With specialization in guitar, keyboard, strings, winds or percussion

The bachelor of music degree curriculum is available for students who wish to pursue a career in performance. All general education requirements must be completed, including one approved course in cross-cultural or international studies.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Area</th>
<th>Requirements</th>
<th>Hours</th>
</tr>
</thead>
</table>
| Area I Symbolics and Communication | 1. See page 23  
2. See page 23  
3. See page 23  
4. See page 23  
5. See page 23 | 45 hours |
| Area II Science and Technology | 1. See page 24  
2. See page 24  
3. See page 24 | |
| Area III Social Sciences | 1. See page 24  
2. See page 24  
3. See page 24  
4. See page 24 | |
| Area IV Arts and Humanities | 1. See page 25  
2. See page 25  
3. See page 25  
4. MUSC101 Music Theory I* | |

**Physical Education/Graduation Requirement**

2 hours

**Major Requirements**

<table>
<thead>
<tr>
<th>Applied Music (principal instrument)</th>
<th>32 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC140 Applied Music (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>MUSC144 Applied Music (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>MUSC240 Applied Music (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>MUSC244 Applied Music (4 hrs)</td>
<td></td>
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<tr>
<td>MUSC340 Applied Music (4 hrs)</td>
<td></td>
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<tr>
<td>MUSC344 Applied Music (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>MUSC440 Applied Music (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>MUSC444 Applied Music (4 hrs)</td>
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</tbody>
</table>

**Supporting Courses**

| MUSC101 Music Theory I (3 hrs) |         |
| MUSC118 Music Literature I (1 hr) |         |
| MUSC119 Aural Skills I (1 hr) |         |
| MUSC120 Music Theory II (3 hrs) |         |
| MUSC128 Music Literature II (1 hr) |         |
| MUSC129 Aural Skills II (1 hr) |         |
| MUSC120 Music Theory III (3 hrs) |         |
| MUSC218 Music Literature III (1 hr) |         |
| MUSC129 Aural Skills III (1 hr) |         |
| MUSC212 Music Theory IV (3 hrs) |         |
| MUSC228 Music Literature IV (1 hr) |         |
| MUSC229 Aural Skills IV (1 hr) |         |
| MUSC301 History of Music (3 hrs) |         |
| MUSC302 History of Music (3 hrs) |         |
| Upper-level music theory/literature electives (4 hrs) |         |

**Four hours from the following:**

| MUSC317 Music Composition (2 hrs) |         |
| MUSC411 Compositional Techniques (2 hrs) |         |
| MUSC401 Music Theory-Literature V (2 hrs) |         |
| MUSC402 Music Theory-Literature VI (2 hrs) |         |
| MUSC404 Psychology of Music I (2 hrs) |         |
| MUSC413 Orchestration (2 hrs) |         |
| MUSC414 Band Arranging (2 hrs) |         |

**Courses Chosen According to Area of Specialization**

20 hours

I. Guitar

| MUSC251 Functional Piano I (1 hr) |         |
| MUSC252 Functional Piano II (1 hr) |         |
| MUSC253 Functional Piano III (1 hr) |         |
| MUSC254 Functional Piano IV (1 hr) |         |
| MUSC236 Beginning Conducting (2 hrs) |         |
| MUSC237 Instrumental Conducting (2 hrs) |         |
| Ensembles (8 hrs) |         |

**II. Keyboard**

Courses chosen in consultation with major professor (4 hrs)

| MUSC301 Beginning Conducting (2 hrs) |         |
| Ensembles (8 hrs) |         |

**III. Strings**

| MUSC251 Functional Piano I (1 hr) |         |
| MUSC252 Functional Piano II (1 hr) |         |
| MUSC253 Functional Piano III (1 hr) |         |
| MUSC254 Functional Piano IV (1 hr) |         |
| MUSC236 Beginning Conducting (2 hrs) |         |
| MUSC237 Instrumental Conducting (2 hrs) |         |
| One from the following: |         |

**Viola principal:**

One course from the following:

| MUSC261 Basic String class: Violin I (1 hr) |         |
| MUSC211 Applied Music (1 hr) |         |

**Violin principal:**

One course from the following:

| MUSC262 String class: Violin II (1 hr) |         |
| MUSC211 Applied Music (1 hr) |         |

**Cello principal:**

One course from the following:

| MUSC263 String class: Cello-Bass (1 hr) |         |
| MUSC211 Applied Music (1 hr) |         |

**String Bass principal:**

One course from the following:

| MUSC264 String class: Cello-Bass (1 hr) |         |
| MUSC211 Applied Music (1 hr) |         |

**MUSC248 University Orchestra (8 hrs) |         |

**Elective courses in music (5 hrs) |         |

**IV. Wind or Percussion**

| MUSC251 Functional Piano I (1 hr) |         |
| MUSC252 Functional Piano II (1 hr) |         |
| MUSC253 Functional Piano III (1 hr) |         |
| MUSC254 Functional Piano IV (1 hr) |         |
| MUSC236 Beginning Conducting (2 hrs) |         |
| Elective courses in music (6 hrs) |         |
| One course from the following: |         |

| MUSC248 University Orchestra (8 hrs) |         |
| MUSC249 University Band (8 hrs) |         |

**Minor Requirements**

0 hours

**Program Total**

129 hours

**Note:**

*This course satisfies both a general education and a major requirement.

*Both a junior and a senior recital are required. Students must enroll in applied music during the semester each recital is performed.

*All bachelor of music students must meet an improvisation requirement. The requirement may be met in one of the following ways.
Music Performance Major (Vocal) (MPRF)

The bachelor of music degree curriculum is available for students who wish to pursue a career in performance. All general education requirements must be completed, including one approved course in cross-cultural or international studies.

General Education Requirements ............................................................... 41 hours

Area I - Symbolics and Communication
1. See page 23
2. See page 25
3. HNH1121/12 Beginning French*
4. See page 23
5. See page 23

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area III Social Sciences
1. See page 23
2. See page 23
3. See page 23
4. See page 23

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. MUSC101: Music Theory I*

Physical Education/Graduation Requirement ........................................... 2 hours

Additional Requirements ......................................................................... 10 hours

GERN1121/122 Beginning German (5 hrs)
*PRN1121/22 Beginning French (5 hrs)

Major Requirements ............................................................................... 90 hours

†Applied Music (principal instrument) .................................................. 32 hours
AVOC140 Applied Music (4 hrs)
AVOC144 Applied Music (4 hrs)
AVOC240 Applied Music (4 hrs)
AVOC244 Applied Music (4 hrs)
AVOC260 Applied Music (4 hrs)
AVOC264 Applied Music (4 hrs)
AVOC440 Applied Music (4 hrs)
AVOC444 Applied Music (4 hrs)

Supporting Courses
*MUSC101: Music Theory I (3 hrs)
MUSC118 Music Literature I (1 hr)
MUSC119 Aural Skills I (1 hr)
MUSC120: Music Theory II (3 hrs)
MUSC128 Music Literature II (1 hr)
MUSC129 Aural Skills II (1 hr)
MUSC201 Music Theory III (3 hrs)
MUSC218 Music Literature III (1 hr)
MUSC219 Aural Skills III (1 hr)
MUSC220: Music Theory IV (3 hrs)
MUSC228 Music Literature IV (1 hr)
MUSC229 Aural Skills IV (1 hr)
MUSC251 Functional Piano I (1 hr)

MUSC252 Functional Piano II (1 hr)
MUSC253 Functional Piano III (1 hr)
MUSC254 Functional Piano IV (1 hr)
MUSC260: Keyboard Skills (2 hrs)
MUSC261 History of Music (3 hrs)
MUSC262: History of Music (3 hrs)
Upper-level music theory/literature electives (4 hrs)

Four hours from the following:
MUSC317 Music Composition (2 hrs)
MUSC341 Counterpoint Techniques (2 hrs)
MUSC401 Music Theory Literature V (2 hrs)
MUSC402 Music Theory Literature VI (2 hrs)
MUSC406 Psychology of Music I (2 hrs)
MUSC415 Orchestration (2 hrs)
MUSC444 Band Arranging (2 hrs)
Vocal Ensembles (8 hrs)

Courses Chosen According to Area of Specialization 10 hours
MUSC235 A Cappella Singing (2 hrs)
Music courses chosen in consultation with major professor (6 hrs)
MUSC236 Beginning Conducting (2 hrs)

Minor Requirements .............................................................................. 0 hours

No minor is required.

Program Total ....................................................................................... 143 hours

Note:
*This course satisfies both a general education and a major requirement.
†Both a junior and a senior recital required. Students must enroll in applied music during the semester each recital is performed.

Music Therapy Major (MUTR)

Successful completion of the requirements for the bachelor of music therapy degree makes students eligible to sit for the Certification Examination given by the Certification Board for Music TherapistsTM. The bachelor of music therapy degree is awarded on completion of this curriculum. The degree program is approved by the American Music Therapy Association.

General Education Requirements .......................................................... 45 hours

Area I Symbolics and Communication
1. See page 23
2. See page 23
3. One course from the following:
   CTAC225 Listening Behavior (3 hrs)
   CTAC226 Nonverbal Communication (3 hrs)
   CTAC227 Intercultural Communication (3 hrs)
   CTAC274 Intracultural Communication (3 hrs)
   CTAC275 Interpersonal Communication (3 hrs)
4. See page 23
5. See page 23

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area III Social Sciences
1. See page 25
2. See page 25
3. See page 25
4. MUSC101: Music Theory I*
Physical Education/Graduation Requirement ........................................... 2 hours
  Two hours of physical education activity credits selected from the following.
  At least one is to be taken prior to MUSC221:
  Dance Activity Course (1 hr)
  Dance Activity Course (2 hrs)

Additional Requirements ................................................................. 6 hours
  PSY360 Abnormal Psychology (3 hrs)
  ZOO1326 Human Physiology (3 hrs)

Major Requirements ................................................................. 87 hours
  Education Courses ................................................................. 3 hours
  SPNG251 Education of Students with Exceptionalities (3 hrs)
  Fine Arts Courses ................................................................. 84 hours
  Music Theory and History Courses
    *MUSC101 Music Theory I (3 hrs)
    MUSC118 Music Literature I (1 hr)
    MUSC119 Aural Skills I (1 hr)
    MUSC120 Music Theory II (3 hrs)
    MUSC128 Music Literature II (1 hr)
    MUSC129 Aural Skills II (1 hr)
    MUSC201 Music Theory III (3 hrs)
    MUSC218 Music Literature III (1 hr)
    MUSC219 Aural Skills III (1 hr)
    MUSC220 Music Theory IV (3 hrs)
    MUSC223 Music Literature IV (1 hr)
    MUSC229 Aural Skills IV (1 hr)
    MUSC301 History of Music (3 hrs)
    MUSC302 History of Music (3 hrs)
    MUSC413 Conducting (2 hrs)

Applied Music
  MUSC326 Conducting (2 hrs)
  *Ensembles (4 hrs)
  Applied Music courses at the 100- to 412-level (principal instrument) (14 hrs)
  Secondary instrument classes (4 hrs)
    MUSC211 Basic Drum Class
    MUSC241 Percussion
    MUSC261 Basic String Class: Violin
    MUSC281 Basic Woodwind Class
  Functional performance skills as determined by the American Music Therapy Association

Some students should be able to meet some of these skill requirements upon entrance, or they can be achieved through the courses listed below:

I. Voice
  MUSC232 Voice Class (1 hr)
  One course from the following:
    ABOC100 Applied Music (1 hr)
    ABOC111 Applied Music (1 hr)

II. Piano
  MUSC251 Functional Piano (1 hr)
  MUSC252 Functional Piano (1 hr)
  MUSC253 Functional Piano (1 hr)
  MUSC254 Functional Piano (1 hr)
  MUSC305 Keyboard Skills (2 hrs)

III. Guitar
  MUSC274 Functional Guitar (2 hrs)

Music Therapy Courses
  MUSC103 Introduction to Music Therapy (2 hrs)
  MUSC221 Methods and Materials in Music Therapy (2 hrs)
  MUSC222 Preclinical Training Practicum in Music Therapy I (1 hr)
  MUSC223 Preclinical Training Practicum in Music Therapy II (1 hr)

MUSC203 Music Therapy Principles I (4 hrs)
MUSC204 Music Therapy Principles II (4 hrs)
MUSC404 Psychology of Music I (2 hrs)
MUSC405 Psychology of Music II (2 hrs)
MUSC414 Preclinical Training Practicum in Music Therapy III (1 hr)
MUSC425 Preclinical Training Practicum in Music Therapy IV (1 hr)
MUSC426 Clinical Training in Music Therapy (2 hrs)

Minor Requirements ........................................................................ 0 hours
  No minor is required.

Program Total ............................................................................. 140 hours

Note:
  *This course satisfies both a general education and a major requirement.
  †At least two credit hours in vocal ensembles required.

Music Major (MUSC)

Students must complete the requirements for the bachelor of arts or bachelor of science degrees by including the academic major below and a different minor subject of 20 to 24 hours in some other department. Bachelor of Arts degrees include one year of foreign language. Students must earn a teaching certificate by completing this major.

General Education Requirements .................................................. 45 hours
  Area I Symbolics and Communication
    1. See page 23
    2. See page 23
    3. See page 23
    4. See page 23
    5. See page 23
  Area II Science and Technology
    1. See page 24
    2. See page 24
    3. See page 24
  Area III Social Sciences
    1. See page 24
    2. See page 24
    3. See page 24
    4. See page 24
  Area IV Arts and Humanities
    1. See page 25
    2. See page 25
    3. See page 25
    4. MUSC201 Music Theory I

Physical Education/Graduation Requirement ................................... 2 hours

Major Requirements ........................................................................ 48 hours

General Music Requirements ....................................................... 34 hours
  *MUSC201 Music Theory I (3 hrs)
  MUSC218 Music Literature I (1 hr)
  MUSC219 Aural Skills I (1 hr)
  MUSC220 Music Theory II (3 hrs)
  MUSC223 Music Literature II (1 hr)
  MUSC229 Aural Skills II (1 hr)
  MUSC231 Music Theory III (3 hrs)
  MUSC238 Music Literature III (1 hr)
  MUSC239 Aural Skills III (1 hr)
  MUSC242 Music Theory IV (3 hrs)
  MUSC248 Music Literature IV (1 hr)
  MUSC249 Aural Skills IV (1 hr)
  MUSC251 Functional Piano I (1 hr)
  MUSC252 Functional Piano II (1 hr)
  MUSC253 Functional Piano III (1 hr)
MUSC 254 Functional Piano IV (1 hr)
MUSC 301 History of Music (3 hrs)
MUSC 302 History of Music (3 hrs)
Upper-level music theory/literature electives (4 hrs)

Four hours from the following:
MUSC 317 Music Composition (2 hrs)
MUSC 341 Contrapuntal Techniques (2 hrs)
MUSC 301 Music Theory-Literature V (2 hrs)
MUSC 402 Music Theory-Literature VI (2 hrs)
MUSC 404 Psychology of Music I (2 hrs)
MUSC 413 Orchestration (2 hrs)
MUSC 414 Band Arranging (2 hrs)

†Applied Music (principal instrument) 12 hours
Axec 112 Applied Music (2 hrs)
Axec 114 Applied Music (2 hrs)
Axec 212 Applied Music (2 hrs)
Axec 214 Applied Music (2 hrs)
Axec 312 Applied Music (2 hrs)
Axec 314 Applied Music (2 hrs)

Ensembles 2 hours

Minor Requirements .................................................. 20 hours
University Elective Courses ........................................ 9 hours
Program Total ......................................................... 124 hours

Note:
*This course satisfies both a general education and a major requirement.
†At least two terms in vocal ensembles are required.

**MUSIC EDUCATION (INSTRUMENTAL)**

**MAJOR (MEDI)**

K-12 Teacher Certification

Successful completion of this course of studies, which leads to the bachelor of music education degree, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate in music education, certification code 01. The Michigan Test for Teacher Certification (MTTC) assessing this field is #39, Music Education.

**General Education Requirements** .................................. 45 hours

Area I Symbolic and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. MUSC 101 Music Theory I

Physical Education/Graduation Requirement .......................... 2 hours

**Major Requirements** .............................................. 70 hours

**General Music Courses** ........................................... 51 hours

* MUSC 101 Music Theory I (3 hrs)
  MUSC 118 Music Literature I (1 hr)
  MUSC 191 Aural Skills I (1 hr)
  MUSC 1102 Music Theory II (3 hrs)
  MUSC 128 Music Literature II (1 hr)
  MUSC 129 Aural Skills II (1 hr)
  MUSC 201 Music Theory III (3 hrs)
  MUSC 218 Music Literature III (1 hr)
  MUSC 219 Aural Skills III (1 hr)
  MUSC 202 Music Theory IV (3 hrs)
  MUSC 228 Music Literature IV (1 hr)
  MUSC 229 Aural Skills IV (1 hr)
  MUSC 232 Voice Class (1 hr)
  MUSC 301 History of Music (3 hrs)
  MUSC 302 History of Music (3 hrs)
  MUSC 413 Orchestration (2 hrs)
  MUSC 411 Basic Brass Class (1 hr)
  MUSC 241 Percussion (1 hr)
  MUSC 251 Basic String Class Viola (1 hr)
  MUSC 265 Basic Woodwind Class (1 hr)

Two courses from the following:
  MUSC 202 Wind Class (1 hr)
  MUSC 203 String Class (1 hr)
  MUSC 204 Cello and Double Bass (1 hr)
  MUSC 208 Woodwind Class (1 hr)
  MUSC 209 Woodwind Class (1 hr)
  MUSC 221 Functional Piano I (1 hr)
  MUSC 222 Functional Piano II (1 hr)
  MUSC 223 Functional Piano III (1 hr)
  MUSC 224 Functional Piano IV (1 hr)
  MUSC 326 Conducting (2 hrs)
  MUSC 327 Instrumental Conducting (2 hrs)
  MUSC 326 Wind/Orchestra Electives (8 hrs)

Wind/pedal percussion principals must enroll in MUSC 249 University Band; string principals must enroll in MUSC 248 University Orchestra; wind and percussion principals are required to enroll in marching band three times: twice at PEGNI 140 and once at MUSC 249.

†Applied Music Courses
Axec 112 Applied Music (2 hrs)
Axec 114 Applied Music (2 hrs)
Axec 212 Applied Music (2 hrs)
Axec 214 Applied Music (2 hrs)
Axec 312 Applied Music (2 hrs)
Axec 314 Applied Music (2 hrs)
Axec 314 Applied Music (2 hrs)

Elective Courses ...................................................... 3 hours

**Professional Studies** .............................................. 33 hours

The following courses may be taken before formal admission to the teacher education program:

100 clock hours of approved prestudent teaching field experiences (0 hrs)
SPGN 251 Education of Students with Exceptionalities (3 hrs)
EDPS 322 Human Development and Learning (6 hrs)

The following courses require formal admission to the teacher education program:
SOED 328 Schools in a Multicultural Society (2 hrs)
MUSC 332 Instrumental Music in the Public Schools (3 hrs)
One course from the following:
MUSC 333 Orchestral Methods (3 hrs) (for string principals)
MUSC 334 Band Methods (3 hrs)
MUSC 334 Band Methods (3 hrs)
EDMT 330 Instructional Applications of Media and Technology (2 hrs)
RDNG 311 Teaching Reading in the Secondary School (3 hrs)
EDUC 496 Student Teaching (6 hrs)
EDUC 497 Student Teaching (6 hrs)

128
Program Total ................................................................. 150 hours

Note:
*This course satisfies both a general education and a major requirement.
A senior recital is required. Students must enroll in applied music during the
semester each recital is performed.

All Bachelor of Music students must meet an improvisation requirement. The
requirements may be met in one of the following ways:

- MUSC3015 Keyboard Skills
- MUSC214j jazz Ensemble
- Other approved improvisation course
  (the above options count toward music electives, and are to be
  selected with a music department advisor)
- By contract in applied music for at least one fall or winter semester (see
  applied music professor for details).

Keyboard principals will waive MUSC251/252/253/254. Instead, they must
take Applied Music (wind/percussion/instr.); Axx11, Axx13, Axx21, Axx213 (total of 4 hours). If students choose hand-instrument, they
must satisfy the PE requirements with PEGN140 Selective Marching Band.

MUSIC EDUCATION (VOCAL) MAJOR (MEDV)
K-12 Teacher Certification

Successful completion of this course of studies, which leads to the bachelor
of music education degree, in the context of other program requirements,
qualifies the student for recommendation for certification for the Michigan
Department of Education Elementary-Secondary Provisional Certificate
endorsed in music education, certification code JX. The Michigan Test
for Teacher Certification (MTTC) covering this field is #39, "Music
Education." At the time of admission to the Bachelor of Music Education
— Vocal curriculum, students with piano as a second instrument must
demonstrate the required level of proficiency for graduation, or elect piano
every semester until the required proficiency is attained.

General Education Requirements ........................................ 45 hours

Area I Symbolic and Communication
  1. See page 23
  2. See page 23
  3. See page 23
  4. See page 23
  5. See page 23

Area II Science and Technology
  1. See page 24
  2. See page 24
  3. See page 24

Area III Social Sciences
  1. See page 24
  2. See page 24
  3. See page 24
  4. See page 24

Area IV Arts and Humanities
  1. See page 25
  2. See page 25
  3. See page 25
  4. MUSC101 Music Theory I*

Physical Education/Graduation Requirement .......................... 2 hours

Major Requirements .......................................................... 70 hours

General Music Requirements ............................................... 48 hours

- MUSC101 Music Theory I (3 hrs)
- MUSC118 Music Literature I (3 hrs)
- MUSC119 Aural Skills I (1 hr)
- MUSC122 Music Theory II (3 hrs)

MUSC128 Music Literature II (1 hr)
MUSC129 Aural Skills II (1 hr)
MUSC201 Music Theory III (3 hrs)
MUSC218 Music Literature III (1 hr)
MUSC219 Aural Skills III (1 hr)
MUSC220 Music Theory IV (1 hr)
MUSC228 Music Literature IV (1 hr)
MUSC239 Aural Skills IV (1 hr)
MUSC261 History of Music (3 hrs)
MUSC262 History of Music (3 hrs)
MUSC305 Keyboard Skills (2 hrs)
MUSC241 Percussion (1 hr)
MUSC274 Functional Guitar (2 hrs)
MUSC413 Orchestra (2 hrs)
MUSC326 Conducting (2 hrs)
MUSC320 Choral Conducting (2 hrs)
Vocal Ensembles (8 hrs)

must include at least four semesters of MUSC131

One course from the following:

- MUSC211 Brass: Trumpet and Trombone (1 hr)
- MUSC212 Brass Class (1 hr)

One course from the following:

- MUSC261 Basic String Class: Violin (1 hr)
- MUSC262 String Class: Viola (1 hr)
- MUSC263 String: Cello and Double Bass (1 hr)

One course from the following:

- MUSC281 Basic Woodwind (1 hr)
- MUSC282 Woodwind: Flute and Saxophone (1 hr)
- MUSC283 Woodwind: Oboe and Basset (1 hr)

Applied Music Courses .................................................... 22 hours

Principle instrument courses must be in either AVOC or APNO/AOOG/APS

Axx112 Applied Music (2 hrs)
Axx114 Applied Music (2 hrs)
Axx212 Applied Music (2 hrs)
Axx214 Applied Music (2 hrs)
Axx312 Applied Music (2 hrs)
Axx314 Applied Music (2 hrs)
Axx412 Applied Music (2 hrs)
Axx414 Applied Music (2 hrs)

One option from the following:

Option I (if keyboard is secondary instrument):

- MUSC251 Functional Piano I (1 hr)
- MUSC252 Functional Piano II (1 hr)
- MUSC253 Functional Piano III (1 hr)
- MUSC254 Functional Piano IV (1 hr)
- APNO111/101/011 Applied Music I (1 hr)
- APNO113/103/113 Applied Music I (1 hr)

Option II (if voice is secondary instrument):

- AVOC111 Applied Music I (1 hr)
- AVOC113 Applied Music I (1 hr)
- AVOC112 Applied Music I (1 hr)
- AVOC113 Applied Music I (1 hr)
- AVOC211 Applied Music I (1 hr)
- AVOC213 Applied Music I (1 hr)
- AVOC211 Applied Music I (1 hr)
- AVOC213 Applied Music I (1 hr)

Professional Studies ....................................................... 33 hours

The following courses may be taken before formal admission to the teacher
education program:

- 100 clock hours of approved practicum teaching field
  experiences (6 hrs)
- SPGN251 Education of Students with Exceptionalities (3 hrs)
- EDPS322 Human Development and Learning (4 hrs)

The following courses require formal admission to the teacher education
program:

- SOFD38 Schools in a Multicultural Society (3 hrs)
- MUSC330 Music Education in the Elementary School (3 hrs)
- MUSC331 Music Education in the Secondary School (3 hrs)
EDMT330 Instructional Applications of Media and Technology (2 hrs)
RDNG311 Teaching Reading in the Secondary School (3 hrs)
EDUC406 Student Teaching (6 hrs)
EDUC407 Student Teaching (6 hrs)

Program Total .................................................. 159 hours

Note:
*This course satisfies both a general education and a major requirement.
A senior recital approval is required. Students must enroll in applied music during the semester a degree recital is performed.

THE MUSIC THERAPY EQUIVALENCY
Certificate (MUTR)

The music therapy post-baccalaureate certificate program is for students with a music degree from a National Association of Schools of Music accredited institution (or an equivalent institution outside of the United States) and an interest in specialized studies that will lead to meeting the eligibility requirements to take the certification examination in music therapy administered by the Certification Board for Music Therapists. Successful passing of this examination leads to the person being credentialed as a music therapist-board certified. The courses within this equivalency certificate program are approved by the American Music Therapy Association, and accredited by the National Association of Schools of Music.

Admission
Students must satisfy admission requirements of the University, the Department of Music and Dance and the Music Therapy Program. Please Note that an audition is not required unless students want to take applied music lessons on their principal instrument while completing this certificate. Applicants may be required in secondary instruments to prepare the student to pass the EMU Music Therapy Competencies. Students must be admitted into the music therapy post-baccalaureate certificate program before enrolling in required course work. Requirements for admission into this certificate program include the following:

a) Submission of the completed application, non-refundable application fee and all official undergraduate and graduate transcripts to undergraduate admissions in the Office of Admissions.
b) The earned equivalent of a U.S. bachelor's degree in music from an accredited college or university.
c) A personal interview with the coordinator of music therapy is required. This interview will explore the applicant's (1) interest in and general knowledge of music therapy; (2) music skills and (3) personal potential for being a successful music therapist.
d) Applicants whose native language is not English must demonstrate English language proficiency.

Certificate Requirements
The post-baccalaureate music therapy equivalency certificate program must consist of all music therapy courses required for the bachelor of music therapy degree.

Courses in the sciences and in other areas to meet the American Music Therapy Association's educational standards are required.

Students must successfully demonstrate the EMU music therapy competencies in guitar, piano and voice before being eligible to enter the required clinical training (internship). Copies of the criteria for the competencies can be obtained from the coordinator of music therapy.

A specific program of study will be developed by the coordinator of music therapy, in consultation with the student, once the student is admitted into the equivalency certificate program.

Required Courses ........................................... 22 hours
MUSC213 Introduction to Music Therapy (2 hrs)
MUSC221 Methods and Materials in Music Therapy (2 hrs)
MUSC222 Preclinical Training Practicum in Music Therapy I (1 hr)
MUSC223 Preclinical Training Practicum in Music Therapy II (1 hr)
MUSC303 Music Therapy Principles I (4 hrs)
MUSC304 Music Therapy Principles II (4 hrs)
MUSC402 Psychology of Music I (2 hrs)
MUSC405 Psychology of Music II (2 hrs)
MUSC24 Preclinical Training Practicum in Music Therapy III (1 hr)
MUSC245 Preclinical Training Practicum in Music Therapy IV (1 hr)
MUSC468 Clinical Training in Music Therapy (2 hrs)

Additional Requirements .................................... 0-15 hours
Other courses may be required depending on the course content of the student's previous degree(s). Additional courses that are often required are:

MUSC32 Conducting (2 hrs)
MUSC413 Orchestration (2 hrs)
PSY360 Abnormal Psychology (3 hrs)
ZOO126 Human Physiology (3 hrs)
PRGN dance activity courses or DANC course (2 hrs)
SPGN251 Education of Exceptional Children (3 hrs)

Certificate Total............................................. 22 hours

Note:
The number of required hours for the certificate depend upon the student's undergraduate degree.

DANCE MINOR (DANC)

Students planning admission to the dance minor must complete the following:

1. A technical assessment and audition into the program
2. An application at 318/319 Parker, and
3. A course of study planned with a dance adviser.

Minor Requirements ........................................ 28 hours
DANC107 Rhythmic Analysis and Dance Accompaniment (3 hrs)
DANC245 Elements of Dance Composition (3 hrs)
DANC250 Dance Production (3 hrs)
DANC250 History of Dance (3 hrs)
DANC50 Advanced Dance Composition (4 hrs)
DANC55 Seminar in Dance (3 hrs)
Two levels of Modern Dance Technique I-IV (4-6 hrs)
Two levels of Classical Ballet Technique I-IV (4-6 hrs)
Two levels of Jazz I-II (2 hrs)

Minor Total .................................................... 28 hours

GENERAL MUSIC MINOR (GMUS)

Students seeking admission to the general minor in music must complete an application at the Department of Music and Dance office and take placement tests in applied music and basic musicianship.

Required Courses ............................................ 16 hours
MUSC101 Music Theory I (3 hrs)
MUSC119 Music Literature I (1 hr)
MUSC119 Aural Skills I (1 hr)
MUSC120 Music Theory II (3 hrs)
MUSC123 Music Literature II (1 hr)
MUSC129 Aural Skills II (1 hr)
MUSC251 Functional Piano I (1 hr)
MUSC252 Functional Piano II (1 hr)
Ensemble (2 hrs)

Applied Music
MUSC1101 Applied Music (1 hr)
MUSC1102 Applied Music (1 hr)
For Instrumental
MUSC251 Functional Piano I (1 hr)
MUSC252 Functional Piano II (1 hr)
MUSC211 Applied Music (all except AVOC) (1 hr)
APN211 Applied Music (all except AVOC) (1 hr)
MUSC211 Basic Brass Class: Trumpet and Trombone (1 hr)
MUSC241 Percussion Class (1 hr)
MUSC261 Basic String Class: Violin (1 hr)
MUSC281 Basic Woodwind Class: Clarinet (1 hr)
Music Electives (2 hrs)
Large Instrumental Ensembles ........................................ 2 hours
Select either MUSC49 University Orchestra or MUSC49 University Band

Professional Studies .......................................................... 7 hours
The following courses require formal admission to the teacher education program:

Music Methods (choose one of the following)

For vocal
MUSC330 Elementary Music Methods (3 hrs)

For instrumental
MUSC332 Instrumental Music Methods (3 hrs)
EDUC495 Student Teaching (4 hrs)

Minor Total ........................................................................... 28-31 hours

DEPARTMENT OF PHYSICS AND ASTRONOMY

Campus Address: 309 Strong Hall
Internet: www.physics.eecs.umich.edu/index.htm
Telephone: 734-764-4144
Email: makees@umich.edu

See page 249 and 336 for course descriptions.

The Department of Physics and Astronomy offers majors in physics, physics research, engineering physics, and physics teaching. Minors are offered in astronomy, general science, physics, and physics teaching. The department also administers interdisciplinary offerings in pre-engineering, applied science, general science, and integrated science teaching. Transfer students who wish to major in physics, physics research, or engineering physics must take a minimum of nine credit hours at the 300-level or above in this department. Transfer students who wish to minor in these areas must take a minimum of six credit hours of course work at the 300-level or above in this department.

Graduate study leads to the master's degree in physics research, physics education, or general science. These programs are described in the graduate catalog.

The department's honor society, Sigma Pi Sigma, is the official honor society of the physics profession. Through election to Sigma Pi Sigma, distinctive achievement and high scholarship in physics is recognized and celebrated. Sigma Pi Sigma exists to honor outstanding scholarship in physics; to encourage interest in physics among students at all levels; to promote an attitude of service in its members toward their fellow students, colleagues and the public; and to provide a fellowship of persons who have excelled in physics. The faculty advisor and a committee of active Sigma Pi Sigma members nominate prospective members.
GROUP MAJOR/MINOR IN GENERAL SCIENCE (GSC)

This 56-hour major and minor combination encompasses five areas of study: biology, chemistry, earth science, mathematics and physics. Students must follow regular department requirements to complete a 20-hour cognate minor in one of the areas listed above and a 36-hour group major composed of courses from the other four areas.

General Education Requirements .................................. 34-37 hours

Area I Symbolic and Communication
1. See page 23
2. See page 23
3. See page 23
4. Students with a general science major:
   - See page 23
   - Students with a minor in mathematics or physics:
     One course from the following:
     * MATH120 Calculus I
     * MATH121 Calculus II
     * MATH122 Elementary Linear Algebra
   - See page 23

Area II Science and Technology
1. One course from the following:
   * ASTR205 Principles of Astronomy
   * CHEM108 Earth Science for non-science majors
   * PHYS221 Mechanics, Sound and Heat
   * CHEM121/122 General Chemistry I with lab
2. One course from the following:
   * BOTN130 Biology of Plants
   * ZOOI140 Biology of Animals
3. One course from the following:
   * ASTR205 Principles of Astronomy
   * ESSC110 The Dynamic Earth System
   * PHYS221 Mechanics, Sound and Heat
   * CHEM121/122 General Chemistry I with lab

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ..................... 2 hours

Group Major (36 hrs) with Cognate Minor (20-21 hrs) ......... 56-57 hours

Cognate minor in one of the following five science areas:

- Biology (22 hrs)
- Chemistry (20-21 hrs)
- Earth science (2 hrs)
- Physics (11 hrs)

Select courses for your minor in consultation with an advisor in the appropriate department.

Group Major .......................................................... 36 hours

With a biology minor, take the following for the group major:

- ASTR205 Principles of Astronomy (4 hrs)
- CHEM121/122 General Chemistry I with lab (4 hrs)
- ESSC110 The Dynamic Earth System (4 hrs)
- ESSC121 Weather, Climate and the Earth System (3 hrs)
- MATH110 College Algebra (3 hrs)
- MATH107 Plane Trigonometry (2 hrs)
- PHYS221 Mechanics, Sound and Heat (4 hrs)
- PHYS222 Electricity and Light (4 hrs)

With a chemistry minor, take the following for the group major:
- ASTR205 Principles of Astronomy (4 hrs)
- BIOL105 Introductory Biology for Non-major (4 hrs)
- BIOL324 Global Ecology and the Environment (4 hrs)
- ESSC110 The Dynamic Earth System (4 hrs)
- ESSC121 Weather, Climate and the Earth System (3 hrs)
- MATH110 College Algebra (3 hrs)
- MATH107 Plane Trigonometry (2 hrs)
- PHYS221 Mechanics, Sound and Heat (4 hrs)
- PHYS222 Electricity and Light (4 hrs)

With an earth science minor, take the following for the group major:
- ASTR205 Principles of Astronomy (4 hrs)
- BIOL110 Introductory Biology I (3 hrs)
- BIOL324 Global Ecology and the Environment (4 hrs)
- CHEM121/122 General Chemistry I with lab (4 hrs)
- MATH110 College Algebra (3 hrs)
- MATH107 Plane Trigonometry (2 hrs)
- PHYS221 Mechanics, Sound and Heat (4 hrs)
- PHYS222 Electricity and Light (4 hrs)

With a mathematics minor, take the following for the group major:
- ASTR205 Principles of Astronomy (4 hrs)
- BIOL110 Introductory Biology I (3 hrs)
- BIOL324 Global Ecology and the Environment (4 hrs)
- CHEM121/122 General Chemistry I with lab (4 hrs)
- ESSC110 The Dynamic Earth System (4 hrs)
- ESSC121 Weather, Climate and the Earth System (3 hrs)
- PHYS221 Mechanics, Sound and Heat (4 hrs)
- PHYS222 Electricity and Light (4 hrs)

With a physics minor, take the following for the group major:
- ASTR205 Principles of Astronomy (4 hrs)
- BIOL110 Introductory Biology I (3 hrs)
- BIOL324 Global Ecology and the Environment (4 hrs)
- CHEM121/122 General Chemistry I with lab (4 hrs)
- ESSC110 The Dynamic Earth System (4 hrs)
- ESSC121 Weather, Climate and the Earth System (3 hrs)
- PHYS221 Mechanics, Sound and Heat (4 hrs)
- PHYS222 Electricity and Light (4 hrs)

With a physics minor, take the following for the group major:
- CHEM121/122 General Chemistry I with lab (4 hrs)
- MATH110 College Algebra (3 hrs)
- MATH111 Calculus II (4 hrs)
- MATH121 Calculus III (4 hrs)

Approved elective courses in biology, chemistry, earth science, mathematics and physics (5 hrs)

Approved elective courses in biology, chemistry, earth science, mathematics and physics (5 hrs)

Approved elective courses in biology, chemistry, earth science, mathematics and physics (5 hrs)

Approved elective courses in biology, chemistry, earth science, mathematics and physics (5 hrs)

University Elective Courses ..................................... 32 hours

Program Total ....................................................... 124 hours

Note:
* This course satisfies both a general education and a major requirement.

Approved Elective Courses:
- ASTR204 Astronomical Investigations (1 hr)
- BIOL205 Field Biology (4 hrs)
- BOTN130 Biology of Plants (4 hrs)
- CHEM123 General Chemistry II Laboratory (1 hr)
- CHEM204 Survey of Organic Chemistry (4 hrs)
- CHEM271 Organic Chemistry Laboratory (1 hr)
- COSC145 Introduction to FORTRAN Programming (3 hrs)
- ESSC114 National Parks and Monuments (2 hrs)
- ESSC228 Mineralogy (4 hrs)
- ESSC230 Oecology (3 hrs)
- ESSC239 Rocks and Minerals (2 hrs)
- MATH120 Calculus I (4 hrs)
- MATH121 Calculus II (4 hrs)
PHY SICS MAJOR (PHY)

This major is provided for students who desire a general cultural education with an emphasis on physics, who are preparing for work in another field such as premedicine or prelaw, or who are interested in combining physics with an allied field such as biology, chemistry, astronomy, geology or with the field of business.

General Education Requirements ............................................. 37 hours

Area I Symbols and Communication
1. See page 23
2. See page 24
3. See page 24
4. MATH210 Calculus I*
5. COSC111 Introduction to Programming*

Area II Science and Technology
1. PHY223 Mechanics and Sound*
2. See page 24
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Additional Requirements ...................................................... 18 hours

*COSC111 Introduction to Programming (3 hrs)
*MATH210 Calculus I (4 hrs)
*MATH211 Calculus II (4 hrs)
*MATH222 Elementary Linear Algebra (3 hrs)
*MATH223 Multivariable Calculus (9 hrs)

Physical Education/Graduation Requirement ............................ 2 hours

Major Requirements ............................................................... 35 hours

Required Courses ................................................................. 29 hours

*PHY223 Mechanics and Sound (5 hrs)
PHY224 Electricity and Light (5 hrs)
PHY310 Intermediate Mechanics I (3 hrs)
PHY312 Mechanics Laboratory I (1 hr)
PHY320 Electricity and Magnetism I (3 hrs)
PHY320 Heat and Thermodynamics (4 hrs)
PHY370 Introduction to Modern Physics (3 hrs)
PHY372 Modern Physics Laboratory (1 hr)
PHY406 Ethical Issues in Physics (1 hr)
PHY420 Capstone Project (3 hrs)

Restricted Elective Courses .................................................. 1–4 hours

One laboratory course from the following:
PHY436 Vibration and Sound (4 hrs)
PHY442 Optics Laboratory (1 hr)
PHY444 Applied Optics (2 hrs)
PHY456 Electronics for Scientists (4 hrs)

Elective Courses ................................................................. 7–3 hours

Only physics or astronomy undergraduate courses numbered greater than 299 can be used as electives on this major, excluding PHY311, PHY312 and PHY325 which cannot be used on this major.

Minor Requirements ........................................................... 20 hours

*A Mathematics minor is highly recommended.

University Elective Courses ................................................. 14 hours

Program Total ................................................................. 124 hours

Note:
*This course satisfies both a general education and a major requirement.
*Students desiring a mathematics minor must take MATH211 Introduction to Mathematical Proof (3 hrs) or MATH360 Statistical Methods (3 hrs) or MATH370 Probability and Statistics I (4 hrs) and a restricted elective to complete the minor.

APPLIED SCIENCE MAJOR (ASCI)

This program is designed for students who plan to enter occupations in which a substantial background in mathematics and science is required. It calls for concentrations of 16 to 18 hours in each of two departments (chemistry, mathematics or physics) and 36 hours in the third. To qualify for a bachelor of arts degree, the student must complete one year of college-level credit in a foreign language. In addition to meeting the general education requirements, all students on this curriculum must complete all other courses specified. No minor is required.

General Education Requirements .......................................... 34 hours

Area I Symbols and Communication
1. See page 23
2. See page 23
3. See page 23

Area II Science and Technology
1. CHEM121/122 General Chemistry I with Lab*
2. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25

Major Requirements ........................................................... 75 hours

Chemistry Courses .............................................................. 15 hours

*CHEM121/122 General Chemistry I with lab (4 hrs)
*CHEM123 General Chemistry II (4 hrs)
*CHEM124 General Chemistry II Laboratory (1 hr)
CHEM261 Quantitative Analysis (4 hrs)
CHEM341 Fundamentals of Material Science (3 hrs)

Mathematics and Computer Science Courses ................................ 18 hours

*MATH120 Calculus I (4 hrs)
*MATH121 Calculus II (4 hrs)
*MATH122 Elementary Linear Algebra (3 hrs)
*MATH223 Multivariable Calculus (4 hrs)
*COSC111 Introduction to Programming (3 hrs)

Physics Courses ................................................................. 18 hours

*PHY223 Mechanics and Sound (5 hrs)
PHY224 Electricity and Light (5 hrs)
PHYS259 Introduction to Modern Physics (3 hrs)
PHYS257 Modern Physics Laboratory (1 hr)
PHYS426 Electronics for Scientists (4 hrs)

Engineering Courses ................................................. 6 hours
CADM122 Engineering Graphics I (3 hrs)
CADM223 Engineering Graphics II (3 hrs)

Restricted Elective Courses ................................. 18-20 hours
18 to 20 hours from one of the following groups to complete
the major: chemistry, mathematics or physics.

Chemistry:
CHEM371 Organic Chemistry I
CHEM372 Organic Chemistry II
CHEM373 Organic Chemistry Laboratory
Electives chosen in consultation with advising coordinator
in applied science

Mathematics:
MATH265 Calculus I (4 hrs)
MATH266 Calculus II (4 hrs)
MATH267 Calculus III (4 hrs)
MATH268 Calculus IV (4 hrs)
MATH269 Differential Equations (3 hrs)
Electives chosen in consultation with advising coordinator
in applied science

Physics:
PHYS259 Intermediate Mechanics I
PHYS260 Electrical Measurements
PHYS261 Atom and Nuclear Physics
One course from the following laboratory courses:
PHYS259 Mechanics Laboratory
PHYS259 Optics Laboratory
Electives at the 300- or 400-level, chosen in consultation
with the advising coordinator in applied science

Minor Requirements ................................................... 0 hours
No minor is required.

University Elective Courses ...................................... 13 hours

Program Total .......................................................... 124 hours

ENGINEERING PHYSICS MAJOR (PHY ENGR)

Students following this program will earn a bachelor of science degree with
a major in physics and will have a strong background in engineering
mechanics. Graduates will be well qualified to fill engineering-oriented positions.
No minor is required.

General Education Requirements .................................... 34 hours

Area I Symbolics and Communication
1. See page 23
2. See page 24
3. See page 25
4. MATH120 Calculus I
5. COSC111 Introduction to Programming

Area II Science and Technology
1. CHEM121/122 General Chemistry I with lab
2. See page 24
3. PHYS259 Mechanics and Sound

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Art and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Additional Requirements ............................................ 11 hours
*CHEM213/214 General Chemistry I with lab (4 hrs)
*CHEM215/216 General Chemistry II with lab (4 hrs)
*COSC111 Introduction to Programming (3 hrs)

Physical Education/Graduation Requirement ....................... 2 hours

Major Requirements ....................................................... 62 hours

Required Math Courses ............................................. 18 hours
MATH120 Calculus I (4 hrs)
MATH121 Calculus II (4 hrs)
MATH122 Calculus III (4 hrs)
MATH123 Multivariable Calculus (4 hrs)
MATH124 Differential Equations (3 hrs)

Required Physics Courses ........................................... 26 hours
*PHYS259 Mechanics and Sound (5 hrs)
*PHYS260 Electricity and Magnetism (5 hrs)
PHYS261 Heat and Thermodynamics (4 hrs)
PHYS267 Introduction to Modern Physics (3 hrs)
PHYS268 Modern Physics Laboratory (1 hr)
PHYS426 Ethical Issues in Physics (1 hr)
PHYS427 Quantum Mechanics (3 hrs)
PHYS428 Capstone Project (3 hrs)
PHYS429 Electromagnetics (3 hrs)

Required Engineering Mechanics Courses ......................... 11 hours
PHYS259 Strength and Elasticity of Materials (4 hrs)
PHYS260 Dynamics (4 hrs)
PHYS261 Fluid Dynamics (3 hrs)

Physics Elective Courses ............................................ 7 hours

Seven hours from the following:
PHYS259 Mechanics Laboratory (1 hr)
PHYS260 Electricity and Magnetism (3 hrs)
PHYS261 Heat and Thermodynamics (4 hrs)
PHYS262 Vibration and Sound (4 hrs)
PHYS426 Optics (3 hrs)
PHYS427 Optics Laboratory (1 hr)
PHYS428 Applied Optics (2 hrs)
PHYS429 Electronic Devices for Scientists (4 hrs)
PHYS261 Atomic and Nuclear Physics (3 hrs)
PHYS267 Introduction to Quantum Mechanics (3 hrs)
PHYS268 Mathematical Physics (3 hrs)

Minor Requirements .................................................... 0 hours
No minor is required.

University Elective Courses ........................................ 15 hours

Program Total .......................................................... 124 hours

Note:
*This course satisfies both a general education and a major requirement.
Students desiring a mathematics minor must take MATH211 Introduction
to Mathematical Proof (3 hrs) or MATH250 Statistical Methods (3 hrs) or
MATH270 Probability and Statistics I (4 hrs) to complete the minor.

GEOPHYSICS MAJOR (GPHY)

The geophysics major involves concentrations in physics, geology and
mathematics. This major is designed to bring together the traditional
sciences of physics and geology into a program that will prepare students for
employment in the modern day geoscience area. This major also will prepare
the student for graduate work in either geophysics, geology or physics.
No minor is required.

General Education Requirements .................................... 34 hours

Area I Symbolics and Communication
1. See page 25
2. See page 23
5. See page 23
4. One course from the following:
   * MATH120 Calculus I
   * MATH121 Calculus II
   * MATH122 Elementary Linear Algebra
5. COSC111 Introduction to Programming*

Area II Science and Technology
1. One course from the following:
   * MATH120 Calculus I
   * MATH121 Calculus II
   * MATH122 Elementary Linear Algebra
   * PHYS223 Mechanics and Sound
   * CHEM121/122 General Chemistry I with lab
2. See page 24
3. One course from the following:
   * MATH120 Calculus I
   * MATH121 Calculus II
   * MATH122 Elementary Linear Algebra
   * PHYS223 Mechanics and Sound
   * CHEM121/122 General Chemistry I with lab

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ............................................. 2 hours

Major Requirements ................................................................. 90 hours

Required Physics and Geology Courses .............................................. 61-63 hours
   * PHYS223 Mechanics and Sound (5 hrs)
   * PHYS224 Electricity and Light (5 hrs)
   * PHYS229 Strength and Elasticity of Materials (4 hrs)
   * PHYS300 Intermediate Mechanics I (3 hrs)
   * PHYS301 Electricity and Magnetism I (3 hrs)
   * PHYS481 Mathematical Physics (3 hrs)
   * ENSC110 The Dynamic Earth System (4 hrs)
   * ENSC111 The Earth System Through Time (4 hrs)
   * ENSC228 Mineralogy (4 hrs)
   * ENSC229 Plate Tectonics (3 hrs)
   * ENSC236 Structural Geology (4 hrs)
   * ENSC239 Igneous and Metamorphic Petrology (4 hrs)
   * ENSC240 Sedimentology and Stratigraphy (4 hrs)
   * ENSC255 Field Geology I (2 hrs)
   * ENSC256 Field Geology II (3 hrs)

Two courses from the following:
   * PHYS270 Introduction to Modern Physics (3 hrs)
   * PHYS272 Vibration and Sound (4 hrs)
   * PHYS452 Electrical Measurements (4 hrs)
   * PHYS456 Electronics for Scientists (4 hrs)
   * PHYS458 Fluid Dynamics (3 hrs)

Required Mathematics Courses .................................................. 21 hours
   * MATH120 Calculus I (4 hrs)
   * MATH121 Calculus II (4 hrs)
   * MATH122 Elementary Linear Algebra (5 hrs)
   * COSC111 Introduction to Programming (3 hrs)
   * MATH221 Multivariable Calculus (4 hrs)
   * MATH325 Differential Equations (3 hrs)

Required Chemistry Courses ..................................................... 8 hours
   * CHEM121/122 General Chemistry I with lab (4 hrs)
   * CHEM233 General Chemistry II (5 hrs)
   * CHEM124 General Chemistry II Laboratory (1 hr)

Minor Requirements .............................................................. 0 hours
   No minor is required.

University Elective Courses .................................................. 0 hours

Program Total ................................................................. 126 hours

Note:
*This course satisfies both a general education and a major requirement.

PHYSICS RESEARCH MAJOR (PHYR)

The physics research major provides the necessary background for those planning to become professional physicists. The requirements listed below ensure adequate depth and breadth of subject matter in both theoretical and experimental physics and in mathematics. Students successfully completing this major are prepared to enter technical positions in government or industrial research, or to undertake graduate study in physics. Further work at the graduate level is highly recommended. No minor is required.

General Education Requirements .................................................. 34 hours

Area I Symbolics and Communication
1. See page 24
2. See page 24
3. See page 24
4. MATH120 Calculus I
5. COSC111 Introduction to Programming*

Area II Science and Technology
1. CHEM121/122 General Chemistry I with lab*
2. See page 24
3. PHYS223 Mechanics and Sound*

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Additional Requirements ......................................................... 7 hours

   * CHEM121/122 General Chemistry I with lab (4 hrs)
   * COSC111 Introduction to Programming (3 hrs)

Physical Education/Graduation Requirement ...................................... 2 hours

Major Requirements .............................................................. 57 hours

Required Mathematics Courses .................................................. 18 hours
   * MATH120 Calculus I (4 hrs)
   * MATH121 Calculus II (4 hrs)
   * MATH122 Elementary Linear Algebra (3 hrs)
   * MATH221 Multivariable Calculus (4 hrs)
   * MATH325 Differential Equations (3 hrs)

Required Physics Courses ...................................................... 32 hours
   * PHYS223 Mechanics and Sound (3 hrs)
   * PHYS224 Electricity and Light (5 hrs)
   * PHYS225 Intermediate Mechanics I (3 hrs)
   * PHYS322 Mechanics Laboratory (1 hr)
   * PHYS325 Electricity and Magnetism I (3 hrs)
   * PHYS360 Heat and Thermodynamics (4 hrs)
   * PHYS370 Introduction to Modern Physics (3 hrs)
   * PHYS372 Modern Physics Laboratory (1 hr)
   * PHYS405 Ethical Issues in Science (1 hr)
   * PHYS421 Capstone Project (3 hrs)
   * PHYS475 Introduction to Quantum Mechanics (3 hrs)

Restricted Elective Courses ....................................................... 1-4 hours

One of the following laboratory courses:
   * PHYS456 Vibration and Sound (4 hrs)
   * PHYS462 Optics Laboratory (1 hr)
   * PHYS444 Applied Optics (2 hrs)
   * PHYS456 Electronics for Scientists (4 hrs)
**Secondary Integrated Science Comprehensive Group Major (GSCT)**

Secondary Teacher Certification

A secondary integrated science endorsement program prepares candidates to teach only integrated science courses. The preparation of integrated science teachers includes courses in the three major categories of science identified in the Michigan Curriculum Framework: life, physical, and earth/space science. Candidates who apply for the secondary integrated science endorsement must pass the Michigan Test for Teacher Certification in integrated science at the secondary level. Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondarv Provisional Certificate endorsed in general science, certification code 01. The Michigan Test for Teacher Certification (MTTC) covering this field is #04, "Science."

**General Education Requirements** .......................................................... 34 hours

**Area I: Symbolics and Communication** ........................................ 1. See page 23
2. See page 23
3. See page 23
4. One course from the following:
   * MATH119 Applied Calculus
   * MATH120 Calculus I
   5. See page 23

**Area II: Science and Technology**
1. PHYS21 Mechanics, Sound and Heat*
2. BIOL10 Introductory Biology I*
3. CHEM121/122 General Chemistry I (with lab)*

**Area III: Social Sciences**
1. See page 24
2. See page 24
3. See page 24
4. See page 24

**Area IV: Arts and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. See page 25

**Physical Education/Graduation Requirement** .................................. 2 hours

**Comprehensive Major Requirements** ........................................... 56-57 hours

**Life Sciences Courses** ................................................................. 14 hours
- BIOL10 Introductory Biology I (5 hrs)
- BIOL120 Introductory Biology II (5 hrs)
- BIOL234 Global Ecology and the Environment (4 hrs)

**Physical Sciences Courses** .......................................................... 20 hours
- CHEM120 Fundamentals of Organic & Biochemistry (4 hrs)
- CHEM121/122 General Chemistry I (with lab) (4 hrs)
- CHEM231/232 General Chemistry II (with lab) (4 hrs)
- PHYS21 Mechanics, Sound and Heat (4 hrs)
- PHYS22 Electricity and Light (4 hrs)

**Earth/Space Sciences Courses** ...................................................... 18 hours
- ASTR205 Principles of Astronomy (4 hrs)
- ASTR315 Observational Astronomy (3 hrs)
- ESSC110 The Dynamic Earth System (4 hrs)
- ESSC211 The Earth System Through Time (4 hrs)
- ESSC212 Weather, Climate and the Earth System (3 hrs)

**Additional Required Courses** ....................................................... 4-5 hours

**Professional Studies** ................................................................. 39 hours

**Pre-admission Phase: The Learner and the Community** .................... 8 hours
- EDPS212 Human Development and Learning (4 hrs)
- ETE201 Field Experience I (1 hr)
- SPG215 Education of Students with Exceptionalities (3 hrs)

**Phase I: Curriculum, Assessment and the Social Context** ................. 10 hours
- SOED328 Schools in a Multicultural Society (3 hrs)
- CURR305 Curriculum and Methods Secondary (3 hrs)
- ETE302 Field Experience II: Secondary (1 hr)
- EDPS340 Introduction to Assessment and Evaluation (3 hrs)

**Phase II: Content Methods, Literacy and Technology** .................... 9 hours
- RDNG311 Teaching Reading in the Secondary School (3 hrs)
- ETE402 Field Experience III: Secondary (1 hr)
- EDMT330 Instructional Applications of Media and Technology (2 hrs)

**One course from the following** .......................................................
- BIOL412 Methods and Materials for Teaching Biology (3 hrs)
- PHYS229 Methods of Teaching the Physical Sciences (3 hrs)
- ESSC211 Teaching Earth Science and Physical Geography (3 hrs)

**Phase III: Capstone Experience** .................................................... 12 hours
- EDUC492 Student Teaching (12 hrs)

**Program Total** .................................................................................. 151-152 hours

**Note:**
- "This course satisfies both a general education and a major requirement.
- The prerequisites for this course require the student to complete the following electives: ESSC239 and ESSC239.

**Physics Major (PHYT)**

Secondary Teacher Certification

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in physics, certification code 01. This program of studies meets all requirements of the National Science Teachers Association. The Michigan Test for Teacher Certification (MTTC) covering this field is #19, "Physics."

**General Education Requirements** ................................................. 39 hours

**Area I: Symbolics and Communication** ........................................ 1. See page 23
2. See page 23
3. See page 23
4. MATH120 Calculus I
5. COSC111 Introduction to Programming

Area II Science and Technology

1. One of the following:
   CHEM115/116 Chemistry and Society with lab (4 hrs)
   CHEM117/118 Fundamentals of Chemistry with lab (4 hrs)
   CHEM120 Fundamentals of Organic and Biochemistry (4 hrs)
   CHEM121/122 General Chemistry I with lab (4 hrs)

2. One of the following:
   BIOL105 Introductory Biology for Non-majors (4 hrs)
   BIOL120 Biology of Plants (4 hrs)
   ZOO120 Biology of Animals (4 hrs)

3. One of the following:
   *ASTR205 Principles of Astronomy
   *PHYS223 Mechanics and Sound

Area III Social Sciences

1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities

1. See page 25
2. See page 25
3. See page 25
4. See page 25

Additional Requirements

*COSC111 Introduction to Programming (3 hrs)
*MATH120 Calculus I (4 hrs)
*MATH121 Calculus II (4 hrs)
*MATH122 Elementary Linear Algebra (3 hrs)
*MATH223 Multivariable Calculus (4 hrs)

Physical Education/Graduation Requirement

2 hours

Major Requirements

35 hours

Required Courses

ASTR204 Astronomical Investigations (1 hr)
*ASTR205 Principles of Astronomy (4 hrs)
*PHYS223 Mechanics and Sound (5 hrs)
PHYS224 Electricity and Light (5 hrs)
PHYS230 Intermediate Mechanics I (3 hrs)
PHYS232 Mechanics Laboratory (1 hr)
PHYS250 Electricity and Magnetism I (3 hrs)
PHYS270 Heat and Thermodynamics (4 hrs)
PHYS270 Introduction to Modern Physics (3 hrs)
PHYS272 Modern Physics Laboratory (1 hr)
PHYS275 Ethical Issues in Physics (1 hr)

Restricted Electives

1-4 hours

One of the following laboratory courses:
PHY416 Vibrations and Sound (4 hrs)
PHY442 Optics Laboratory (1 hr)
PHY444 Applied Optics (2 hrs)
PHY490 Electronics for Physicians (4 hrs)

Elective Courses

0-3 hours

Select elective courses in physics and astronomy to complete the 35 hour requirement. Only physics and astronomy undergraduate courses numbered greater than 299 can be used as electives on this major, excluding PHYS211 and PHYS225 which can never be used on this major.

Professional Studies

39 hours

Pre-admission phase: The Learner and the Community
EDPS322 Human Development and Learning (4 hrs)
FETE281 Field Experience I (1 hr)
SPGN251 Education of Students with Exceptionalities (3 hrs)

The following courses require formal admission to the teacher education program:

Phase I: Curriculum, Assessment and the Social Context

10 hours
   SOFD228 Schools in a Multicultural Society (3 hrs)
   CURR305 Curriculum and Methods: Secondary (3 hrs)
   FETE302 Field Experience II: Secondary (1 hr)
   EDPS340 Introduction to Assessment and Evaluation (3 hrs)

Phase II: Content Methods, Literacy and Technology

9 hours
   RDNG311 Teaching Reading in the Secondary School (3 hrs)
   FETE312 Field Experience III: Secondary (1 hr)
   EDMT330 Instructional Applications of Media and Technology (2 hrs)
   PHYS325 Methods of Teaching the Physical Sciences (3 hrs)

Phase III: Capstone Experience

12 hours
   EDUC392 Student Teaching (12 hrs)

Minor Requirements

12-24 hours

Select a minor from the approved list of minors for secondary K-12 and special education-secondary programs (mathematics is highly recommended).

University Elective Courses

0 hours

Program Total

145 hours

PRE-ENGINEERING PROGRAM (PENG)

This program is designed for the student who wishes to transfer to an engineering program at another university. Students are strongly advised to consult with the engineering school to which they plan to transfer for specific requirements. Courses taken may apply to other majors at the University if the student chooses to remain on campus to complete a bachelor's degree.

Department advisers in these areas maintain contact with universities that offer related four-year programs in order to maximize the value of the transfer program of study at the University to other universities. Students planning to transfer to four-year programs should not complete EMU's general education requirements.

Required Courses

35 hours
   ENGL121 Composition II: Researching the Public Experience (3 hrs)
   MATH120 Calculus I (4 hrs)
   MATH121 Calculus II (4 hrs)
   MATH122 Elementary Linear Algebra (3 hrs)
   MATH223 Multivariable Calculus (4 hrs)
   CHEM121/122 General Chemistry I with lab (4 hrs)
   PHYS223 Mechanics and Sound (5 hrs)
   PHYS224 Electricity and Light (5 hrs)
   One literature course (3 hrs)

Recommended Courses

21 hours
   *COSC111 Introduction to Programming (3 hrs)
   CTA212 Fundamentals of Speech (3 hrs)
   ECON201 Principles of Microeconomics (3 hrs)
   MATH222 Multivariable Calculus (4 hrs)
   CHEM121/122 General Chemistry I with lab (4 hrs)
   PHYS223 Mechanics and Sound (5 hrs)
   PHYS224 Electricity and Light (5 hrs)
   One literature course (3 hrs)
   One humanities course (3 hrs)

Optional Courses

3 hours
   CADM122 Engineering Graphics I (3 hrs)
   CADM222 Engineering Graphics II (3 hrs)

ASTRONOMY GROUP MINOR (ASTR)

This minor is designed to give the student a basic knowledge of astronomy and related fields. It is recommended that students wishing to undertake graduate work in astronomy complete the research major in physics with a minor in either mathematics or astronomy. Electives used to fulfill the astronomy minor cannot be used to complete any other major or minor.
**Required Courses**..................................................... 11 hours
ASTR204 Astronomical Investigations (1 hr)
ASTR205 Principles of Astronomy (4 hrs)
ASTR215 Observational Astronomy (3 hrs)
ASTR370 Astrophysical Concepts (3 hrs)

**Restricted Elective Courses**..................................... 13 hours
Choose 13 credits from approved courses in physics, astronomy, mathematics or chemistry in consultation with the advising coordinator for astronomy.

**Minor Total**................................................................ 24 hours

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**GROUP MINOR IN GENERAL SCIENCE (GSC)**

A group minor in general science (24 credit hours) must be combined with an academic major in biology, chemistry, earth science, mathematics or physics.

With a major in biology, take the following courses:
ASTR205 Principles of Astronomy (4 hrs)
CHEM121/122 General Chemistry I with lab (4 hrs)
ESSC110 The Dynamic Earth System (4 hrs)
MATH105 College Algebra (3 hrs)
MATH107 Plane Trigonometry (2 hrs)
PHY221 Mechanics, Sound and Heat (4 hrs)

**Three hours from the following:**
CHEM125 General Chemistry II (3 hrs)
CHEM126 General Chemistry II Laboratory (1 hr)
ESSC212 Weather, Climate and the Earth System (3 hrs)
COSC145 Introduction to FORTRAN Programming (3 hrs)
PHY222 Electricity and Light (4 hrs)
Others as approved by general science adviser

With a major in chemistry, take the following courses:
ASTR205 Principles of Astronomy (4 hrs)
BIOL110 Introductory Biology I (3 hrs)
ESSC110 The Dynamic Earth System (4 hrs)
MATH105 College Algebra (3 hrs)
MATH107 Plane Trigonometry (2 hrs)
PHY221 Mechanics, Sound and Heat (4 hrs)

**Three hours from the following:**
BIOL324 Global Ecology and the Environment (4 hrs)
ESSC212 Weather, Climate and the Earth System (3 hrs)
COSC145 Introduction to FORTRAN Programming (3 hrs)
PHY222 Electricity and Light (4 hrs)
Others as approved by general science adviser

With a major in earth science, a structured general science minor is included in the program.

With a major in mathematics, take the following courses:
ASTR205 Principles of Astronomy (4 hrs)
BIOL110 Introductory Biology I (3 hrs)
CHEM121/122 General Chemistry I with lab (4 hrs)
ESSC110 The Dynamic Earth System (4 hrs)
PHY221 Mechanics, Sound and Heat (4 hrs)

**Four hours from the following:**
BIOL324 Global Ecology and the Environment (4 hrs)
CHEM121/122 General Chemistry I with lab (4 hrs)
ESSC212 Weather, Climate and the Earth System (3 hrs)
PHY222 Electricity and Light (4 hrs)
Others as approved by general science adviser

With a major in physics, take the following courses:
ASTR205 Principles of Astronomy (4 hrs)
BIOL110 Introductory Biology I (3 hrs)
CHEM121/122 General Chemistry I with lab (4 hrs)
ESSC110 The Dynamic Earth System (4 hrs)

**MATH120 Calculus I (4 hrs)**

**Four hours from the following:**
BIOL324 Global Ecology and the Environment (4 hrs)
CHEM123/124 General Chemistry I with lab (4 hrs)
ESSC212 Weather, Climate and the Earth System (3 hrs)
COSC145 Introduction to FORTRAN Programming (3 hrs)
Others as approved by general science adviser

**Approved Elective Courses**
BIOL324 Global Ecology and the Environment
CHEM123 General Chemistry I
CHEM124 General Chemistry II Laboratory
ESSC212 Weather, Climate and the Earth System
COSC145 Introduction to FORTRAN Programming
PHY222 Electricity and Light

This list is not complete; consult with the general science adviser for other possible courses.

**Minor Total**................................................................ 24 hours

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**PHYSICS MINOR (PHY)**

**Required Courses**..................................................... 21 hours
PHY223 Mechanics and Sound (5 hrs)
PHY224 Electricity and Light (5 hrs)
PHY230 Intermediate Mechanics I (3 hrs)
PHY360 Heat and Thermodynamics (4 hrs)
PHY370 Introduction to Modern Physics (3 hrs)
PHY372 Modern Physics Laboratory (1 hr)

**Additional Requirements**.......................................... 15 hours
MATH120 Calculus I (4 hrs)
MATH121 Calculus II (4 hrs)
MATH122 Elements of Linear Algebra (3 hrs)
MATH223 Multivariable Calculus (4 hrs)

All students earning a minor in physics must also take, as a minimum, the following courses in mathematics. (These courses may be used on a minor in mathematics.)

**Minor Total**................................................................ 21 hours

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**PHYSICS MINOR (PHYT)**

Secondary, K-12 and Special Education-Secondary Teacher Certification

Successful completion of this minor, in context of other program requirements, qualifies the student for recommendation for endorsement in physics; certification code DE, The Michigan Test for Teacher Certification (MTTC) covering this field is #19, "Physics."

**Required Physics and Astronomy Courses**...................... 21 hours
PHY223 Mechanics and Sound (5 hrs)
PHY224 Electricity and Light (5 hrs)
PHY230 Intermediate Mechanics I (3 hrs)
PHY360 Heat and Thermodynamics (4 hrs)
PHY370 Introduction to Modern Physics (3 hrs)
PHY372 Modern Physics Laboratory (1 hr)

**Additional Requirements**.......................................... 15 hours
These courses may be used on a minor in mathematics.
MATH120 Calculus I (4 hrs)
MATH121 Calculus II (4 hrs)
MATH122 Elementary Linear Algebra (3 hrs)
MATH223 Multivariable Calculus (4 hrs)

**Minor Total**................................................................ 21 hours
Political science studies every aspect of public life, encouraging a high level of civic literacy and political participation. It explores political thinking, values, systems of government and the socio-economic environments in which they function. Legislative, executive and judicial structures of government are emphasized, along with the roles of parties and interest groups, voting behavior, public opinion and political socialization. The discipline also considers such matters as public law, public policy and public administration.

Political science draws upon a variety of methodological approaches to focus on public life, including both the qualitative social sciences and quantitative analytic techniques. Computer-assisted learning is encouraged.

Students who select major programs within the Department of Political Science are successful in a broad range of careers such as elective public office, legal studies, state and local government service, public opinion research, primary and secondary school teaching, journalism and business. Many pursue post-baccalaureate education at the master's and doctoral levels and in professional schools. As an inherently interdisciplinary liberal arts discipline, political science coordinates pre-law studies for the University and also participates in several international programs of study.

Advising is coordinated by the Department of Political Science. Faculty advisors are available during posted office hours or by appointment. Students enrolled in any of the majors offered by the department are expected to consult an assigned department faculty adviser when they declare the major and prior to each registration for classes.

Graduate study in the Department of Political Science consists of a master of public administration degree and several graduate certificate programs. A political science concentration is also possible under the interdisciplinary master of arts in social science that is administered by the History and Philosophy Department. The M.P.A., the certificates and the M.A. programs are all described in the graduate catalog.

**POLITICAL SCIENCE MAJOR (PLS)**

To fulfill the requirements for a major in political science, students must complete at least 30 hours in the major as specified below, complete at least four courses in the major numbered 300 or above and attain at least a C average in the major. Students are further expected to take PLSC112/113 American Government, one of their general education courses, prior to the required core courses and to complete PLSC112/113 and the required core courses within the first 18 hours of political science course work. A maximum of three credit hours of independent study or internship/cooperative education courses may be applied to the 30 credit hours required for the major. Finally, neither the independent study, internship/cooperative education course, nor PLSC470 meets the group distribution requirements specified below under areas of concentration, but any may be taken as free political science electives. Students should consult a departmental adviser for guidance about applying these and special topics courses towards the major.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Area I: Symbolic and Communication</th>
<th>47 hours</th>
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<tbody>
<tr>
<td>1. See page 23</td>
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<td>2. See page 23</td>
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<td>3. See page 23</td>
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</table>

**Required Core Courses**

- **30 hours**
  - Students select one course from the following:
    - PLSC210 Introduction to Political Analysis (3 hrs)
    - PLSC310 Methods of Political Research (3 hrs)
- **9 hours**
  - Students select two courses from the following:
    - PLSC211 Introduction to Comparative Government (3 hrs)
    - PLSC212 Introduction to International Politics (3 hrs)
    - PLSC213 Introduction to Political Thought (3 hrs)

**Areas of Concentration**

- **11 hours**
  - Students select seven courses from the three groups listed below, including at least one course from each group.

**I. American Politics, Public Law, and Administration**

- PLSC202 State and Local Government (3 hrs)
- PLSC216 Municipal Government (3 hrs)
- AAS32/PLSC242 Black Women Politics and Racism (3 hrs)
- PLSC270 Public Administration (3 hrs)
- PLSC301 The American Legal System (3 hrs)
- PLSC312 American Constitutional Law I (3 hrs)
- PLSC313 American Constitutional Law II (3 hrs)
- PLSC350 Urban Politics (3 hrs)
- PLSC332 International Relations and Federalism (3 hrs)
- PLSC355 Labor in American Politics (3 hrs)
- PLSC352 Politics of Government Budgeting (3 hrs)
- PLSC357 Campaigns and Elections (3 hrs)
- PLSC358 Political Parties and Interest Groups (3 hrs)
- AAS30/PLSC302/WMSST362 Black Women Religion and Sexism (3 hrs)
- PLSC360 The Legislative Process (3 hrs)
- PLSC395 Women and Politics (3 hrs)
- PLSC386 The American Presidency (3 hrs)
- PLSC381 Public Policy Analysis (3 hrs)
- PLSC385 Judicial Process and Behavior (3 hrs)

**II. Comparative Politics and International Relations**

- PLSC221 Vietnam (3 hrs)
- PLSC222 War and Peace in the Nuclear Age (3 hrs)
- PLSC301 Politics of the Developing World (3 hrs)
- PLSC327 American Foreign Policy Process (3 hrs)
- PLSC341 International Law (3 hrs)
- PLSC342 International Organizations (1 hr)
- PLSC343 Model United Nations (3 hrs)
- PLSC344 Government and Politics of Canada (3 hrs)
- PLSC351 Russian Politics in Transition (3 hrs)
- PLSC356 Latin American Politics (3 hrs)
- PLSC371 Government and Politics of the Middle East (3 hrs)
- PLSC372 Government and Politics of Sub-Saharan Africa (3 hrs)
- PLSC374 Asian Political Systems (3 hrs)
- PLSC462 Russian Foreign Relations (3 hrs)
- PLSC467 Advanced International Relations (3 hrs)
Major Requirements: 36 hours

Required Courses:
- PLSC301 The American Legal System (3 hrs)
- PLSC312 American Constitutional Law I (3 hrs)
- PLSC313 American Constitutional Law II (3 hrs)
- PLSC341 International Law (3 hrs)
- PLSC412 Comparative Legal Systems (3 hrs)

Restricted Elective Courses: 9 hours
One course from each of the following three groups:

I. American politics and administration
- PLSC202 State and Local Government (3 hrs)
- PLSC216 Municipal Government (3 hrs)
- AAS242/PLSC242 Women's Politics and Racism (3 hrs)
- PLSC276 Public Administration (3 hrs)
- PLSC330 Urban Politics (3 hrs)
- PLSC352 Intergovernmental Relations and Federalism (3 hrs)
- PLSC355 Labor in American Politics (3 hrs)
- PLSC357 Politics of Government Budgeting (3 hrs)
- PLSC358 Political Parties and Interest Groups (3 hrs)
- AAS362/PLSC362/WMST362 Black Women's Religion and Sexism (3 hrs)

II. Comparative Politics and International Relations
- PLSC211 Introduction to Comparative Government (3 hrs)
- PLSC221 Introduction to International Politics (3 hrs)
- PLSC222 Vietnam (3 hrs)
- PLSC223 War and Peace in the Nuclear Age (3 hrs)
- PLSC211 Politics of the Developing World (3 hrs)
- PLSC327 American Foreign Policy Process (3 hrs)
- PLSC342 International Organizations (3 hrs)
- PLSC343 Model United Nations (3 hrs)
- PLSC354 Government and Politics of Canada (3 hrs)
- PLSC361 Russian Politics in Transition (3 hrs)
- PLSC367 Latin American Politics (3 hrs)
- PLSC371 Government and Politics of the Middle East (3 hrs)
- PLSC372 Government and Politics of Sub-Saharan Africa (3 hrs)
- PLSC374 Asian Political Systems (3 hrs)
- PLSC462 Russian Foreign Relations (3 hrs)
- PLSC467 Advanced International Relations (3 hrs)

III. Political Theory and Methods
- PLSC210 Introduction to Political Analysis (3 hrs)
- PLSC212 Introduction to Political Thought (3 hrs)
- PLSC308 Political Violence and Revolution (3 hrs)
- PLSC310 Methods of Political Research (3 hrs)
- PLSC359 Public Opinion and Political Learning (3 hrs)
- PLSC392 Politics and the 21st Century (3 hrs)
- PLSC410 Political Science in Fiction (3 hrs)
- PLSC418 20th-Century Political Theory (3 hrs)
- PLSC420 Democracy and Power (3 hrs)
- PLSC422 American Political Theory (3 hrs)

Elective Courses: 12 hours
Four courses from the following:
- PLSC312 American Constitutional Law I (3 hrs)
- PLSC313 American Constitutional Law II (3 hrs)
- PLSC341 International Law (3 hrs)
- PLSC385 Judicial Process and Behavior (3 hrs)
- PLSC387 Cooperative Education in Political Science (3 hrs)
- ECON407 Economic Analysis and Law (3 hrs)
- PLSC412 Comparative Legal Systems (3 hrs)
- PLSC456 Criminal Law I (3 hrs)
- HIST485 United States Constitutional History (3 hrs)

PLSC480 Field Seminar in Political Science/Public Administration (3 hrs)
PLSC486 Internship in Political Science/Public Administration (3 hrs)
PLSC487 Cooperative Education in Political Science (3 hrs)
PLSC488/489 Internship in Political Science/Public Administration (6-9 hrs)
PLSC497/498/499 Independent Study (1-3/3 hrs)

Cognate Elective Courses: 6 hours
Courses in a related content area selected in consultation with the advisor.

Minor Requirements: 20 hours

University Elective Courses: 19 hours

Program Total: 124 hours

Note: Courses may not be counted toward more than one requirement within the major.

**PUBLIC SAFETY ADMINISTRATION CURRICULUM (PSAD)**

The public safety administration program is an interdisciplinary program involving course work in three departments from two colleges within the University. The curriculum is intended to meet the professional development needs of in-service and entry-level personnel in public safety organizations including those involved in law enforcement, public safety, fire protection, private security, disaster and emergency management, and corrections with a competency-based curriculum resting on a strong liberal arts foundation.

The public safety manager's focus is on leadership, public policy, politics, and administration. The public safety manager is concerned with issues such as the causes of crime, the nature and impact of criminal behavior, threats to public safety arising from environmental and natural disasters and the nature and operation of correctional institutions. The administration's responsibilities extend to addressing how the public safety organization develops a response to these problems, the nature of the response and how resources — budgets and personnel — are obtained, utilized and evaluated in responding to problems.

This program builds on the existing public administration major. Courses are drawn from five groups:

- An interdisciplinary, skills-focused, foundation group
- An administration group directed towards developing an understanding of public and nonprofit organizations and related personnel, budgeting and administrative skills
- A public safety administration group that addresses conditions, strategies and practices found particularly in public safety agencies
- An area concentration
- An academy or internship component

The program combines both major and minor requirements, and graduating students will be awarded a baccalaureate in public administration.

Transfer students from associate degree programs in related fields can matriculate into the program. Students transferring from another college must, however, complete all general education course work as required by the University for the bachelor's degree.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Area</th>
<th>Credits</th>
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<tbody>
<tr>
<td>I.</td>
<td>48</td>
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<td>II.</td>
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<td>III.</td>
<td>22</td>
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<tr>
<td>IV.</td>
<td>17</td>
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</tbody>
</table>

1. See page 23
2. CTPS124 Fundamentals of Speech (3 hrs)
3. One of the following:
   - CTAC227 Interpersonal Communication (3 hrs)
   - CTAC374 Intercultural Communication (3 hrs)
   - ENGL326 Research Writing (3 hrs)
4. SOCL250 Social Statistics I (3 hrs)
5. INDT201 Microcomputer Applications in Technology (3 hrs)
**Area II Science and Technology**
1. One course from the following:
   - PHYS 221: Mechanics, Sound and Heat (4 hrs)
   - CHEM 117/118: Fundamentals of Chemistry with Lab (4 hrs)
2. PSY 101: General Psychology (3 hrs)
3. See page 24

**Area III Social Sciences**
1. See page 24
2. See page 24
3. SOC 105: Introductory Sociology (3 hrs)
4. SOC 202: Social Problems (3 hrs)

**Area IV Arts and Humanities**
1. See page 25
2. See page 25
3. See page 23
4. See page 25

**Physical Education/Graduation Requirement** 2 hours

**Major Requirements** 66 hours

**Foundation Group** 12 hours
- One course from the following:
  - ANTH 222: Introduction to Cultural Anthropology (3 hrs)
  - SOC 214/ANTH 214: Racial and Cultural Minorities (3 hrs)
- One course from the following:
  - PLSC 202: State and Local Government (3 hrs)
  - PLSC 216: Municipal Government (3 hrs)
  - PLSC 300: Urban Politics (3 hrs)
- One course from the following:
  - PLSC 313: American Constitutional Law II (3 hrs)
  - CRIM 200: Criminal Justice (3 hrs)
- One course from the following:
  - CTAC 232: Communication in Negotiation (3 hrs)
  - CTAC 234: Organizational Communication (3 hrs)

**Administration Group** 15 hours
- PLSC 270: Public Administration (3 hrs)
- PLSC 334: Personnel Administration in Government (3 hrs)
- PLSC 352: Politics and Government Budgeting (3 hrs)
- One course from the following:
  - PLSC 112: Comparative Legal Systems (3 hrs)
  - PLSC 331: Theories of Public Organization (3 hrs)

**Public Safety Administration Group** 18 hours
- INDT 380: Planning and Decision-Making for Public Safety (3 hrs)
- INDT 381: Public Relations and Public Safety (3 hrs)
- INDT 382: Personnel for Public Safety Managers (3 hrs)
- INDT 383: Budgeting for Public Safety Managers (3 hrs)

**Area of Concentration** 15 hours
- Five courses from the following:
  - CRM 411: Policing in Society (3 hrs)
  - ESSC 224: Weather (3 hrs)
  - ESSC 325: Geomorphology (4 hrs)
  - INDT 223: Emergency Preparedness Planning (3 hrs)
  - INDT 306: Issues in Emergency Preparedness (3 hrs)
  - INDT 308: Natural Hazard Mitigation (3 hrs)
  - INDT 323: Anom Investigation (3 hrs)
  - INDT 434: Hazardous Materials (3 hrs)
  - INDT 435: Incident Command (3 hrs)
  - INDT 432: Current Trends in Emergency Management (3 hrs)
  - INDT 475: Managing Correctional Agencies and Facilities (3 hrs)

**Academy or Internship/Co-op Experience** 6 hours

<table>
<thead>
<tr>
<th>POLITICAL SCIENCE MAJOR (PLST)</th>
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<tr>
<td>PLSC 488 Internship in Political Science/Public Administration (6 hrs)</td>
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</table>

**Minor Requirements** 6 hours
- No minor is required.

**University Elective Courses** 8 hours

**Program Total** 124 hours

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**POLITICAL SCIENCE MAJOR (PLST)**

Secondary Teacher Certification

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in political science, certification code CD, and, depending on the minor selected, endorsement in economics (CA), geography (CB), history (CC), psychology (CE), sociology (CF). The Michigan Test for Teacher Certification (MTTC) covering this field is #10, "Political Science."

To fulfill the requirements for a major in political science, students must complete at least 30 credit hours in the major as specified below, complete at EMU at least four courses in the major numbered 300 or above and attain at least a C average in the major. Students are further expected to take PLSC 112/113, one of their general education courses, prior to the required core courses and to complete PLSC 112/113 and the required core courses within the first 18 hours of political science coursework. A maximum of three credit hours of independent study or internship/cooperative education courses may be applied to the 30 credit hours required for the major. Finally, neither the independent study, internship/cooperative education course nor PLSC 470 meets the group distribution requirements specified below under areas of concentration, but any may be taken as free political science electives.

**General Education Requirements** 47 hours

<table>
<thead>
<tr>
<th>Area I Symbolic and Communication</th>
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<tr>
<th>Area II Science and Technology</th>
<th></th>
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<tbody>
<tr>
<td>1. See page 24</td>
<td></td>
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<tr>
<td>2. HIST 102 Western Civilization 1648 to World War I (3 hrs)</td>
<td></td>
</tr>
</tbody>
</table>
| 3. One course from the following:
  - GEOG 107: Introduction to Geography (3 hrs)
  - GEOG 110: World Regions (3 hrs) |  |
| 4. HIST 103 20th Century Civilization (3 hrs) |  |

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<thead>
<tr>
<th>Area IV Arts and Humanities</th>
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<td>4. See page 25</td>
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</table>

**Physical Education/Graduation Requirement** 2 hours

**Major Requirements** 30 hours

<table>
<thead>
<tr>
<th>Required Core Courses</th>
<th>15 hours</th>
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<tbody>
<tr>
<td>PLSC 210: Introduction to Political Analysis (3 hrs)</td>
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<tr>
<td>PLSC 212: State and Local Government (3 hrs)</td>
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<tr>
<td>ECON 375: Economic History of the United States (3 hrs)</td>
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</table>
| Two courses from the following:
  - PLSC 211 Introduction to Comparative Government (3 hrs) |  |

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Preservice students must complete an internship or cooperative education placement or an accredited academy program; in-service students may substitute credits from an accredited academy program.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PLSC212</td>
<td>Introduction to International Politics (3 hrs)</td>
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<tr>
<td>PLSC213</td>
<td>Introduction to Political Thought (3 hrs)</td>
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</table>

**Area of Concentration** 15 hours

**Phase I: Curriculum, Assessment and the Social Context** 10 hours
- SOFD328 Schools in a Multicultural Society (3 hrs)
- CURR305 Curriculum and Methods: Secondary (3 hrs)
- FETE302 Field Experience II: Secondary (1 hr)
- EDFP340 Introduction to Assessment and Evaluation (3 hrs)

**Phase II: Content Methods, Literacy and Technology** 9 hours
- RDNG331 Teaching Reading in the Secondary School (3 hrs)
- FETE402 Field Experience III: Secondary (1 hr)
- EDMT330 Instructional Applications of Media and Technology (2 hrs)
- HIST481 The Teaching of Social Studies (3 hrs)

**Phase III: Capstone Experience** 12 hours
- EDUC492 Student Teaching (12 hrs)

**University Elective Courses** 0 hours

**Program Total** 131 hours

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**POLITICAL SCIENCE MINOR (PLS)**

Students must complete PLSC112/113 American Government before beginning the course of study for the minor.

**Required Core Courses** 6 hours
- Two courses from the following:
  - PLSC210 Introduction to Political Analysis (3 hrs)
  - PLSC211 Introduction to Comparative Government (3 hrs)
  - PLSC212 Introduction to International Politics (3 hrs)
  - PLSC213 Introduction to Political Thought (3 hrs)
  - PLSC214 Methods of Political Research (3 hrs)

**Area of Concentration** 15 hours
- Five courses from two of the three following groups:
  
  **I. American Politics, Public Law and Administration**
  - PLSC216 Municipal Government (3 hrs)
  - AAS242/PLSC242 Black Women: Politics and Racism (3 hrs)
  - PLSC270 Public Administration (3 hrs)
  - PLSC301 The American Legal System (3 hrs)
  - PLSC312 American Constitutional Law I (3 hrs)
  - PLSC313 American Constitutional Law II (3 hrs)
  - PLSC330 Urban Politics (3 hrs)
  - PLSC332 Intergovernmental Relations and Federalism (3 hrs)
  - PLSC225 Labor in American Politics (3 hrs)
  - PLSC352 Politics of Government Budgeting (3 hrs)
  - PLSC357 Campaigns and Elections (3 hrs)
  - PLSC358 Political Parties and Interest Groups (3 hrs)
  - PLSC362/PLSC362/WMST362 Black Women: Religion and Sexism (3 hrs)
  - PLSC364 The Legislative Process (3 hrs)
  - PLSC365 Women and Politics (3 hrs)
  - PLSC380 The American Presidency (3 hrs)
  - PLSC381 Public Policy Analysis (3 hrs)
  - PLSC385 Judicial Process and Behavior (3 hrs)

  **II. Comparative Politics and International Relations**
  - PLSC221 Vietnam (3 hrs)
  - PLSC222 War and Peace in the Nuclear Era (3 hrs)
  - PLSC311 Politics of the Developing World (3 hrs)
  - PLSC327 American Foreign Policy Process (3 hrs)
  - PLSC341 International Law (3 hrs)
  - PLSC342 International Organizations (3 hrs)
  - PLSC343 Model United Nations (3 hrs)
  - PLSC354 Government and Politics of Canada (3 hrs)
  - PLSC361 Russian Politics in Transition (3 hrs)
  - PLSC367 Latin American Politics (3 hrs)
  - PLSC371 Government and Politics of the Middle East (3 hrs)
  - PLSC372 Government and Politics of Sub-Saharan Africa (3 hrs)
  - PLSC374 Asian Political Systems (3 hrs)
  - PLSC362 Russian Foreign Relations (3 hrs)
  - PLSC467 Advanced International Relations (3 hrs)

  **III. Political Theory and Methods**
  - PLSC308 Political Violence and Revolution (3 hrs)
  - PLSC310 Methods of Political Research (3 hrs)
  - PLSC339 Public Opinion and Political Learning (3 hrs)
  - PLSC382 Politics and the 21st Century (3 hrs)
  - PLSC410 Political Science in Fiction (3 hrs)
  - PLSC418 20th Century Political Theory (3 hrs)
  - PLSC420 Democracy and Power (3 hrs)
  - PLSC422 American Political Theory (3 hrs)

**Minor Requirements** 13-26 hours
Select a minor from the approved list of minors for secondary, K-12 and special education secondary programs.

**Professional Studies** 39 hours
Pre-Admission Phase: The Learner and the Community 8 hours
- EDPS322 Human Development and Learning (4 hrs)
- FETE201 Field Experience I (1 hr)
- SPGN351 Education of Students with Exceptionalities (3 hrs)

The following courses require formal admission to the teacher education program:

**Phase I:**
- SOFD328 Schools in a Multicultural Society (3 hrs)
- CURR305 Curriculum and Methods: Secondary (3 hrs)
- FETE302 Field Experience II: Secondary (1 hr)
- EDFP340 Introduction to Assessment and Evaluation (3 hrs)

**Phase II:**
- RDNG331 Teaching Reading in the Secondary School (3 hrs)
- FETE402 Field Experience III: Secondary (1 hr)
- EDMT330 Instructional Applications of Media and Technology (2 hrs)
- HIST481 The Teaching of Social Studies (3 hrs)

**Phase III:**
- EDUC492 Student Teaching (12 hrs)

**University Elective Courses** 0 hours

**Program Total** 131 hours

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**POLITICAL SCIENCE MINOR (PLS)**

Students must complete PLSC112/113 American Government before beginning the course of study for the minor.

**Required Core Courses** 6 hours
- Two courses from the following:
  - PLSC210 Introduction to Political Analysis (3 hrs)
  - PLSC211 Introduction to Comparative Government (3 hrs)
  - PLSC212 Introduction to International Politics (3 hrs)
  - PLSC213 Introduction to Political Thought (3 hrs)
  - PLSC214 Methods of Political Research (3 hrs)

**Area of Concentration** 15 hours
- Five courses from two of the three following groups:
  
  **I. American Politics, Public Law and Administration**
  - PLSC216 Municipal Government (3 hrs)
  - AAS242/PLSC242 Black Women: Politics and Racism (3 hrs)
  - PLSC270 Public Administration (3 hrs)
  - PLSC301 The American Legal System (3 hrs)
  - PLSC312 American Constitutional Law I (3 hrs)
  - PLSC313 American Constitutional Law II (3 hrs)
  - PLSC330 Urban Politics (3 hrs)
  - PLSC332 Intergovernmental Relations and Federalism (3 hrs)
  - PLSC225 Labor in American Politics (3 hrs)
  - PLSC352 Politics of Government Budgeting (3 hrs)
  - PLSC357 Campaigns and Elections (3 hrs)
  - PLSC358 Political Parties and Interest Groups (3 hrs)
  - PLSC362/PLSC362/WMST362 Black Women: Religion and Sexism (3 hrs)
  - PLSC364 The Legislative Process (3 hrs)
  - PLSC365 Women and Politics (3 hrs)
  - PLSC380 The American Presidency (3 hrs)
  - PLSC381 Public Policy Analysis (3 hrs)
  - PLSC385 Judicial Process and Behavior (3 hrs)

  **II. Comparative Politics and International Relations**
  - PLSC221 Vietnam (3 hrs)
  - PLSC222 War and Peace in the Nuclear Era (3 hrs)
  - PLSC311 Politics of the Developing World (3 hrs)
  - PLSC327 American Foreign Policy Process (3 hrs)
  - PLSC341 International Law (3 hrs)
  - PLSC342 International Organizations (3 hrs)
  - PLSC343 Model United Nations (3 hrs)
  - PLSC354 Government and Politics of Canada (3 hrs)
  - PLSC361 Russian Politics in Transition (3 hrs)
  - PLSC367 Latin American Politics (3 hrs)
  - PLSC371 Government and Politics of the Middle East (3 hrs)
  - PLSC372 Government and Politics of Sub-Saharan Africa (3 hrs)
  - PLSC374 Asian Political Systems (3 hrs)
  - PLSC362 Russian Foreign Relations (3 hrs)
  - PLSC467 Advanced International Relations (3 hrs)

  **III. Political Theory and Methods**
  - PLSC308 Political Violence and Revolution (3 hrs)
  - PLSC310 Methods of Political Research (3 hrs)
  - PLSC339 Public Opinion and Political Learning (3 hrs)
  - PLSC382 Politics and the 21st Century (3 hrs)
  - PLSC410 Political Science in Fiction (3 hrs)
  - PLSC418 20th Century Political Theory (3 hrs)
  - PLSC420 Democracy and Power (3 hrs)
  - PLSC422 American Political Theory (3 hrs)

**Minor Requirements** 13-26 hours
Select a minor from the approved list of minors for secondary, K-12 and special education secondary programs.

**Professional Studies** 39 hours
Pre-Admission Phase: The Learner and the Community 8 hours
- EDPS322 Human Development and Learning (4 hrs)
- FETE201 Field Experience I (1 hr)
- SPGN351 Education of Students with Exceptionalities (3 hrs)

The following courses require formal admission to the teacher education program:

**Phase I:**
- SOFD328 Schools in a Multicultural Society (3 hrs)
- CURR305 Curriculum and Methods: Secondary (3 hrs)
- FETE302 Field Experience II: Secondary (1 hr)
- EDFP340 Introduction to Assessment and Evaluation (3 hrs)

**Phase II:**
- RDNG331 Teaching Reading in the Secondary School (3 hrs)
- FETE402 Field Experience III: Secondary (1 hr)
- EDMT330 Instructional Applications of Media and Technology (2 hrs)
- HIST481 The Teaching of Social Studies (3 hrs)

**Phase III:**
- EDUC492 Student Teaching (12 hrs)

**University Elective Courses** 0 hours

**Program Total** 131 hours
PLSC372 Government and Politics of Sub-Saharan Africa (3 hrs)
PLSC374 Asian Political Systems (3 hrs)
PLSC462 Russian Foreign Relations (3 hrs)
PLSC467 Advanced International Relations (3 hrs)

III. Political Theory and Methods
PLSC308 Political Violence and Revolution (3 hrs)
PLSC359 Public Opinion and Political Learning (3 hrs)
PLSC382 Politics and the 21st Century (3 hrs)
PLSC410 Political Science in Fiction (3 hrs)
PLSC418 20th Century Political Theory (3 hrs)
PLSC420 Democracy and Power (3 hrs)
PLSC422 American Political Theory (3 hrs)

Minor Total........................................... 21 hours

PUBLIC ADMINISTRATION MINOR (PADM)

Required Course.................................... 3 hours
PLSC270 Public Administration (3 hrs)

Restricted Elective Courses....................... 12 hours
Four of the following courses:
PLSC210 Introduction to Political Analysis (3 hrs)
PLSC334 Personnel Administration in Government (3 hrs)
PLSC352 Politics of Government Budgeting (3 hrs)
PLSC381 Public Policy Analysis (3 hrs)
PLSC431 Theories of Public Organization (3 hrs)
PLSC480 Field Seminar/Internship (6 hrs)

Elective Courses.................................... 9 hours
Three courses from the following:
PLSC202 State and Local Politics (3 hrs)
PLSC216 Municipal Government (3 hrs)
PLSC301 American Legal Systems (3 hrs)
PLSC330 Urban Politics (3 hrs)
PLSC332 Intergovernmental Relations and Federalism (3 hrs)
PLSC365 Legislative Process (3 hrs)
PLSC380 American Presidency (3 hrs)
PLSC385 Judicial Process and Behavior (3 hrs)
PLSC470 Seminar in Political Science (3 hrs)
PLSC486 Internship (3 hrs)

Minor Total........................................... 24 hours

PUBLIC LAW AND GOVERNMENT MINOR (PLWG)

Students must complete at Eastern Michigan University at least three courses in the public law and government minor numbering 300 or above. A maximum of four credit hours of independent study or internship/cooperative education courses may be applied to the 24 credit hours required for this minor.

Required Courses................................... 6 hours
PLSC301 The American Legal System (3 hrs)
One course from the following:
PLSC312 American Constitutional Law I (3 hrs)
PLSC313 American Constitutional Law II (3 hrs)
PLSC412 Comparative Legal Systems (3 hrs)

Restricted Elective Courses....................... 6 hours
Select two courses from two of the three following groups:

I. American Politics and Administration
PLSC202 State and Local Government (3 hrs)
PLSC216 Municipal Government (3 hrs)
PLSC270 Public Administration (3 hrs)

PLSC330 Urban Politics (3 hrs)
PLSC332 Intergovernmental Relations and Federalism (3 hrs)
PLSC335 Labor in American Politics (3 hrs)
PLSC352 Politics of Government Budgeting (3 hrs)
PLSC357 Campaigns and Elections (3 hrs)
PLSC358 Political Parties and Interest Groups (3 hrs)
PLSC359 Public Opinion and Political Learning (3 hrs)
PLSC365 Women and Politics (3 hrs)
PLSC380 The American Presidency (3 hrs)
PLSC381 Public Policy Analysis (3 hrs)

II. Comparative Politics and International Relations
PLSC211 Introduction to Comparative Government (3 hrs)
PLSC212 Introduction to International Politics (3 hrs)
PLSC221 Vietnam (3 hrs)
PLSC222 War and Peace in the Nuclear Era (3 hrs)
PLSC311 Politics of the Developing World (3 hrs)
PLSC327 American Foreign Policy Process (3 hrs)
PLSC342 International Organizations (3 hrs)
PLSC354 Government and Politics of Canada (3 hrs)
PLSC361 Russian Politics in Transition (3 hrs)
PLSC367 Latin American Politics (3 hrs)
PLSC371 Government and Politics of the Middle East (3 hrs)
PLSC372 Government and Politics of Sub-Saharan Africa (3 hrs)
PLSC374 Asian Political Systems (3 hrs)
PLSC462 Russian Foreign Relations (3 hrs)
PLSC467 Advanced International Relations (3 hrs)

III. Political Theory and Methods
PLSC210 Introduction to Political Analysis (3 hrs)
PLSC213 Introduction to Political Thought (3 hrs)
PLSC308 Political Violence and Revolution (3 hrs)
PLSC310 Methods of Political Research (3 hrs)
PLSC359 Public Opinion and Political Learning (3 hrs)
PLSC382 Politics and the 21st Century (3 hrs)
PLSC410 Political Science in Fiction (3 hrs)
PLSC418 20th Century Political Theory (3 hrs)
PLSC420 Democracy and Power (3 hrs)
PLSC422 American Political Theory (3 hrs)

Other Elective Courses................................ 12 hours
Four courses from the following:
PLSC312 American Constitutional Law I (3 hrs)
PLSC313 American Constitutional Law II (3 hrs)
PLSC341 International Law (3 hrs)
PLSC385 Judicial Process and Behavior (3 hrs)
PLSC387 Cooperative Education in Political Science (3 hrs)
ECON407 Economic Analysis and Law (3 hrs)
PLSC412 Comparative Legal Systems (3 hrs)
PLSC456 Criminal Law (3 hrs)
HIST465 United States Constitutional History (3 hrs)
PLSC480 Field Seminar in Political Science/Public Administration (3 hrs)
PLSC486 Internship in Political Science/Public Administration (3 hrs)
PLSC487 Cooperative Education in Political Science (3 hrs)
PLSC489/489 Internship in Political Science/Public Administration (9 hrs)
PLSC497/498/499 Independent Study (1/2/3 hrs)

Minor Total........................................... 24 hours

Note: One of these four electives may be a cognate in a related content area selected with the approval of the advisor.
POLITICAL SCIENCE MINOR (PLST)
Secondary, K-12 and Special Education-Secondary Teacher Certification

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in political science, certification code CD. The Michigan Test for Teacher Certification (MTTC) covering this field is #10, "Political Science." Students must complete PLSC112/113 American Government before beginning the course of study for the minor.

Required Courses.......................................................... 6 hours
Two courses from the following:
PLSC210 Introduction to Political Analysis (3 hrs)
PLSC211 Introduction to Comparative Government (3 hrs)
PLSC212 Introduction to International Politics (3 hrs)
PLSC213 Introduction to Political Thought (3 hrs)
PLSC310 Methods of Political Research (3 hrs)

Restricted Elective Courses.............................................. 15 hours
Five courses from two of the three following areas of concentration:

I. American Politics, Public Law and Administration
PLSC202 State and Local Government (3 hrs)
PLSC216 Municipal Government (3 hrs)
AAAS242/PLSC242 Black Women: Politics and Racism (3 hrs)
PLSC276 Public Administration (3 hrs)
PLSC301 The American Legal System (3 hrs)
PLSC312 American Constitutional Law I (3 hrs)
PLSC313 American Constitutional Law II (3 hrs)
PLSC330 Urban Politics (3 hrs)
PLSC332 Intergovernmental Relations and Federalism (3 hrs)
PLSC335 Labor in American Politics (3 hrs)
PLSC352 Politics of Government Budgeting (3 hrs)
PLSC357 Campaigns and Elections (3 hrs)
PLSC358 Political Parties and Interest Groups (3 hrs)
AAAS362/PLSC362/WMST362 Black Women: Religion and Sexism (3 hrs)
PLSC364 The Legislative Process (3 hrs)
PLSC365 Women and Politics (3 hrs)
PLSC380 The American Presidency (3 hrs)
PLSC381 Public Policy Analysis (3 hrs)
PLSC385 Judicial Process and Behavior (3 hrs)

II. Comparative Politics and International Relations
PLSC221 Vietnam (3 hrs)
PLSC222 War and Peace in the Nuclear Age (3 hrs)
PLSC311 Politics of the Developing World (3 hrs)
PLSC327 American Foreign Policy Process (3 hrs)
PLSC341 International Law (3 hrs)
PLSC342 International Organizations (3 hrs)
PLSC343 Model United Nations (3 hrs)
PLSC354 Government and Politics of Canada (3 hrs)
PLSC361 Russian Politics in Transition (3 hrs)
PLSC367 Latin American Politics (3 hrs)
PLSC371 Government and Politics of the Middle East (3 hrs)
PLSC372 Government and Politics of Sub-Saharan Africa (3 hrs)
PLSC374 Asian Political Systems (3 hrs)
PLSC462 Russian Foreign Relations (3 hrs)
PLSC467 Advanced International Relations (3 hrs)

III. Political Theory and Methods
PLSC308 Political Violence and Revolution (3 hrs)
PLSC359 Public Opinion and Political Learning (3 hrs)
PLSC382 Politics and the 21st Century (3 hrs)
PLSC410 Political Science in Fiction (3 hrs)
PLSC418 20th Century Political Theory (3 hrs)
PLSC420 Democracy and Power (3 hrs)
PLSC422 American Political Theory (3 hrs)

Minor Total................................................................. 21 hours

Preprofessional Program in
Prelaw (PLAW)

Most law schools require a bachelor’s degree and evidence of potential for law school as measured by grade point average and the results of the Law School Admission Test (LSAT). In addition, most law school admission officers emphasize the importance of a broad academic background and the development of analytical and communication skills. The Department of Political Science provides counseling for prelaw students, LSAT registration, and application materials and catalogs from many law schools throughout the country.

Because law schools typically do not require specific courses for admission or identify any particular major or curriculum as preferable, it is necessary for prelaw students to plan their own academic programs. Given the increasing competitiveness of admission to law school, it is important that great care be exercised in selecting a program of study appropriate to a legal career and in maintaining a high level of academic performance. It is also prudent to choose a program that will provide a suitable alternative career.

The majors most commonly selected by prelaw students are political science, economics, history and sociology. Other frequent choices include English language and literature, communications, psychology, philosophy and business administration. Although less numerous, students with majors in mathematics, the natural sciences, foreign languages, music, and art are also urged to consider law school to enhance their career potential.

Whatever major and minor combination is chosen, attention also should be given to the selection of appropriate elective courses. Generally, any challenging course that will facilitate mastery of the use of language, develop critical understanding of human values and institutions, or contribute to the capacity for independent and creative thinking is likely to be useful. Among specific courses that are often recommended by prelaw advisors are advanced English composition, persuasive speech, logic and accounting. Mathematics and science courses are frequently cited as helpful in developing needed analytical skills.

Premedical students who desire to gain greater insight into the law and legal procedures, and law school approaches to legal studies, may choose from a broad range of courses offered by the Departments of Political Science, Sociology, Economics, History and Philosophy, and Marketing. The major and minor in public law and government, offered by the Department of Political Science, provides a firm foundation on which to build a career in law.

DEPARTMENT OF
Psychology

Campus Address: 537 Mark Jefferson
Internet: www.cmich.edu/psychology
Telephone: 734.487.1155 734.487.0047
E-mail: jensapp@cmich.edu

See page 541 for course descriptions

Psychology, as a discipline, is concerned with the experience, behavior, needs, desires and potential of human beings. It is basic to self development, and to career fields and life pursuits that involve other human beings.

Objectives of the department are to provide a general and in-depth survey of the fields of the science of psychology for students interested in diversified career fields; to prepare undergraduate students to pursue graduate studies in order to enter one of the several professional career areas for which the major is required: clinical psychology, industrial psychology, school psychology, teaching and research in psychology; for example, and
to help students who are interested in self-development obtain current and sound approaches to problems of topical interest.

Graduate study leads to a master's degree in psychology with programs in general psychology, clinical psychology, clinical behavioral psychology and to the Ph.D. in clinical psychology. These programs are described in the graduate catalog.

**Psychology Major (PSY)**

The major in psychology is designed to provide a general and in-depth survey of the fields in the science of psychology and to prepare students to work with people in several career areas. Further study beyond the baccalaureate is required to enter professional career work.

### General Education Requirements
44 hours

**Area I: Symbolic and Communication**

1. See page 23
2. See page 23
3. See page 23
4. One course from the following:
   - MATH118 Linear Models and Probability (3 hrs)
   - MATH119 Applied Calculus (5 hrs)
   - MATH120 Calculus I (4 hrs)
   - MATH121 Calculus II (4 hrs)
   - MATH122 Elementary Linear Algebra (3 hrs)
5. See page 23

**Area II: Science and Technology**

1. See page 24
2. One course from the following:
   - PSY101 General Psychology (no laboratory)
   - PSY102 General Psychology
3. See page 24

**Area III: Social Sciences**

1. See page 24
2. See page 24
3. See page 24
4. See page 24

**Area IV: Arts and Humanities**

1. See page 25
2. See page 25
3. See page 25
4. See page 25

### Physical Education/Graduation Requirement
2 hours

**Major Requirements**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>13-14 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY101/102 General Psychology (3-4 hrs)</td>
<td></td>
</tr>
<tr>
<td>PSY205 Quantitative Methods in Psychology (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>PSY301 Introductory Experimental Psychology (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>PSY453 History and Systems of Psychology (3 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

**Restricted Elective Courses**

12 hours

Select one course from each of the following areas:

I. Adjustment and personality
   - PSY560 Abnormal Psychology (3 hrs)
   - PSY451 Dynamics of Personality (3 hrs)

II. Biological
   - PSY357 Sensation and Perception (3 hrs)
   - PSY457 Physiological Psychology (3 hrs)
   - PSY458 Comparative Animal Behavior (3 hrs)

III. Learning and motivation
   - PSY304 Learning (3 hrs)
   - PSY356 Motivation and Emotion (3 hrs)

IV. Developmental and social
   - PSY309 Social Psychology (3 hrs)
   - PSY321 Child Psychology (3 hrs)

### Elective Courses
4-5 hours

Select four to five credit (enough to total 30 hours in psychology), including PST101 General Psychology, in consultation with an advising coordinator.

### Minor Requirements
20 hours

### University Elective Courses
28 hours

### Program Total
124 hours

**Note:**

*This course satisfies both a general education and a major requirement.

**Psychology Major (PSYT)**

Secondary Teacher Certification

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate in psychology, certification code CE. Depending on the minor selected, these areas may be obtained. The Michigan Test for Teacher Certification (MTTC) covering this field is #11, "Psychology."

### General Education Requirements
44 hours

**Area I: Symbolic and Communication**

1. See page 23
2. See page 23
3. See page 23
4. One course from the following:
   - MATH118 Linear Models and Probability (3 hrs)
   - MATH119 Applied Calculus (3 hrs)
   - MATH120 Calculus I (4 hrs)
   - MATH121 Calculus II (4 hrs)
   - MATH122 Elementary Linear Algebra (3 hrs)
5. See page 23

**Area II: Science and Technology**

1. See page 24
2. One course from the following:
   - PSY101 General Psychology (no laboratory)
   - PSY102 General Psychology
3. See page 24

**Area III: Social Sciences**

1. See page 24
2. See page 24
3. See page 24

**Area IV: Arts and Humanities**

1. See page 25
2. See page 25
3. See page 25
4. See page 25

### Physical Education/Graduation Requirement
2 hours

**Major Requirements**

<table>
<thead>
<tr>
<th>Required Courses</th>
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</thead>
<tbody>
<tr>
<td>PSY101/102 General Psychology (3-4 hrs)</td>
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</tr>
<tr>
<td>PSY205 Quantitative Methods in Psychology (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>PSY301 Introductory Experimental Psychology (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>PSY453 History and Systems of Psychology (3 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

**Restricted Elective Courses**

Adjustment and personality

One course from the following:

- PSY560 Abnormal Psychology (3 hrs)
- PSY451 Dynamics of Personality (3 hrs)
**Psychology Minor (PSYT)**

Secondary, K-12 and Special Education-Secondary Teacher Certification (not available to social studies group majors)

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in psychology certification code C8. The Michigan Test for Teacher Certification (MTTC) covering this field is #11, "Psychology."

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSY101/102</td>
<td>General Psychology</td>
<td>3/4 hours</td>
</tr>
</tbody>
</table>

**Elective Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY101/102</td>
<td>General Psychology</td>
<td>3/4 hours</td>
</tr>
</tbody>
</table>

Sixteen to seventeen hours selected in consultation with an advising coordinator.

**Minor Total**

20 hours

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**DEPARTMENT OF SOCIOLOGY, ANTHROPOLOGY AND CRIMINOLOGY**

**Campus Address:** 712-A Pray Hall

**Internet:** www.as cmich.edu

**Telephone:** 734.487.0012

E-mail: jay.weinstein@cmich.edu

See pages 245, 266 and 346 for course descriptions.

The department offers majors and minors in the disciplines of sociology, anthropology, and criminology and criminal justice, and participates in the social work curriculum, the major in area studies and programs in psychology, bilingual-bicultural education and women's studies.

Advising is available for particular areas of study. Students majoring in one of the department's programs are encouraged to see the undergraduate advising coordinator to be assigned an advisor as soon as they make their selection. Students not majoring in the department's programs may seek information about the curricula from any faculty member during their "on call" advising hours.

Graduate study leads to the master's degree in sociology or criminology and criminal justice. The M.A. degree is described in the graduate catalog.

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**Anthropology Major (ANTH)**

The program in anthropology advances the goals of humanistic education, prepares students for successfully operating in a multidisciplinary society, and provides majors with a foundation for graduate study. Anthropology is the comparative study of human behavior, both in terms of its development and in terms of its cultural-specific expression. Eastern program in anthropology gives particular attention to the sociocultural subfield.

**General Education Requirement**

<table>
<thead>
<tr>
<th>Area</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Symbolic and Communication</td>
<td>38 hours</td>
</tr>
<tr>
<td>1. See page 23</td>
<td></td>
</tr>
<tr>
<td>2. See page 23</td>
<td></td>
</tr>
<tr>
<td>3. ANTH200 Writing for Anthropology*</td>
<td></td>
</tr>
<tr>
<td>4. See page 23</td>
<td></td>
</tr>
<tr>
<td>5. See page 23</td>
<td></td>
</tr>
</tbody>
</table>
Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. ANTH135 Introduction to Cultural Anthropology
4. ANTH140 Introduction to Physical Anthropology

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ........................................... 2 hours

Major Requirements ................................................................. 30 hours
Required Courses ................................................................. 18 hours
*ANTH135 Introduction to Cultural Anthropology (3 hrs)
*ANTH140 Introduction to Physical Anthropology (3 hrs)
ANTH150 Introduction to Archaeology (3 hrs)
ANTH210 History of Anthropological Theory (3 hrs)
ANTH439 Seminar in Anthropological Theory (3 hrs)
ANTH441 Senior Seminar in Anthropology (3 hrs)

Restricted Elective Courses ...................................................... 6 hours
One course from the following culture area courses:
ANTH233 Peoples and Cultures of Mexico (3 hrs)
ANTH236 Peoples and Cultures of Africa (3 hrs)
ANTH237 Indians of North America (3 hrs)
ANTH248 Peoples and Cultures of the Pacific (3 hrs)
ANTH285 Culture of Japan (3 hrs)

One course from the following methodology courses:
ANTH345 Qualitative Methods (3 hrs)
ANTH437 Kinship and Social Structure (3 hrs)

Elective Courses ................................................................. 6 hours
Two anthropology courses, one of which must be at the 300- or 400-level.

Minor Requirements ............................................................... 20 hours
University Elective Courses .................................................... 34 hours

Program Total ................................................................. 124 hours

Note: *This course satisfies both a general education and a major requirement.

CURRICULUM IN CRIMINOLOGY AND CRIMINAL JUSTICE (CRM)

The criminology and criminal justice curriculum provides students with a multidisciplinary understanding of crime and justice within the framework of broader social processes. This curriculum is a three-tiered structure composed of general education, a core curriculum and selected concentrations. The typical student will move from general education to the core of the program and then into one of four specialized concentrations, where he or she will be introduced to courses on the principles and application of the chosen specialty.

The curriculum for general education includes introductory courses in the fundamental social science disciplines of sociology and psychology. The core of the curriculum consists of a number of related courses that will build a foundation of social science education emphasizing analytical and conceptual skills. The pivotal course is CRM301 Criminology, a multidisciplinary perspective on the nature, extent and causes of crime. CRM300 Criminal Justice and CRM301 Criminology should be the first core courses taken by the typical student. The third and final tier of the curriculum consists of 21 hours in one of four concentrations. These concentrations contain some courses without criminological content that provide students with professionally relevant occupational knowledge and skills.

Students completing the curriculum will have satisfied all major and minor requirements for graduation. No additional minor is required.

An articulation agreement exists between this program and a community college. For further details, see the Articulation Agreements section, page 13.

General Education Requirements ................................................. 29 hours

Area I Symbols and Communication
1. See page 23
2. See page 25
3. See page 23
4. SOC230 Social Statistics
5. See page 23

Area II Science and Technology
1. See page 24
2. PSY101/102 General Psychology
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. SOC105 Introductory Sociology
4. SOC202 Social Problems

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. One course from the following:
   CRM310 Introduction to Critical Reasoning
   CRM330 Introduction to Logic
4. See page 25

Physical Education/Graduation Requirement ...................................... 2 hours

Major Requirements ............................................................... 69-70 hours
Core Requirements ............................................................... 54-55 hours

*PSY101/102 General Psychology (3-4 hrs)
*PSY112/113 American Government (3 hrs)
*SOC105 Introductory Sociology (3 hrs)
*SOC202 Social Problems (if SOC103 is taken) (3 hrs)

Criminology and Criminal Justice Courses ...................................... 24 hours

CRM300 Criminal Justice (3 hrs)
CRM301 Criminology (3 hrs)
CRM331 Introduction to Corrections (3 hrs)
CRM334 Juvenile Delinquency (3 hrs)
CRM370 White-Collar Crime (3 hrs)
CRM431 Policing in Society (3 hrs)
CRM447 Senior Seminar in Criminology (3 hrs)

One course from the following:
CRM333/SOC333 Violence and Society (3 hrs)
CRM337/SOC337 Deviance and Society (3 hrs)

Research Methods ................................................................. 6 hours

*SOC250 Social Statistics I (3 hrs)
SOC304 Methods in Research (3 hrs)

Sociology/Anthropology Courses ................................................ 12 hours

ANTH355 Introduction to Cultural Anthropology (3 hrs)
SOC214/ANTH214 Racial and Cultural Minorities (3 hrs)
SOC308 Social Psychology (3 hrs)
SOC462 Complex Organizations (3 hrs)

Concentration Requirements ..................................................... 15 hours

Select one of the following four concentrations:

I. Legal Studies (CRM LGST)
SOC122CRM412 Law and Society (3 hrs)
CRM468 Criminal Law II (3 hrs)

Nine hours from the following:

AAS141 Law in the African American Experience (3 hrs)
SOC321/CRM321 Cooperation and Conflict in Society (3 hrs)
CRM488/489 Field Internship in Criminology and Criminal Justice (3 hrs)
CTAC357 Interviewing as Communication (3 hrs)
LAW203 Legal Environment of Business (3 hrs)
LAW205 Legal Research (3 hrs)

*PHIL120 Introduction to Critical Reasoning (3 hrs)

*PHIL130 Introduction to Logic (3 hrs)
PHIL335 Philosophy of Law (3 hrs)
PLSC301 The American Legal System (3 hrs)
PLSC306 The Legislative Process (3 hrs)
PLSC305 Judicial Process and Behavior (3 hrs)
PLSC356 Criminal Law I (3 hrs)

CRM277/278/279 Special Topics (1/2/3 hrs)
CRM377/378/379 Special Topics (1/2/3 hrs)

II. Law Enforcement (CRM LAW)

SWRK120 Introduction to Social Work Services and Professional Roles (3 hrs)
One course from the following:

CRM432 Police Organization (3 hrs)
PLSC301 Managing Public Safety Agencies (3 hrs)

Nine hours from the following:

CRM320 Criminal Investigation (3 hrs)
SOC132/CRM321 Cooperation and Conflict in Society (3 hrs)
CRM460 Criminal Law II (3 hrs)
CRM488/489 Field Internship in Criminology and Criminal Justice (3-6 hrs)

One course from the following:

HLED380 Drug Use and Abuse (3 hrs)
SWRK431 Substance Abuse (3 hrs)
PLSC301 The American Legal System (3 hrs)
PLSC308 Political Violence and Revolution (3 hrs)
PLSC305 Judicial Process and Behavior (3 hrs)
PLSC356 Criminal Law I (3 hrs)

PSY340 Psychological Perspectives on Prejudice and Discrimination (3 hrs)
PSY360 Abnormal Psychology (3 hrs)
SOC130 The Urban Community (3 hrs)
SOC144 Collective Behavior (3 hrs)
CRM277/278/279 Special Topics (1/2/3 hrs)
CRM377/378/379 Special Topics (1/2/3 hrs)

III. Corrections (CRM CORR)

CRM332 Community Corrections (3 hrs)

SOC133/CRM321 Cooperation and Conflict in Society (3 hrs)

Nine hours from the following:

CRM488/489 Field Internship in Criminology and Criminal Justice (3-6 hrs)
CTAC355 Interviewing as Communication (3 hrs)
COUN450 An Introduction: Counseling Concepts and Skills (3 hrs)
HLED380 Drug Use and Abuse (3 hrs) or SWRK431 Substance Abuse (3 hrs)

PSY340 Psychological Perspectives on Prejudice and Discrimination (3 hrs)
PSY360 Abnormal Psychology (3 hrs)
PSY365 Behavioral Modification (3 hrs)
SOC142 Group Dynamics (3 hrs)

SWRK120 Introduction to Social Work Services and Professional Roles (3 hrs)
CRM277/278/279 Special Topics (1/2/3 hrs)
CRM377/378/379 Special Topics (1/2/3 hrs)

IV. Criminal Justice Administration (CRM ADM)

CRM332 Community Corrections (3 hrs)
One course from the following:

CRM432 Police Organization (3 hrs)
PLSC301 Managing Public Safety Agencies (3 hrs)

Nine hours from the following:

ANTH450/SOC135 Qualitative Methods (3 hrs)
SOC132/CRM321 Cooperation and Conflict in Society (3 hrs)

CRM330 Criminal Investigation (3 hrs)
CRM488/489 Field Internship in Criminology and Criminal Justice (3-6 hrs)
CTAC355 Interviewing as Communication (3 hrs)
LAW403 Employment Law (3 hrs)
MGMT202 Business Communication (3 hrs)
MGMT386 Organizational Behavior and Theory (3 hrs)
PLSC270 Public Administration (3 hrs)
PLSC334 Personnel Administration in Government (3 hrs)
PLSC381 Public Policy Analysis (3 hrs)

PSY301 Introductory Experimental Psychology (3 hrs)

PSY340 Psychological Perspectives on Prejudice and Discrimination (3 hrs)
SOC130 Sociology of the Workplace (3 hrs)
CRM277/278/279 Special Topics (1/2/3 hrs)
CRM377/378/379 Special Topics (1/2/3 hrs)

Minor Requirements .................................................. 0 hours

No minor is required.

University Elective Courses .......................................... 24 hours

Program Total .......................................................... 124 hours

Note:
*This course satisfies both a general education and a major requirement.
SOC134 and SOC135 Quantitative Methods of Social Research I and II may be substituted for SOC1250 and SOC1294.

Sociology Major (SOC)

This major includes the study of social class, community and family, and educational, religious, governmental and economic institutions in complex industrial societies. Flexibility in both the major and minor allows students interested in careers in fields such as business, nursing, technology, communications, psychology, home economics, law or the helping professions to select courses meeting their special needs.

General Education Requirements .................................. 41 hours

Area I Symbolic and Communication
1. See page 23
2. See page 23
3. See page 23
4. SOCI250 Social Statistics*
5. See page 23

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III Social Science
1. See page 24
2. See page 24

3. One course from the following:
   *SOC103 Introductory Sociology
   *ANTH105 Introduction to Cultural Anthropology
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirements ...................... 2 hours
Major Requirements

Required Courses

*SOC105 Introductory Sociology (3 hrs)
*SOC250 Social Statistics 1 (3 hrs)
SOC104 Methods in Sociological Research (3 hrs)
SOC108 Social Psychology (3 hrs)
SOC403 Modern Sociological Theory (3 hrs)
SOC405 Senior Seminar in Sociology (3 hrs)

One option from the following:

Options I: General Sociology

Required Courses

3 hours

*ANTH135 Introduction to Cultural Anthropology (3 hrs)

Restricted Elective Courses

6 hours

Two courses from the following:

SOC130 Social Stratification (3 hrs)
SOC207 Social Psychology of the Workplace (3 hrs)
SOC211 Social Gerontology (3 hrs)
SOC212 Medical Sociology (3 hrs)
SOC306/ANTH336 Social and Cultural Change (3 hrs)

Elective Courses

6 hours

Choose from courses in sociology, anthropology, criminology. Must be at the 300-level or above.

Options II: Applied Sociology

Required Courses

9 hours

SOC130 Social Stratification (3 hrs)
SOC230 Introduction to Applied Sociology (3 hrs)
SOC405 Senior Seminar in Sociology (3 hrs)

Restricted Electives

6 hours

Students must take two courses from one of the following four areas:

Family/Health/Aging Concentration

SOC132 Medical Sociology (3 hrs)
SOC211 Social Gerontology (3 hrs)
SOC303 Sociology of Childhood and Youth (3 hrs)
SOC450 The Family (3 hrs)

Public/Private Sector Concentration

SOC206 The Urban Community (3 hrs)
SOC230 Sociology of the Workplace (3 hrs)
SOC232 Cooperation and Conflict in Society (3 hrs)
SOC334 Population (3 hrs)
SOC462 Complex Organizations (3 hrs)

Deviance Concentration

CRM301 Criminology (3 hrs)
CRM337 Deviance and Society (3 hrs)
CRM339 Juvenile Delinquency (3 hrs)
CRM370 White Collar Crime (3 hrs)
SOC/CRI412 Law and Society (3 hrs)
SOC333 Violence and Society (3 hrs)

Media/Technology Concentration

SOC140 Sociology and Technology (3 hrs)
SOC/CRI250 Media and Violence (3 hrs)
INDT425 Communication Technology and Social Change (3 hrs)
INDT495 Technology, Values, and the Future (3 hrs)

Minor Requirements

20 hours

Minor Requirements

Program Total

124 hours

Note:

*This course satisfies both a general education and a major requirement.

Sociology Major (SOCT)

Secondary Teacher Certification

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in sociology. Certification code CE. The Michigan Test for Teacher Certification (MTTC) covering this field is #12, "Sociology."

General Education Requirements

41 hours

Area I: Symbolic and Communication

1. See page 23
2. See page 23
3. See page 23
4. SOC250 Social Statistics 1
5. See page 23

Area II: Science and Technology

1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area III: Social Science

1. See page 24
2. HIST102 Western Civilization, 1648 to World War I (3 hrs)
3. One course from the following:
   *SOC105 Introductory Sociology
   *ANTH135 Introduction to Cultural Anthropology (3 hrs)
   GEOG107 Introduction to Geography
   GEOG110 World Regions (3 hrs)
4. HIST103 20th-Century Civilization (3 hrs)

Area IV: Arts and Humanities

1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement

1 hour

Major Requirements

30 hours

*SOC105 Introductory Sociology (3 hrs)
SOC202 Social Problems (3 hrs)
*SOC250 Social Statistics 1 (3 hrs)
SOC204 Methods in Sociological Research (3 hrs)
SOC208 Social Psychology (3 hrs)
SOC210 Social Stratification (3 hrs)
SOC403 Modern Sociological Theory (3 hrs)
SOC405 Senior Seminar in Sociology (3 hrs)

One course from the following:

SOC306 The Urban Community (3 hrs)
SOC307 Sociology of the Workplace (3 hrs)
SOC309/ANTH309 Culture and Personality (3 hrs)
SOC303 Sociology of Childhood and Youth (3 hrs)
SOC450 The Family (3 hrs)
SOC462 Complex Organizations (3 hrs)

One additional 300- or 400-level Sociology course (3 hrs)

Minor Requirements

13-26 hours

Select one minor from the approved list of minors for secondary, K-12 and special education — secondary programs.

Professional Studies

39 hours

Pre-admission phase: The Learner and the Community

8 hours

EDPS322 Human Development and Learning (4 hrs)
PE1201 Field Experience I (1 hr)
SPGN251 Education of Students with Exceptionalities (3 hrs)

Courses that require formal admission to the teacher education program
HEALTH AND ILLNESS STUDIES
INTERDISCIPLINARY MINOR (HILL)

This minor examines the ways in which human beings deal with health and illness in different cultural settings including American society and its subcultures. Oriented toward the student interested in social and cultural aspects of health, illness and disease, it provides a theoretical perspective on comparative medical systems.

Required Courses
- SOC105 Introductory Sociology (3 hrs)
- ANTH335 Introduction to Cultural Anthropology (3 hrs)
- CRJ501 Social Gerontology (3 hrs)
- CRJ312 Medical Sociology (3 hrs)
- ANTH329 Medical Anthropology (3 hrs)

Elective Courses
- 6 hours

Minor Total
- 21 hours

SOCIOLOGY MINOR (SOC)

Required Courses
- 14-15 hours

Sociocultural Perspectives on the Family Interdisciplinary Minor (SPF)

This minor combines the perspectives of anthropology and sociology by examining the sociocultural determinates and consequences of the family in the United States and other cultures. Students in this minor will study the family from anthropology and sociology. This minor is designed for students planning to work with families as social workers, family life professionals or psychologists.

Required Courses
- 21 hours

SOCIOLOGY MINOR (SOCT)

Secondary, K-12 and Special Education-Secondary Teacher Certification (not available to social studies group majors)

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in sociology, certification code CR: The Michigan Test for Teacher Certification (MTTC) covering this field is #12, "Sociology."
Required Courses

- SOCL105 Introductory Sociology (3 hrs)
- SOCL202 Social Problems (3 hrs)
- SOCL304 Methods in Sociological Research (3 hrs)
- SOCL308 Social Psychology (3 hrs)
- SOCL310 Social Stratification (3 hrs)
- SOCL403 Modern Sociological Theory (3 hrs)

Restricted Electives

Choose one additional 300- or 400-level sociology course. The following courses are suggested, but any 300- or 400-level sociology course is acceptable:

- SOCL306 The Urban Community (3 hrs)
- SOCL307 Sociology of the Workplace (3 hrs)
- SOCL309/ANTH309 Culture and Personality (3 hrs)
- SOCL311 Social Gerontology (3 hrs)
- SOCL312 Medical Sociology (3 hrs)
- SOCL336/ANTH336 Social and Cultural Change (3 hrs)
- SOCL405 Senior Seminar in Sociology (3 hrs)
- SOCL450/WMST450 The Family (3 hrs)
- SOCL462 Complex Organizations (3 hrs)

Minor Total

21 hours

Women's Studies Major (WMST)

Women's Studies Program offers an interdisciplinary academic major and minor to provide intellectual perspective and life-enriching skills for women and men. Professors have designed interdisciplinary courses that document the contributions of women to history, literature, education, family, and work in a cultural context. Insights into the psychology of women, the impact of women on social structures and how women influence contemporary society will be valuable to students in their personal and professional lives.

Individual courses in the Women's Studies Program can be taken as electives to enrich any major.

Women's Studies Major (WMST)

General Education Requirements

Area I Symbolic and Communication

1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

Area II Science and Technology

1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences

1. See page 24
2. See page 24
3. See page 24
4. WMST200 Introduction to Women's Studies*
5. Area IV Arts and Humanities

1. See page 25
2. See page 25

Core Courses

- WMST300 Introduction to Women's Studies (3 hrs)
- WMST226 Feminist Theory (3 hrs)
- PSY1421WMST112 Psychology of Women (3 hrs)

Restricted Elective Courses

Three from each of the following four groups:

I. Arts and Humanities

- ART436/WMST436 Women in Art (3 hrs)
- HIST335/WMST335 History of Women in Europe (3 hrs)
- HIST336/WMST336 History of Women in the United States and Great Britain, 1800 to the Present (3 hrs)
- LITER432/WMST432 Women in Literature (3 hrs)
- PHIL206/WMST206 Women in Religion and Philosophy (3 hrs)

II. Social and Physical Sciences

- AAS362/PLSC362/WMST362 Black Women: Religion and Sexism (3 hrs)
- ECON328/WMST328 Economics of Women (3 hrs)
- INDT420/WMST420 Women and Technology (3 hrs)
- PLSC365 Women and Politics (3 hrs)
- PSY202/WMST202 Psychology of Women (3 hrs)
- SOCL334/WMST334 Sociology of Gender (3 hrs)

III. Multicultural and Cross-Cultural Studies

- AAS361 The African American Family (3 hrs)
- ANTH214/WMST214 Racial and Cultural Minorities (3 hrs)
- ANTH355/WMST355 Anthropology of Women (3 hrs)
- CTAC373 Intercultural Communication (3 hrs)
- ECON321 Minority Workers in the Labor Market (3 hrs)
- PSY340 Psychological Perspectives on Prejudice and Discrimination (3 hrs)

IV. Practice and Policy

- ATHL317 Theory of Coaching Individual Sports for Women (3 hrs)
- ATHL318 Theory of Coaching and Teaching Women's Team Sports (2 hrs)
- BEDU205/WMST205 Women in Business (3 hrs)
- COUN450 An Introduction: Counseling Concepts and Skills (3 hrs)
- CTAC360 Gender Communication (3 hrs)
- HLED360 Concepts in School Sex Education (2 hrs)
- HLED399 Teaching about AIDS (1 hr)
- LEGL313 Family Law (3 hrs)
- PHED405/WMST405 Women in Sports (3 hrs)
- PSY200 Psychology of Sex (3 hrs)
- SOCL450 The Family (3 hrs)
- SWRK403 Practicum Issues with Women (3 hrs)
- SWRK413 Women and Aging (3 hrs)
- SWRK469 Social Work, Sex and the Family (3 hrs)
- WMST487 Cooperative Education in Women's Studies (3 hrs)
- WMST487 Cooperative Education in Women's Studies (5 hrs)

Elective Courses

Nine from the remaining courses selected in consultation with the advising coordinator.

Minor Requirements

20 hours

University Elective Courses

31 hours

Program Total

134 hours
Women's Studies Minor (WMST)

For all of the following listed courses, note the relevant department's or program's course prerequisites. For availability of all of the following courses, check the class schedule of the term for which you register. Also, consult the Women's Studies Program director or the undergraduate advisor for other approved women's studies courses offered in the term for which you register.

Required Courses ............................................. 3 hours
WMST200 Introduction to Women's Studies (3 hrs)

Restricted Elective Courses ................................. 12 hours
Select six hours from each of the following groups:

I. Arts and Humanities
ART336/WMST436 Women in Art (3 hrs)
HIST335/WMST335 History of Women in Europe (3 hrs)
HIST336/WMST336 History of Women in the United States and Great Britain, 1800 to the Present (3 hrs)
LITR443/WMST443 Women in Literature (3 hrs)
PHIL225/WMST225 Feminist Theory (3 hrs)
PHIL426/WMST426 Topics in Gender and Philosophy (3 hrs)

II. Social and Physical Sciences
AAS362/PLSC362 WMST362 Black Women: Religion and Sexism (3 hrs)
ANTH355/WMST355 Anthropology of Women (3 hrs)
ECON338/WMST338 Economics of Women (3 hrs)
INDT420/WMST420 Women and Technology (3 hrs)
PLSC365 Women and Politics (3 hrs)
PSY242/WMST242 Psychology of Women (3 hrs)
SOC256 Minority Women in the United States (3 hrs)
SOC344/WMST344 Sociology of Gender (3 hrs)

Elective Courses .............................................. 6 hours
Six hours from the following elective courses
AAS351 The African American Family (3 hrs)
SOC214/ANTH214 Racial and Cultural Minorities (3 hrs)
ATHL317 Theory of Coaching Individual Sports for Women (2 hrs)
ATHL318 Theory of Coaching and Teaching Women's Team Sports (2 hrs)
BEDU205/WMST205 Women in Business (3 hrs)
LEGL313 Family Law (3 hrs)
CTAC360 Gender Communication (3 hrs)
CTAC374 Intercultural Communication (3 hrs)
CTAC375 Interracial Communication (3 hrs)
ECON321 Minority Workers in the Labor Market (3 hrs)
COUN470 An Introduction: Counseling Concepts and Skills (3 hrs)
HLED360 Concepts in School Sex Education (2 hrs)
HLED399 Teaching about AIDS (1 hr)
PHED345/WMST345 Women in Sports (3 hrs)
PSY240 Psychology of Sex (3 hrs)
PSY340 Psychological Perspectives on Prejudice and Discrimination (3 hrs)
SOC450 The Family (3 hrs)
SWRK403 Practice Issues with Women (3 hrs)
SWRK413 Women and Aging (3 hrs)
SWRK465 Social Work, Sex and the Family (3 hrs)
WMST477/478/479 Special Topics (1/2/3 hrs)
WMST497/498/499 Independent Study (1/2/3 hrs)

Additional courses selected in consultation with the advising coordinator.

Minor Total .................................................. 21 hours
COLLEGE OF BUSINESS

Dear:
David Mielke
473 Owen Building
734.487.4140

Associate Dean:
Denise Tagnay
473 Owen Building
734.487.4140

Assistant Dean:
Amelia Chan
401 Owen Building
734.487.2344

Assistant Dean:
Steven Hoskin
404 Owen Building
734.487.4444

Departments and Programs
• Accounting and Finance
• Computer Information Systems
• Management
• Marketing
MISSION STATEMENT

The mission of the College is to support the economic development of southeast Michigan by preparing graduates to perform effectively in an "information age" business environment that is being shaped by a global economy and by helping business leaders understand and address the forces shaping their environment as they create and recreate business.

The primary focus of the college is on teaching and learning, whether in the classroom or in the community. Faculty research is fundamentally applied in nature and serves to enhance teaching as well as provide new insights to the business community and other scholars. Professional service is directed towards the needs of the region and the professional communities that sustain the faculty and also serves to enhance the teaching capacity of the faculty and learning opportunities for our students.

The College of Business provides affordable practical business education for the bachelor's through the master's level degrees to residents of southeast Michigan. By virtue of its many strengths, the College of Business also attracts students from outside the region and from the world. The college aims to design programs to meet the needs of a quickly changing business environment by having key corporate partnerships and strong advisory boards. The college has a strong faculty with interests and skills that match these needs: skills in entrepreneurship, human resource development, information/knowledge management, results measurement, change management, e-business, real estate development, corporate social responsibility, globalization, workforce diversity, supply and chain management innovation, and rapid growth and diversification of the regional economy.

The bachelor of business administration degree is offered to students majoring in any one of 12 undergraduate professional programs:

Accounting
Accounting Information Systems
Bachelor's-Master's degree in accounting (150-hour program)
Computer Information Systems
+Economics
Entrepreneurship
Finance
General Business
International Business
+Language and World Business
Management
Marketing

Note:
+Economics is offered in cooperation with the Department of Economics.
+The joint bachelor of business administration-bachelor of arts degree in language and world business is offered in cooperation with the Department of Foreign Languages and Bilingual Studies, College of Arts and Sciences and the EMU World College.

Graduate programs lead to a master's of business administration or master of science degree in accounting, computer-based information systems and human resource management and organization development. For descriptions of graduate programs and courses in the College of Business, consult the graduate catalog.

Accreditation of all undergraduate and graduate programs is by AACSB International: The Association to Advance Collegiate Schools of Business.

ADMISSION

Admission to the college of business is open to student applicants with 56 or more hours completed who are enrolled in the last one or two of the 16 required courses to qualify for admission. Students wishing to advance registrar should return their applications to the College of Business Undergraduate Business Advising Office by the following deadlines:

Winter Semester ........................................ November 15
Spring and Summer Sessions ................................ March 15
Fall Semester ........................................ July 15

Note:
Students who do not meet the above deadline for application to the College of Business should contact the Undergraduate Business Programs Office regarding late application.

Applicants must bring to the Undergraduate Business Program Office a progress report, tabulation of transfer credit and transcripts or grade reports in order to be approved immediately for registration in 300- to 400-level business courses.

Students must be admitted to the University to be considered for admission to the College of Business. However, students admitted to the University are not automatically admitted to the College of Business.

Business majors who wish to enroll in 300- to 400-level business courses must contact the Undergraduate Business Program Office.

To qualify for admission, students must have successfully completed 56 hours with a minimum cumulative grade point average of 2.5. In addition, the following courses (1 through 14) must be recognized as successfully completed by the University, and the business courses (9 through 14) must be completed with a minimum earned grade of C-(C required for transfer courses) in each:

1. ENGL121 Composition II: Reading the Public Experience (3 hrs)
2. One course from the following:
   CTAS121 Fundamentals of Speech (2 hrs)
   CTAS124 Fundamentals of Speech (3 hrs)
3. An English, foreign language or communication elective
4. MATH118 Linear Models and Probability (3 hrs)
5. ECON201 Principles of Microeconomics (3 hrs) and ECON202 Principles of Macroeconomics (3 hrs)
6. FLSC112/113 American Government (3/3 hrs)
7. Philosophy or religion (logic or ethics strongly recommended)
8. PSY101/102 General Psychology (3/4 hrs)
9. COB200 Introduction to Business (3 hrs)
10. ACC240 Principles of Financial Accounting (3 hrs) and ACC241 Principles of Managerial Accounting (3 hrs)
11. LAW293 Legal Environment of Business (3 hrs)
12. IS215 End-User Computing (3 hrs)
13. MGM102 Business Communication (3 hrs)
14. DS225 Business Statistics I (3 hrs)

Business students may not enroll in 300- to 400-level business courses prior to completing admission requirements. Students who fail to satisfy admission requirements may be involuntarily withdrawn from upper-division business courses by the college.

Freshman
Freshmen who are high school National Merit Scholars or Eastern Michigan University Presidential Scholars, as determined by the scale below, may gain priority admission to the College of Business as a freshman.

The determination of an EMU Presidential Scholar is indicated on the scale below:

<table>
<thead>
<tr>
<th>GPA</th>
<th>ACT</th>
<th>SAT</th>
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<tbody>
<tr>
<td>4.0</td>
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<td>22</td>
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</tr>
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<td>26</td>
<td>1170-1209</td>
</tr>
</tbody>
</table>
| 3.3  | 27  | 1210 and up

Transfer Student
Students transferring from a community college or a four-year institution who have completed at least 30 transferable credit hours with course(s) in a business track may also gain priority admission to the College of Business. Those students who have earned a 3.0 or higher GPA will be admitted to the College of Business without a probationary semester.
To maintain priority admit status in the College of Business:

- Students must maintain a minimum of 2.5 cumulative GPA at Eastern Michigan University.
- Priority admit students will be eligible to enroll in 300-400 level business courses after completing a total of 56 credit hours (junior status) and meeting prerequisite requirements.

Prospective transfer students are strongly recommended to contact the Undergraduate Business Advising Office for a review and evaluation of transfer credits individually and unofficially. Students may also contact the Transfer Center in 301 Pierce Hall, 734.487.1442. Prospective transfer students need to present unofficial transcripts/records for advising. Once an applicant is accepted as a transfer student at Eastern Michigan University, an official tabulation of credit will be provided to the student during the initial advising appointment at Academic Advising in 301 Pierce Hall.

Business-intent students will be advised in the College of Business Undergraduate Advising Office after the initial advising appointment at Academic Advising. Transfer business students are required to formally apply for admission to the College of Business and must meet all college admission requirements.

Non-business majors

Non-business majors need not apply for admission to the College of Business but must contact the Undergraduate Business Advising Office. Students will be asked to provide academic records and to complete a student intake sheet to confirm their program of study and preparation. Students must be of junior standing (30 or more hours) and in good academic standing (2.0 GPA or better) to enroll in 300- and 400-level College of Business courses. No student majoring in a program outside of the College of Business may be given more than 30 hours of credit for courses offered in EMU's College of Business. This limitation applies to those minoring in business as well as to those taking business courses for general elective credit. Non-business majors also must satisfy stated course prerequisites listed in this catalog.

CURRICULUM FOR THE BACHELOR OF BUSINESS ADMINISTRATION DEGREE (BA)

The bachelor of business administration degree requires that students successfully complete a minimum of 60 hours in business within the minimum 124 hours required to qualify for a B.B.A. degree. No more than 50 percent of the 124 hours may be completed in the business courses.

In the program of study outlined below, the number of general education hours in symbols and communication, mathematics, science and technology, social science and arts and humanities is indicated. Students must take the specified courses as shown. In some cases, courses taken to meet General Education Requirements also may satisfy specific program requirements, as in the case of economics, mathematics and computer literacy. (Please refer to EMU General Education Graduation Requirements on pages 22-26.)

Students must meet requirements for admission to the College of Business before enrolling in upper-division (300- or 400-level) business courses.

The curriculum described meets the major and minor requirements for graduation. No additional minor is needed.

The business core and major requirements in effect at the time of the student's initial registration at Eastern Michigan University (see the EMU seven-year rule on page 34), or the requirements of a subsequent catalog, including those in effect at the time of the student's graduation, may be used to complete graduation requirements.

Active articulation agreements exist between this program and community colleges. For further details, see the Articulation Agreements section, page 15.

See page 263 for course descriptions.

GRADUATION REQUIREMENTS FOR BACHELOR OF BUSINESS ADMINISTRATION

Academic standards require that students maintain a 2.0 GPA. Students who fail to achieve this cumulative 2.0 GPA will be considered to be on probation by the University. A cumulative GPA below 2.0 for consecutive semesters will result in dismissal from the University. Please refer to the section under "Academic Probation and Dismissal" in this catalog.

To qualify for graduation, students must maintain a GPA of 2.0 in the business administration core and 2.0 in their major as well as maintaining a 2.0 overall EMU GPA.

General Education Requirements .................................................. 41 hours

Area I: Symbolics and Communication

1. See page 23
2. See page 23
3. MGMT202 Business Communication

4. One course from the following:
   MATH118 Linear Models and Probability (3 hrs)
   MATH122 Elementary Linear Algebra (3 hrs)

5. IS215 End-User Computing

Area II Science and Technology

1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences

1. See page 26

Area IV Arts and Humanities

1. See page 25
2. See page 25
3. Logic or ethics is strongly recommended for general education requirement IV3.
1. See page 25

Physical Education/Graduation Requirement .................................. 2 hours

Major Requirements ........................................................................ 60-69 hours

Business Core 21 hours

COB200 Introduction to Business (3 hrs)
ACC240 Principles of Financial Accounting (3 hrs)
ACC241 Principles of Managerial Accounting (3 hrs)
LAW293 Legal Environment of Business (3 hrs)
MGMT202 Business Communication (3 hrs)
IS215 End-User Computing (3 hrs)
DS265 Business Statistics I (3 hrs)

Business Administration Core 15 hours

FIN350 Principles of Finance (3 hrs)
MKTG360 Principles of Marketing (3 hrs)
MGMT386 Organizational Behavior and Theory (3 hrs)
POM174 Introduction to Production/Operations Management (3 hrs)

MGMT496 Business Policy (3 hrs)

Discipline 24-23 hours

Select one from the following:

- Accounting
- Accounting Information Systems
- Computer Information Systems
- Economics
- Entrepreneurship
- Finance
- General Business
- Management
- Marketing

Minor Requirement ......................................................................... 0 hours

No minor is required.
INTERNATIONAL BUSINESS MAJOR (INB)

The International Business major offers an interdisciplinary focus which is attractive to students who favor an introduction to the study of foreign languages and desire an interdisciplinary approach to professional business studies. The state of Michigan is one of the leading states in the amount of imports and export business. General international activity is increasing due to NAFTA, our proximity to Canada and the relocation and development of many subsidiaries of foreign-based companies to Michigan.

The 124-hour International Business (IB) major differs from the 154-hour Language and World Business (LWB) degree in that the IB program does not require an extensive foreign language training. This program is also attractive to international students who are bilingually or multi-lingual and are more interested in broad-based business knowledge rather than specified professional areas.

General Education Requirements .......................................................... 44 hours

Area I Symbolics and Communication
1. See page 23
2. See page 23
3. See page 23
4. One course from the following:
   MATH218 Linear Models and Probability (3 hrs)
   MATH222 Elementary Linear Algebra (3 hrs)
5. IS215 End-User Computing

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. ECON261 Principles of Macroeconomics (3 hrs)
4. ECON262 Principles of Microeconomics (3 hrs)

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. Logic or ethics is strongly recommended for general education requirement IV.C.
4. See page 25

Physical Education/Graduation Requirement .............................................. 2 hours

Major Requirements .................................................................................... 73-76 hours

Language Requirements ............................................................................. 10, 13 hours
1. French, German and Spanish (15 hrs)
2. Japanese (10 hrs)

Business Core Courses .................................................................................. 21 hours
1. ACC240 Principles of Financial Accounting (3 hrs)
2. ACC241 Principles of Managerial Accounting (3 hrs)
3. COB200 Introduction to Business (3 hrs)
4. LAW293 Legal Environment of Business (3 hrs)
5. MGMT202 Business Communication (3 hrs)

Business Administration Core Courses ....................................................... 15 hours
1. FIN350 Principles of Finance (3 hrs)
2. MKTG360 Principles of Marketing (3 hrs)
3. MGMT381 Organizational Behavior and Theory (3 hrs)
4. POM374 Introduction to Production/Operations Management (3 hrs)
5. MGMT490 Business Policy (3 hrs)

Discipline ........................................................................................................ 27 hours
1. ACC275 International Accounting (3 hrs)
2. FIN370 International Business Finance (3 hrs)
3. MGMT493 International Management (3 hrs)
4. MKTG490 International Marketing (3 hrs)

Two courses from the following:
1. ACC479 Special Topics (3 hrs)
2. ECON500 Computer Econometric Systems (3 hrs)
3. ECON548 International Economics (3 hrs)
4. IS479 Special Topics (3 hrs)
5. FIN479 Special Topics (3 hrs)
6. LAW350 International Business Law (3 hrs)
7. MGMT492 Managing World Business
   - Communication (3 hrs)
8. MKTG375 International Business Transactions (3 hrs)

Select one from the following functional disciplines:

I. Accounting (INB ACC)
1. ACC250 Intermediate Accounting (3 hrs)
2. ACC256 Managerial Cost Accounting (3 hrs)
3. ACC258 Accounting Information Systems (3 hrs)

II. Computer Information Systems (INB CIS)
For a third 15-hour course, please see a CIS advisor:
1. IS380 Introduction to Databases (3 hrs)
2. IS380 Business Data Communications and Computer Networks (3 hrs)

III. Economics (INB ECON)
See an advisor in the Department of Economics for course selection.

IV. Finance (INB FIN)
Three courses from the following:
1. FIN354 Investments (3 hrs)
2. FIN357 Financial Markets and Institutions (3 hrs)
3. FIN360 Theory of Financial Decisions (3 hrs)
4. ACC340 Intermediate Accounting (3 hrs)
5. ACC359 Intermediate Financial Theory (3 hrs)
6. FIN450 Problems in Financial Management (3 hrs)
7. FIN450 Introduction to Speculative Markets (3 hrs)
8. FIN454 Commercial Banking (3 hrs)
9. FIN454 Mortgage Banking (3 hrs)

V. Management (INB MGMT)
Three courses from the following:
1. MGMT386 Human Resource Management (3 hrs)
2. MGMT480 Management Responsibility and Ethics (3 hrs)
3. MGMT485 Management-Union Relations (3 hrs)
4. MGMT486 Human Resource Development (3 hrs)

VI. Marketing (INB MKTG)
Select any three marketing courses.
MINOT REQUITE

DQWTH

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ACCOUNTING (B.B.A.-M.S.A.)

CPA candidates must have completed 150 hours of education before being admitted as members of the American Institute of Certified Public Accountants and be licensed in most states.

Admission Requirements

Following are the minimal standards for admission to the combined B.B.A. and M.S.A. degree program in accounting. Generally, each item should be satisfied, though the candidate's overall record is considered. Transfer credits and grades will be evaluated in terms of Eastern Michigan University equivalency.

Initial admission is dependent on:

1. completion of 90 hours of undergraduate course work including College of Business requirements, General Education Requirements and ACC340 Intermediate Accounting;
2. a cumulative GPA of 3.0 on a 4.0 scale;
3. the candidate's written statement of personal goals; and
4. an interview with the program advisor.

Admission to the graduate level requires:

1. completion of 120 hours of undergraduate course work including course content. Noted under initial admission above and the undergraduate component (i.e., required and restricted electives);
2. a GMAT score of 500 (must be taken during the fourth year, so that the candidate's score is received before admission to the fifth year; and
3. completed application and payment of fee to the Graduate School.

If the candidate is an accounting undergraduate from another four-year accredited school and plans to complete the graduate level program at EMU, he/she must meet the minimum requirements for graduate-level admission noted above, in addition to the bachelor's degree. The candidate is encouraged to apply to EMU at the beginning of his/her senior year and take the Graduate Management Admission Test (GMAT) during that same year.

To inquire about the specific requirements and to develop the program of study, contact:

Director of Graduate Business Programs
401 Gary M. Owen Building
Eastern Michigan University
Ypsilanti, MI 48197
734.487.4444

ACCOUNTING MAJOR (ACC)

Students majoring in accounting develop competencies necessary for professional careers in:

Public Accounting, which leads to a career as a Certified Public Accountant (CPA). Public accounting firms provide a variety of professional services to their clients, such as audit, tax management, advisory and personal financial planning.

Controllership and Financial Management in Industry, which leads to careers as Certified Management Accountants (CMA). Managerial accountants perform tasks within a business, such as strategic cost management, performance measurement, budget analysis and internal and operational auditing. The strategic managerial accountant generates and interprets operating and financial data that helps management make decisions.

Internal Auditing, which leads to careers as Certified Internal Auditors (CIA). Internal auditors are engaged within large corporations to provide independent objective assurance and consulting activities designed to add value and improve an organization's operations.

Public and Nonprofit Sector Accounting, which leads to careers as Certified Government Financial Managers (CGFM). Government accountants work in federal, state and local governmental entities to provide information and accountability to taxpayers and other resource providers. Accountants in nonprofit organizations also provide similar information to donors, grantors and other resource providers.

Through an optional internship program, students with good academic records have an opportunity to work in public accounting or industry. These paid (at market wage) internships provide education, exposure to professionals and opportunities to network.
ACCOUNTING INFORMATION SYSTEMS

ACC 280 Applied Information Systems (3)
ACC 211 Financial Accounting (3)
ACC 212 Managerial Accounting (3)
ACC 310 Intermediate Financial Accounting (3)
ACC 312 Intermediate Managerial Accounting (3)
ACC 315 Corporate Accounting (3)
ACC 420 Accounting Information Systems (3)

Program Requirements

18 Hours

Elective Courses

ACC 316 Federal Taxation (3)
ACC 317 International Accounting (3)
ACC 410 Advanced Corporate Accounting (3)
ACC 420 Advanced Accounting Information Systems (3)

General Education Requirement

6 Hours

Writing Requirement

3 Hours

Humanities/Behavioral Sciences/Philosophy (6)

Science Requirement

4 Hours

Life Science (4)

Social Sciences Requirement

3 Hours

Social Sciences (3)

Note: These course requirements are subject to change and should be confirmed with the appropriate academic advisor.
Area III Social Sciences
1. See page 24
2. See page 24
3. ECON 201 Principles of Macroeconomics (3 hrs)
4. ECON 202 Principles of Microeconomics (3 hrs)

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. Logic or ethics is strongly recommended for general education requirement IV.3.
4. See page 25

Physical Education/Graduation Requirement .................................................. 2 hours

Major Requirements ................................................. 69 hours

Business Core Courses ..................................... 21 hours
ACC 240 Principles of Financial Accounting (3 hrs)
ACC 241 Principles of Managerial Accounting (3 hrs)
COB 200 Introduction to Business (3 hrs)
LAW 293 Legal Environment of Business (3 hrs)
*MGMT 202 Business Communication (3 hrs)
*IS 215 End-User Computing (3 hrs)
DS 265 Business Statistics I (3 hrs)

Business Administration Core Courses ............. 15 hours
FIN 350 Principles of Finance (3 hrs)
MKTG 360 Principles of Marketing (3 hrs)
MGMT 386 Organizational Behavior and Theory (3 hrs)
POM 374 Introduction to Production/Operations Management (3 hrs)
*MGMT 490 Business Policy (3 hrs)

Discipline ............................................... 39 hours
ACC 296 The Accounting Cycle and Profession (3 hrs)
ACC 340 Intermediate Accounting (3 hrs)
ACC 342 Managerial Cost Accounting (3 hrs)
ACC 344 Principles of Taxation (3 hrs)
ACC 356 Accounting Information Systems (3 hrs)
ACC 456 Accounting Information Systems Implementation and Projects (3 hrs)
ACC 348 Information Systems Audit and Control (3 hrs)
IS 319 File Processing and COBOL Programming (3 hrs)
IS 247 Introduction to Web Application Development (3 hrs)
IS 380 Introduction to Databases (3 hrs)

One course from the following:
IS 315 Object-Oriented Application Development (3 hrs)
IS 417 Systems Analysis and Design (3 hrs)
IS 320 Business Data Communications and Computer Networks (3 hrs)

Minor Requirements ............................................. 0 hours
No minor is required.

University Elective Courses ..................................... 12 hours

Program Total .................................................. 124 hours

Note:
*a This course satisfies both a general education and a major requirement.
*b These courses must be taken outside the College of Business.
*c All 300-level core courses listed above must be completed before enrollment in MGMT 490 Business Policy.
*d All 200-level core courses listed above must be completed prior to admission to the College of Business.

Finance Major (FIN)

Finance majors acquire the knowledge and skills to analyze financial data and use financial concepts to value financial and real assets, and to help individuals and companies make decisions about allocating scarce resources. Students can develop their expertise in a variety of areas including corporate finance, banking, investments and international finance.

The general requirements for the bachelor of business administration degree, the academic major requirements below, and sufficient electives to meet the minimum of 124 hours must be completed for graduation.

General Education Requirements ........................................... 41 hours

Area I Symbolics and Communication
1. See page 23
2. See page 23
3. MGMT 202 Business Communication
4. One course from the following:
   - MATH 118 Linear Models and Probability (3 hrs)
   - MATH 112 Elementary Linear Algebra (3 hrs)
5. IS 215 End-User Computing

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. Logic or ethics is strongly recommended for general education requirement IV.3.
4. See page 25

Physical Education/Graduation Requirement .................................................. 2 hours

Major Requirements ................................................. 60 hours

Business Core Courses ..................................... 21 hours
ACC 240 Principles of Financial Accounting (3 hrs)
ACC 241 Principles of Managerial Accounting (3 hrs)
COB 200 Introduction to Business (3 hrs)
LAW 293 Legal Environment of Business (3 hrs)
*MGMT 202 Business Communication (3 hrs)
*IS 215 End-User Computing (3 hrs)
DS 265 Business Statistics I (3 hrs)

Business Administration Core Courses ............. 15 hours
FIN 350 Principles of Finance (3 hrs)
MKTG 360 Principles of Marketing (3 hrs)
MGMT 386 Organizational Behavior and Theory (3 hrs)
POM 374 Introduction to Production/Operations Management (3 hrs)
*MGMT 490 Business Policy (3 hrs)

Discipline ............................................... 24 hours

Required Courses ............................................. 15 hours
FIN 354 Investments (3 hrs)
FIN 357 Financial Markets and Institutions (3 hrs)
FIN 359 Financial Institution Theory (3 hrs)
FIN 360 Theory of Financial Decisions (3 hrs)
FIN 450 Problems in Financial Management (3 hrs)

Restricted Elective Courses ..................................... 9 hours

Nine hours from the following:
FIN 352 Corporate Financial Accounting (3 hrs)
FIN 370 International Business Finance (3 hrs)
FIN 451 Introduction to Speculative Markets (3 hrs)
FIN 433 Commercial Banking (3 hrs)
FIN 445 Mortgage Banking (3 hrs)
FIN 479 Special Topics (3 hrs)
ACC 240 Intermediate Accounting (3 hrs)
ACC 350 Corporate Financial Reporting (3 hrs)
ECON 335 Economic Fluctuations and Forecasting (3 hrs)

Minor Requirements ............................................. 0 hours
No minor is required.
University Elective Courses ............................................. 21 hours
Program Total ......................................................... 124 hours

Note: *This course satisfies both a general education and a major requirement.
All 300-level core courses listed above must be completed before enrollment in MGMT490 Business Policy.
All 200-level core courses listed above must be completed prior to admission to the College of Business.

FINANCE MAJOR — BANKING TRACK (FIN BNKG)

General Education Requirements ...................................... 41 hours

Area I: Symbolic and Communication
1. See page 23
2. See page 23
3. MGMT202 Business Communication
4. One course from the following:
   - MATH118 Linear Models and Probability (3 hrs)
   - MATH122 Elementary Linear Algebra (3 hrs)
5. IS215 End-User Computing

Area II: Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III: Social Sciences
1. See page 24
2. See page 24
3. ECON201 Principles of Macroeconomics (3 hrs)
4. ECON202 Principles of Microeconomics (3 hrs)

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. Logic or ethics is strongly recommended for general education requirement IV:3
4. See page 25

Physical Education/Graduation Requirement .................. 2 hours

Major Requirements .................................................... 63 hours

Business Core Courses .............................................. 21 hours
- ACC240 Principles of Financial Accounting (3 hrs)
- ACC241 Principles of Managerial Accounting (3 hrs)
- COB200 Introduction to Business (3 hrs)
- LAW293 Legal Environment of Business (3 hrs)
- *MGMT202 Business Communication (3 hrs)
- *IS215 End-User Computing (3 hrs)
- DS265 Business Statistics I (3 hrs)

Business Administration Core Courses ......................... 15 hours
- FIN350 Principles of Finance (3 hrs)
- MKTG360 Principles of Marketing (3 hrs)
- MGMT386 Organizational Behavior and Theory (3 hrs)
- POM374 Introduction to Production/Operations Management (3 hrs)
- *MGMT490 Business Policy (3 hrs)

Discipline .............................................................. 27 hours
- ACC340 Intermediate Accounting (3 hrs)
- FIN354 Investments (3 hrs)
- FIN357 Financial Markets and Institutions (3 hrs)
- FIN359 Intermediate Financial Theory (3 hrs)
- FIN430 Problems in Financial Management (3 hrs)
- FIN460 Theory of Financial Decisions (3 hrs)
- FIN454 Mortgage Banking (3 hrs)
- FIN453 Commercial Banking (3 hrs)

One course from the following:
- FIN370 International Business Finance (3 hrs)
- FIN451 Introduction to Speculative Markets (3 hrs)
- ACC540 Corporate Financial Reporting (3 hrs)
- FIN479 Special Topics (3 hrs)
- ECON445 Economic Fluctuations & Forecasting (3 hrs)

Minor Requirements .................................................. 0 hours
No minor is required.

University Elective Courses ......................................... 18 hours
Program Total ......................................................... 124 hours

Note: *This course satisfies both a general education and a major requirement.
All 300-level core courses listed above must be completed before enrollment in MGMT490 Business Policy.
All 200-level core courses listed above must be completed prior to admission to the College of Business.

ACCOUNTING MINOR (ACC)
(For non-business majors)

Required Courses .................................................... 18 hours
- ACC240 Principles of Financial Accounting (3 hrs)
- ACC241 Principles of Managerial Accounting (3 hrs)
- ACC296 The Accounting Cycle and Profession (3 hrs)
- ACC340 Intermediate Accounting (3 hrs)
- ACC342 Managerial Cost Accounting (3 hrs)
- ACC556 Accounting Information Systems (3 hrs)

Restricted Elective Course ......................................... 3 hours
One course from the following:
- ACC344 Principles of Taxation (3 hrs)
- ACC442 Advanced Cost Accounting (3 hrs)
- ACC450 Internal Auditing (3 hrs)
- ACC475 International Accounting (3 hrs)
- ACC540 Corporate Financial Reporting (3 hrs)
- ACC546 Public and Nonprofit Sector Accounting (3 hrs)

Minor Total ........................................................... 21 hours

FINANCE MINOR (FIN)
(For non-business majors)

Required Courses .................................................... 21 hours
- ACC240 Principles of Financial Accounting (3 hrs)
- ACC241 Principles of Managerial Accounting (3 hrs)
- FIN450 Principles of Finance (3 hrs)
- FIN359 Intermediate Financial Theory (3 hrs)
- *Three courses from the following:
  - FIN354 Investments (3 hrs)
  - FIN358 Analysis of Financial Statements (3 hrs)
  - FIN370 International Business Finance (3 hrs)
  - FIN450 Problems in Financial Management (3 hrs)
  - FIN451 Introduction to Speculative Markets (3 hrs)
  - FIN453 Commercial Banking (3 hrs)
  - FIN479 Special Topics (3 hrs)

Minor Total ........................................................... 21 hours
DEPARTMENT OF COMPUTER INFORMATION SYSTEMS

The Department of Computer Information Systems prepares students for careers in business information systems. The department strives to produce highly qualified information systems professionals who are able to analyze, design and integrate systems solutions.

Advising assistance, both academic and career, is provided by the faculty and is available Monday through Friday while school is in session, or by appointment.

Graduate study leads to the master of business administration with concentration in CIS or the master of science degree in information systems (M.S.I.S.). These degree programs and courses are described in the graduate catalog.

COMPUTER INFORMATION SYSTEMS MAJOR (CIS)

Computer information systems emphasizes the role and application of computers in making management decisions. Students are prepared for careers as systems analysts, programmers, software engineers, database specialists and information systems and database management administrators.

The general requirements for the bachelor of business administration degree, the academic major requirements below, and sufficient electives to meet the minimum of 124 hours for graduation must be completed.

General Education Requirements ........................................... 41 hours

Area I: Symbolic and Communication
1. See page 23
2. See page 23
3. MGMT202 Business Communication*
4. One course from the following:
   MATH118 Linear Models and Probability (3 hrs)
   MATH122 Elementary Linear Algebra (3 hrs)
5. IS215 End-User Computing*

Area II: Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III: Social Sciences
1. See page 24
2. See page 24
3. ECON201 Principles of Macroeconomics (3 hrs)
4. ECON202 Principles of Microeconomics (3 hrs)

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. Logic or ethics are strongly recommended for general education requirement IV.3.
4. See page 25

Physical Education/Graduation Requirement ................................... 2 hours

Major Requirements ................................................................ 66 hours

Business Core Courses ......................................................... 21 hours
ACC240 Principles of Financial Accounting (3 hrs)
ACC241 Principles of Managerial Accounting (3 hrs)
COB200 Introduction to Business (3 hrs)
Law293 Legal Environment of Business (3 hrs)
*MGT302 Business Communication (3 hrs)
*IS215 End-User Computing (3 hrs)
DS265 Business Statistics (3 hrs)

Business Administration Core Courses ...................................... 3 hours
FIN350 Principles of Finance (3 hrs)
MKT350 Principles of Marketing (3 hrs)
MGT386 Organizational Behavior and Theory (3 hrs)
POM374 Introduction to Production/Operations Management (3 hrs)
*MGMT490 Business Policy (3 hrs)

Discipline ........................................................................... 30 hours
IS247 Introduction to Web Application Development (3 hrs)
IS315 Object-Oriented Application Development (3 hrs)
IS320 Business Data Communications and Computer Networks (3 hrs)
IS380 Introduction to Databases (3 hrs)
IS403 Information Technology Infrastructure and Security (3 hrs)
IS417 Systems Analysis and Design (3 hrs)
IS421 Enterprise Database Application (3 hrs)
IS425 Information Systems Project Management (3 hrs)
IS449 Information Systems Integration (3 hrs)
One course from the following:
IS350 Enterprise Resource Planning (3 hrs)
IS410 Business Intelligence (3 hrs)
IS416 System Software Administration (3 hrs)

Minor Requirements ................................................................ 0 hours

No minor is required.

University Elective Courses .................................................. 15 hours
Program Total ....................................................................... 124 hours

Note: *Courses satisfy both a general education and major requirement.
†All 200-level core courses listed above must be completed before enrollment in MGMT490 Business Policy.
All 200-level core courses listed above must be completed prior to admission to the College of Business.

COMPUTER INFORMATION SYSTEMS MINOR (CIS)
(For non-business majors)

Required Courses .................................................................. 23 hours
IS215 End-User Computing (3 hrs)
IS247 Introduction to Web Application Development (3 hrs)
IS417 Systems Analysis and Design (3 hrs)
POM374 Introduction to Production/Operations Management (3 hrs)
MGMT386 Organizational Behavior and Theory (3 hrs)
One course from the following:
IS315 Object-Oriented Application Development (3 hrs)
IS416 System Software Administration (3 hrs)
IS380 Introduction to Databases (3 hrs)
IS320 Business Data Communications and Computer Networks (3 hrs)
IS426 Advanced Structured COBOL Programming (3 hrs)
ACC256 Accounting Information Systems (3 hrs)

Minor Total .......................................................................... 21 hours
Graduates from the Department of Management are prepared to assume leadership roles in today’s dynamic environment in both business and non-business organizations. They understand the roles of management as well as the complex social and environmental obligations faced in business today. In so doing, they are ready to apply the needed technical, human, and conceptual skills.

Eastern Michigan University’s management graduates understand and are able to apply the behavioral sciences in planning, implementation, communication, organizational design and development, and performance measurement to maximize organizational and employer achievement.

Faculty from the department provide both academic and career advising assistance Monday through Friday while school is in session, or by appointment. Management advisers are available to help students tailor a program that answers a variety of career needs in both general business and management.

A concentration in human resource management is available under the management major. See your adviser for details.

Details on the department’s innovative master of science degree in human resource organizational development (HR/OD) are available in the graduate catalog.

ENTREPRENEURSHIP MAJOR (ENTR)

The general requirements for the bachelor of business administration degree, the academic major requirements below, and sufficient electives to meet the minimum of 124 hours for graduation must be completed.

General Education Requirements ..................................................41 hours

Area I: Symbolic and Communication
1. See page 23
2. See page 23
3. MGMT202 Business Communication*
4. One course from the following:
   MATE118 Linear Models and Probability (3 hrs)
   MATH122 Elementary Linear Algebra (3 hrs)
5. IS215 End-User Computing*

Area II: Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III: Social Sciences
1. See page 24
2. See page 24
3. ECON201 Principles of Macroeconomics (3 hrs)
4. ECON202 Principles of Microeconomics (3 hrs)

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. Logic or ethics is strongly recommended for general education requirement IV.C.
4. See page 25

Physical Education/Graduation Requirement ..................................2 hours

Major Requirements .................................................................60 hours

Business Core Courses ............................................................21 hours
ACC240 Principles of Financial Accounting (3 hrs)
ACC241 Principles of Managerial Accounting (3 hrs)
COB200 Introduction to Business (3 hrs)
LAW293 Legal Environment of Business (3 hrs)
*MGMT202 Business Communication (3 hrs)
IS215 End-User Computing (3 hrs)
DS255 Business Statistics (3 hrs)

Business Administration Core Courses ..........................................15 hours
FIN350 Principles of Finance (3 hrs)
MKTG300 Principles of Marketing (3 hrs)
MGMT386 Organizational Behavior and Theory (3 hrs)
POM374 Introduction to Production/Operations Management (3 hrs)
*MGMT490 Business Policy (5 hrs)

Discipline .................................................................24 hours
MGMT384 Human Resource Management (3 hrs)
MGMT388 Introduction to Entrepreneurship (3 hrs)
MGMT460 Management Skills (3 hrs)
MGMT481 Managing the Entrepreneurial Venture (3 hrs)
MGMT488 Field Studies in Entrepreneurship (3 hrs)

One course from the following:
MGKT363 Retailing (3 hrs)
MGKT374 Business to Business Marketing (3 hrs)
MGKT430 Marketing of Services (3 hrs)
MGKT479 Special Topics
MGKT473 Marketing and Product Innovation (3 hrs)

Two courses from the following:
ACC342 Managerial Cost Accounting (3 hrs)
ACC344 Principles of Taxation (3 hrs)
FIN342 Financial Management for Entrepreneurs (3 hrs)
*MGKT363 Retailing (3 hrs)
*MGKT374 Business to Business Marketing (3 hrs)
*MGKT473 Marketing and Product Innovation (3 hrs)
MGMT480 Management Responsibility and Ethics (3 hrs)
Other courses with approval of the adviser.

Minor Requirements ..............................................................0 hours
No minor is required.

University Elective Courses .......................................................21 hours
Program Total .................................................................124 hours

Note:
*Course satisfies both a general education and a major requirement.
**Students may select one of these courses if not previously taken to meet marketing requirement.
*All 300-level Core Courses listed above must be completed before enrollment in MGMT490 Business Policy.
All 200-level Core Courses listed above must be completed prior to admission to the College of Business.

GENERAL BUSINESS MAJOR (GBUS)

The major in general business has been designed for students seeking a broad business background rather than specialization in any one functional area of business. The program for the general business major includes a minimum of 124 hours for graduation as stipulated in the catalog.

General Education Requirements ................................................41 hours

Area I: Symbolic and Communication
1. See page 23
2. See page 23
3. MGMT202 Business Communication*
4. One course from the following:
   MATH118 Linear Models and Probability (3 hrs)
   MATH122 Elementary Linear Algebra (3 hrs)
MANAGEMENT MAJOR (MGMT)

The major in management prepares students for a variety of roles in the business world. These roles can include line and staff supervisory positions and human resource assignments. The general requirements for the bachelor of business administration degree include a minimum of 124 hours for graduation as stipulated in the catalog.

General Education Requirements
Area I: Symbolic and Communication
Area II: Science and Technology
Area III: Social Sciences
Area IV: Arts and Humanities

Physical Education/Graduation Requirement

Major Requirements

Business Core Courses

Business Administration Core Courses

Discipline

Minor Requirements

University Elective Courses

Program Total

Note:

This course satisfies both a general education and major requirement.

All 300-level core courses listed above must be completed before enrollment in MGMT450 Business Policy.

All 200-level core courses listed above must be completed prior to admission to the College of Business.

5. IS215 End-User Computing

Area II Science and Technology

1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences

1. See page 24
2. See page 24
3. ECON201 Principles of Macroeconomics (3 hrs)
4. ECON202 Principles of Microeconomics (3 hrs)

Area IV Arts and Humanities

1. See page 25
2. See page 25
3. Logic or ethics is strongly recommended for general education requirement IV.3.
4. See page 25

Physical Education/Graduation Requirement

2 hours

Major Requirements

60 hours

Business Core Courses

21 hours

Business Administration Core Courses

15 hours

Discipline

24 hours

Minor Requirements

0 hours

No minor is required.

University Elective Courses

21 hours

Program Total

124 hours

General Education Requirements

41 hours

Business Core Courses

21 hours

Business Administration Core Courses

15 hours

Discipline

24 hours

Minor Requirements

0 hours

No minor is required.

University Elective Courses

21 hours

Program Total

124 hours
ENTREPRENEURSHIP MINOR (ENTR)

Required Courses............................................. 12 hours
ACC240 Principles of Financial Accounting (3 hrs)
MKTG360 Principles of Marketing (3 hrs)
MGMT386 Organizational Behavior and Theory (3 hrs)
MGMT388 Introduction to Entrepreneurship (3 hrs)

Restricted Elective Courses .................................. 9 hours
Nine hours from the following:
ACC241 Principles of Managerial Accounting (3 hrs)
COB200 Introduction to Business (3 hrs)
FIN352 Financial Management for Entrepreneurs (3 hrs)
IS215 End-User Computing (3 hrs)
LAW299 Legal Environment of Business (3 hrs)
MGMT1202 Business Communications (3 hrs)
POM374 Introduction to Production/Operations Management (3 hrs)
MKTG363 Retailing (3 hrs)
MKTG374 Business to Business Marketing (3 hrs)
MKTG473 Marketing and Product Innovation (3 hrs)
MKTG430 Marketing of Services (3 hrs)
MGMT481 Managing the Entrepreneurial Venture (3 hrs)
MGMT488 Field Studies in Entrepreneurship (3 hrs)
MGMT460 Management Responsibility and Ethics (3 hrs)

Minor Total..................................................... 21 hours

GENERAL BUSINESS MINOR (GBUS)
(For non-business majors)

Required Courses............................................. 12 hours
ACC240 Principles of Financial Accounting (3 hrs)
LAW299 Legal Environment of Business (3 hrs)
MKTG360 Principles of Marketing (3 hrs)
One course from the following:
MGMT386 Organizational Behavior and Theory (3 hrs)
MGMT384 Human Resource Management (3 hrs)

Elective Courses............................................... 9 hours
Any three courses offered by the COB that were not taken as a required course.

Minor Total..................................................... 21 hours

MANAGEMENT MINOR (MGMT)
(For non-business majors)

Required Courses............................................. 6 hours
MGMT202 Business Communication (3 hrs)
MGMT386 Organizational Behavior and Theory (3 hrs)

Elective Courses............................................... 15 hours
Five courses from the following, three of which must be MGMT courses:
ACC240 Principles of Financial Accounting (3 hrs)
ACC241 Principles of Managerial Accounting (3 hrs)

COB200 Introduction to Business (3 hrs)
IS215 End-User Computing (3 hrs)
MKTG261 Contemporary Selling (3 hrs)
MKTG360 Principles of Marketing (3 hrs)
POM374 Introduction to Production/Operations Management (3 hrs)

Any MGMT course not listed as a required course (3 hrs)

Minor Total..................................................... 21 hours

DEPARTMENT OF MARKETING

Campus Address: 469 Gary M. Owen Building
Internet: www.mkt.emich.edu
Telephone: 734.487.3323
E-mail: paul.chiao@emich.edu

See pages 312 and 323 for course descriptions.

The marketing curriculum prepares students for careers in sales, advertising, product management, marketing management, marketing research, retailing, international business, purchasing, supply chain management and logistics.

Advising is provided by the department head and faculty and is available during scheduled office hours or by appointment.

Graduate study leads to the master of business administration (MBA) degree. The MBA degree program and courses are described in the graduate catalog.

MARKETING MAJOR (MKTG)

The marketing major offers career preparation in sports marketing, advertising and sales promotion, international business, marketing research, purchasing and materials management, retailing, marketing channels, supply chain management and sales and sales management. Students may select any nine-hour combination of marketing electives, but are encouraged to focus on their anticipated career path.

The general requirements for the bachelor of business administration degree, the academic major requirements below and sufficient electives to meet the minimum of 124 hours for graduation must be completed.

General Education Requirements.................................. 41 hours

Area I Symbolic and Communication
1. See page 23
2. See page 23
3. MKTG202 Business Communication*
4. One course from the following:
   MATH110 Linear Models and Probability (3 hrs)
   MATH112 Elementary Linear Algebra (3 hrs)
5. IS215 End-User Computing*

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. ECON201 Principles of Macroeconomics (3 hrs)
4. ECON202 Principles of Microeconomics (3 hrs)
Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. Logic or ethics is strongly recommended for general education requirement IV.3.
4. See page 25.

Physical Education/Graduation Requirement ...................................... 2 hours

Major Requirements ............................................................................. 60 hours

Business Core Courses ......................................................................... 21 hours
ACC 240 Principles of Financial Accounting (3 hrs)
ACC 241 Principles of Managerial Accounting (3 hrs)
COB 200 Introduction to Business (3 hrs)
LAW 293 Legal Environment of Business (3 hrs)
*MGM 102 Business Communication (3 hrs)
*TIS 215 End-User Computing (3 hrs)
DS 265 Business Statistics I (3 hrs)

Business Administration Core Courses ........................................... 15 hours
FIN 330 Principles of Finance (3 hrs)
*MKTG 360 Principles of Marketing (3 hrs)
*MKTG 386 Organizational Behavior and Theory (3 hrs)
*POM 374 Introduction to Production/Operations Management (3 hrs)
†MKTG 490 Business Policy (3 hrs)

Discipline Required Courses ............................................................... 24 hours
Discipline Required Courses ............................................................... 24 hours
MKTG 261 Contemporary Selling (3 hrs)
MKTG 265 Consumer Behavior (3 hrs)
MKTG 268 Marketing Strategy (3 hrs)
MKTG 470 Marketing Research (3 hrs)
MKTG 475 Marketing Planning and Management (3 hrs)

Concentration Courses ......................................................................... 9 hours
Students may select from one of the following program areas or may select any nine-hour combination of marketing electives to create their own program in consultation with an advisor:

• Advertising and sales promotion
• International business
• Purchasing and materials management
• Marketing channels
• Supply chain management
• Retailing
• Sales and sales management
• Marketing management
• Sports marketing

Minor Requirements ........................................................................... 0 hours
No minor is required.

University Elective Courses ............................................................... 21 hours

Program Total .................................................................................... 124 hours

Note:
*This course satisfies both a general education and a major requirement.
†All 300-level core courses listed above must be completed before enrollment in MKTG 490 Business Policy.
All 200-level core courses listed above must be completed prior to admission to the College of Business.

MARKETING MINOR (MKTG)
(For non-business majors)

Required Courses ................................................................................ 6 hours
MKTG 261 Contemporary Selling (3 hrs)
MKTG 360 Principles of Marketing (3 hrs)

Restricted Elective Courses ................................................................. 15 hours

Five courses from the following, at least three must be in Marketing (all five may be in Marketing):
MKTG 363 Retailing (3 hrs)
MKTG 364 Logistics and Materials Management (3 hrs)
MKTG 365 Consumer Behavior (3 hrs)
MKTG 368 Marketing Strategy (3 hrs)
MKTG 369 Advertising (3 hrs)
MKTG 374 Business to Business Marketing (3 hrs)
MKTG 375 International Business Transactions (3 hrs)
MKTG 377 Special Topics (3 hrs)
MKTG 425 Sports and Event Marketing (3 hrs)
MKTG 430 Marketing of Services (3 hrs)
MKTG 460 International Marketing (3 hrs)
MKTG 461 Sales Management (3 hrs)
MKTG 464 Supply Chain Management (3 hrs)
MKTG 470 Marketing Research (3 hrs)
MKTG 473 Marketing and Product Innovation (3 hrs)
MKTG 474 Promotional Strategy (3 hrs)
MKTG 477 Marketing Planning and Management (3 hrs)
MKTG 479 Special Topics (3 hrs)
MKTG 499 Independent Study (3 hrs)
ACC 240 Principles of Financial Accounting (3 hrs)
MKTG 262 Business Communication (3 hrs)
MKTG 386 Organizational Behavior and Theory (3 hrs)

Minor Total ........................................................................................... 21 hours

Note:
College of Business approval is required for students planning to enroll in 300-
to 400-level business courses. All students must meet the specific course prerequisites for enrollment in any College of Business course.
COLLEGE OF EDUCATION

Dean:
Alane J. Starko, Interim
310 John W. Porter Building
734.487.1414

Associate Dean:
Michael Heagney
310 John W. Porter Building
734.487.0490

Associate Dean:
Virginia Harder
206 John W. Porter Building
734.487.1416

Departments and Programs
• Leadership and Counseling
• Special Education
• Teacher Education
MISSION STATEMENT

To create an exemplary educational environment to develop the intellectual curiosity, creativity, critical and reflective thinking and problem-solving abilities of our students so that they may become ethical, productive and contributing participants and leaders in a democratic and diverse society.

Given the size and complexity of the professional preparation programs of Eastern Michigan University, the complicated interactions between University programming and external authorities, the rapid change that is occurring to keep EMU professional education on "the cutting edge," and other such factors, it is virtually impossible for any single faculty or staff member to be completely and fully informed on every matter that might be raised.

Faculty and staff members make every effort to be helpful to students and departmental program materials are intended to inform. Even so, none of these sources is infallible, especially in complicated situations.

Thus, there is a need for a single, authoritative source of information about professional education curricula and academic policy on which the entire EMU community can draw and in which all can have confidence. This portion of the catalog is intended to serve that purpose.

THE GOVERNANCE OF PROFESSIONAL EDUCATION

As a member of The Renaissance Group, Eastern Michigan University is committed to the principle that teacher preparation is a campus-wide responsibility. Many EMU organizational entities are involved with services to prospective teachers (and other professional personnel) and teacher (and other professional personnel) preparation program delivery. Several established faculty bodies are charged with roles involving curriculum and academic policy issues.

Committee on Basic Programs
The committee on basic programs (CBP) is charged, under its governing document, with the coordination of initial teacher preparation. The CBP is composed of elected faculty members from three academic colleges, each representing one or more program areas in which the institution prepares beginning teachers; students; and major administrators of the teacher education program. The determinations of the CBP are made as recommendations to the education council.

College of Education Council
The College of Education Council (COE Council) is composed of elected members of the faculty of the College of Education. CBP recommendations are forwarded to the COE Council for its review. Positive recommendations are forwarded through the dean of the College of Education to the Office of the Provost and Vice President for Academic Affairs for further review and approval.

All matters related to the advanced preparation of teachers and related to the preparation of all other types of educational personnel (e.g., principals, counselors) are processed through the committee on advanced programs and the COE Council determinations are forwarded through the dean of the College of Education to the office of the Provost/Vice President for Academic Affairs.

Central Institutional Structures
An item approved by the College of Education Council and also approved by the dean of the College of Education is transmitted to the Office of the Provost and Vice President for Academic Affairs. From there, the routing to obtain closure on the item, depending on the nature of the item, might be to one or more of several different entities, including the Faculty Council, the Graduate School, the Board of Regents, etc. The policies, procedures, minutes, etc. of these various structures are available through the executive officer of the body or the relevant Eastern Michigan University administrator.

GENERAL INFORMATION APPLICABLE TO ALL PROSPECTIVE TEACHERS

Eastern Michigan University is authorized and approved by the Michigan Department of Education and accredited by the National Council for Accreditation of Teacher Education to prepare the following types of teachers. Successful completion of the appropriate program of studies leads to a recommendation for the Michigan provisional certificate.

Elementary
Several approaches for establishing eligibility for recommendation for certification as an elementary teacher are offered. One approach includes the course work necessary for eligibility for the additional early childhood education endorsement. See the curricula in both elementary and early childhood education.

Secondary and K-12
Programming is offered to establish eligibility for recommendation for certification as a secondary teacher in the following major fields: biology, business education, business education (business, management, marketing and technology), chemistry, computer science, earth science, economics, English, French, geography, German, history, marketing education, mathematics, physics, political science, psychology, social studies, sociology, Spanish and speech (communication). Preparation through a minor is available in several additional fields. See the curricula for these secondary programs.

Programming is offered to establish eligibility for recommendation for certification as a K-12 teacher in the following fields: Japanese language and culture, music (instrumental), music (vocal), physical education, technology, and design and visual arts education. See the curricula for these K-12 programs.

Special Education
In general, one must complete requirements for becoming an elementary or secondary teacher prior to or simultaneously with completing additional requirements for becoming a special education teacher. At the baccalaureate level, EMU prepares special education teachers in the areas of emotional impairment, hearing impairment, cognitive impairment, physical and other health impairment, and visual impairment. The speech and language pathology program is a five-year course of study that culminates in a master's degree. The learning disabilities program is a graduate level program only. See the curricula for these special education programs.

Endorsements
One may become eligible to become endorsed in a second (or third or fourth) teaching field. In addition to the teaching fields given above, course work leading to eligibility for recommendation for certification endorsement is available in such fields as bilingual Spanish, health and vocational business education.

Employment Opportunities
The demand for certain kinds of teachers is much greater in Michigan and nationally, than it is for other kinds of teachers. In addition, it is sometimes difficult to place student teachers in certain teaching fields. Accordingly, prospective teachers are urged to consult with an advisor at an early point so as to optimize ultimate employment opportunities through careful selection of course of study.

Education Honor Society
Kappa Delta Pi, International Honor Society in Education, has been in existence since 1911. Pi Chapter, the chapter at Eastern Michigan University, was established at Michigan State Normal School on June 20, 1922. It has operated continuously since that date, the 16th chapter chartered out of more than 600 in the world. In 1999, Pi Chapter was recognized as an "ACE" (Achieving Chapter Excellence) chapter. Among the activities of Pi Chapter are the following:

- Assisting with the care and welfare of the Town Hall School, the 1895 one-room schoolhouse
- Adoption of Bellevue Elementary School in Detroit

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Continuing Certification

The Michigan provisional teaching certificate earned in teacher preparation programs is good for six years. In order to maintain a valid teaching credential, teachers must continue their studies toward a professional certificate. A minimum of 10 credit hours must be earned during the first six years in order to renew a Provisional Certificate. The College of Education Office of Academic Services is responsible for assisting certified Michigan teachers in maintaining and updating their teaching credentials with the state of Michigan. The Office of Academic Services (206 Porter, 734.487.0275) can help licensed Michigan teachers renew a provisional certificate, add endorsements or apply for the professional certificate. The office is unable to process applications for certification outside Michigan.

Current teacher licensing information for each licensed teacher in Michigan can be found at http://meis.mde.state.mi.us/teachcert/tg_teacert.asp.

First Renewal Certificate Requirements (good for three years)
1. Ten credit hours after the issuance of Michigan provisional certificate or a master's degree in a field related to teaching from Eastern Michigan University. Coursework must support major/minor subject areas already existing on the certificate, or endorsement areas to be added to an existing certificate. (Six credits are required from Eastern Michigan University and four credits may be transferred if approved by the certification coordinator. No community college credits will be accepted.)
2. Photocopy of latest Michigan certificate (front side only).
3. Photocopy of graduate transcripts, only if credit is from another college or university. Please do not send original transcripts to the Office of Academic Services.

Second Renewal Certificate Requirements (good for three years)
1. Completion of the entire 18 credit hours after the issuance of the Michigan provisional certificate or a master's degree in a field related to teaching from Eastern Michigan University. Coursework must support major/minor subject areas already existing on the certificate, or endorsement areas to be added to an existing certificate. (Twelve credits must be taken at Eastern Michigan University and six credits may be transferred if approved by the certification coordinator. No community college credits will be accepted.)
2. Photocopy of latest Michigan certificate (front side only).
3. Photocopy of graduate transcripts, only if credit is from another college or university. Please do not send original transcripts to the Office of Academic Services.

Professional Certificate Requirements
1. Three years of teaching (150 days per year, 450 days total).

2. Completion of the entire 18 credit hours after the issuance of the Michigan provisional certificate or a master's degree in a field related to teaching from Eastern Michigan University. Coursework must support major/minor subject areas already existing on the certificate. (Twelve credits must be taken at Eastern Michigan University and six credits may be transferred if approved by the certification coordinator. No community college credits will be accepted.) To meet state Reading requirements for the professional certificate, six hours of Reading courses for elementary or three hours for secondary must be passed on your transcripts.
3. Photocopy of latest Michigan certificate (front side only).
4. Photocopy of transcripts, only if credit is from another college or university. Please do not send original transcripts to the Office of Academic Services.
5. Recommendation form completed by appropriate school district representative. After the professional certificate has been issued the teacher must complete either six credit hours or 18 hours of CEUs that have been approved in advance by the Michigan Department of Education. Contact the Michigan Department of Education (Marleen Higbee) by phone, 517.373.3310, or fax, 517.373.0542, to obtain an application to renew Professional Certificates.

Eastern Michigan University does not process renewals of Professional Certificates. Professional renewals are handled by contacting the Michigan Department of Education directly (517.373.3310).

Adding Endorsements
Endorsements are available in various subject areas. These endorsements require coursework, and typically, the appropriate subject area test from the Michigan Test for Teacher Certification. The first step in this process is to meet with a department advisor who can write a program of study for the subject area you would like to add. Upon completion of the coursework and test(s), each candidate must present the following documents to the College of Education Office of Academic Services:

1. Photocopy of test scores for the endorsement area to be added.
2. Photocopy of latest Michigan certificate (front side only).
3. Photocopy of transcripts, only if credit is from another college or university. Please do not send original transcripts to the Office of Academic Services.
4. Signed approval form from appropriate Eastern Michigan University department, if needed.

The Michigan Department of Education will bill each candidate for the renewal, professional certificate, or endorsement. Do not send any money to the Office of Academic Services.

Admission
Students interested in pursuing coursework toward continuing certification should apply for Graduate School admission as "non-degree" students. This requires an application, application fees and undergraduate transcripts (401 Porter, 734.487.3060).

ADMISSION TO AND RETENTION IN THE TEACHER CERTIFICATION PROGRAM

In order to pursue the sequence of courses necessary to complete eligibility for recommendation for certification, one must apply for and be admitted to the teacher certification program. Admission requirements are common for all teacher certification programs, except that certain special education programs have additional requirements.

Application for admission to the teacher certification program should occur immediately after the semester in which the student has earned 56 credit hours. Transfer students with more than 56 credit hours should apply immediately after the semester in which they have earned 12 hours at EMU, including at least one course in their major.

Admission to the teacher certification program is not automatic. Only those persons who have formally applied are considered for admission. Not all persons who apply become eligible for admission.
**Secondary (Middle-High School)**

- **English Language Development**
- **Spanish Language Development**
- **Special Education**
- **English Learner Program**
- **Middle School Counseling**
- **High School Counseling**

**Elementary and Early Childhood**

- **Pre-K-2 Programs**
- **English Language Development**
- **Spanish Language Development**
- **Special Education**
- **English Learner Program**
- **Middle School Counseling**
- **High School Counseling**

*Information on academic information may be found online.*
Special Education Programs

College of Education Information | Pages 169-177

Approved Programs for Secondary (Middle-High School) and K-12 Teachers

• Spanish
• Special Education

K-12 Requirements

- Choose 1 from each category (Math/English) and 2 from each category (Social Studies, Science, ECSE, ESL)

Prerequisites

- Completion of SPED 191 and SPED 201

Program Objectives

- To prepare students to become effective educators in the field of special education
- To develop students' skills in the area of special education
- To provide students with a strong foundation in the principles of special education

Admission Requirements

- Completion of SPED 101 and SPED 102

Elective Offerings

- French
- Geometry
- Algebra
- English
- Social Studies
- Science
- Health

Campus Services

- Counseling Services
- Career Services
- Library Services
- Information Resources

Admission Information

- For more information on admission requirements, please contact the Special Education Department.
To be allowed to continue in the speech-language pathology program, the student must meet the following:

1. Maintenance of a cumulative overall GPA of 2.75 or better.
2. Maintenance of a cumulative major GPA of 3.0 or better.
3. Completion of all major academic courses with a grade of C- or better. Courses in which a grade of C- or lower is achieved must be repeated and may be repeated only once. A student must re-take the course in which the lowest grade was received. No more than one course may be repeated. Students will not be allowed to enroll in courses at the management level or beyond until this requirement is met. Students must remain in their planned tracks if they are required to repeat. This implies ineligibility to take advanced SLP courses for one or two terms.
4. Completion of all major clinical courses with a grade of C- or better. Clinical courses in which a grade of C- or lower is achieved must be repeated before the student is allowed to continue with the next level of courses and may be repeated only once.
5. Demonstration of behaviors which indicate reasonable stability, maturity, understanding and aptitude as judged necessary for predicted success as a speech-language pathologist. Such judgemental evaluations will be made by the SLP faculty.
6. Students on academic probation will not be allowed to enroll in major courses until the probation is lifted and their overall GPA is 2.75.

**Termination from the Program**

Students who fail to comply with the continuation criteria stated above will be notified of their termination from the program. Students so notified have the right to appeal such termination through normal University channels. In some cases, a student will be required to meet with the full faculty for discussion of academic performance and continuation in the program.

**General Information**

Fieldwork in both general and special education is required. Pre-student teaching experiences are required of all candidates pursuing a teaching certificate (see Pre-student Teaching). Majors in special education are required to complete practicums or pre-clinical experiences in addition to those required for teacher certification and should consult with their advisors regarding specific requirements within their designated areas of special education.

Student teaching in either elementary or secondary education must be successfully completed prior to the special student teaching placement. Special student teaching assignments are arranged and approved by the department upon the recommendation of the faculty within the designated area of special education.

**Certification — Special Education**

Certification in either elementary or secondary (regular) education is required for all programs of study in special education except speech and language impaired (see SLP program description). Successful completion of any program of study leads to a K-12 special education endorsement when students pass the relevant state certification test.

The professional entry-level credential in speech-language pathology (speech and language impaired) is the master's degree. Students who are awarded the bachelor's degree in speech-language pathology at Eastern Michigan University are expected to apply for admission to graduate degree programs. Those applying to the graduate speech-language pathology program at Eastern Michigan University will compete with other applicants for admission.

Each of the programs of study in special education meets or exceeds minimum course, experience, or competency requirements established by the Michigan State Board of Education for that endorsement area. However, meeting Michigan teaching certification and endorsement requirements does not necessarily meet requirements for teacher certification or endorsement in other states. All special education programs of study are recognized and approved for accreditation by the International Council for Exceptional Children.

The hearing impaired and speech and language impaired programs also are certified by national professional associations. The American Speech-Language-Hearing Association issues Certificates of Clinical Competence to individuals who present satisfactory evidence of their ability to provide independent clinical services to persons who have disorders of communication (speech, language, and/or hearing). An individual who meets these requirements may be awarded a Certificate of Clinical Competence in Speech Pathology. Specific requirements may be obtained from the advisors in speech and language impairment.

Public certification is provided by the Council on Education of the Deaf to eligible majors in the hearing impaired program. Specific requirements may be obtained from advisors in this area.

**Teaching Minor Methods Courses for Special Education/Secondary Programs**

- Bilingual-Bilingual Education Spanish-English FLAN422 (3 hrs)
- Biology: BIO1403 (3 hrs)
- Chemistry: PHY325 (3 hrs)
- Communication Minor for Elementary Special Education Students CTAC307 (3 hrs)
- Computer Science: COSC346 (3 hrs)
- Earth Science: ESSC347 (3 hrs)
- Language, Literature and Writing: ENGL400 (3 hrs)
- Foreign Language: FLAN411 (3 hrs)
- German: FLAN411 (3 hrs)
- Health: HLED325 (3 hrs)
- History: HIST481 (3 hrs)
- Mathematics: MATH306 (3 hrs)
- Physical Education: PHED415 (3 hrs)
- Special Education for Special Education Major (available only to special education majors): PHED415 (3 hrs)
- Physics: PHY325 (3 hrs)
- Spanish Language: FLAN411 (3 hrs)

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**PRE-STUDENT TEACHING FIELD EXPERIENCES**

**Departmental Administration**

Field Experience Coordinator
313 Porter
734.487.7210 ext. 2502 or 734.487.3560

Barbara Gerein
206 Porter
734.487.1416

The pre-student teaching field experiences require prospective teachers to work with children or youth in classroom settings. They are designed to help prospective teachers evaluate their own abilities as teachers and to affirm their decision about choosing teaching as a career. They also enable prospective teachers to understand how the professional education courses in human development and learning, social aspects of teaching and curriculum and methods relate to the classroom.

A minimum of 100 clock hours of approved pre-student teaching field experiences is required of all candidates for a recommendation for a teaching certificate. See the program descriptions for the exact requirement in each program. At least 30 percent of the experience must be in a classroom situation with the age group and (in the case of secondary/ K-12) in the subject matter area the student plans to teach. Students in elementary and secondary programs complete 60 pre-student teaching hours in PTE4 (Field Experiences in Teacher Education) courses. Students should make sure that their pre-student teaching field experiences include opportunities to work with students from different socio-economic levels and cultures.

By the end of the pre-student teaching field experience, the student should be able to:

1. Discuss the ways in which schools and communities impact student learning.
2. Describe and reflect upon teaching/learning activities in a variety of settings.
3. Plan, carry out and assess a series of learning activities for an individual student or group of students.
4. Describe and reflect upon a variety of classroom environments and how they affect student learning.
5. Make a valid decision concerning teaching as a career.

Most students will complete approximately 60 of their 100 pre-student teaching hours through required Field Experiences in Teacher Education (FETE) courses. Students who complete all three FETE courses are not required to complete an additional pre-student teaching coursepack. Majors in special education should consult their advisors or the pre-student teaching director concerning overlapping preclinical requirements.

**STUDENT TEACHING**

**Departmental Administration**
Barbara Goreatto, Director
206 Porter
734.487.1416
E-mail: bgoreatto@emich.edu

See page 280 for student teaching course descriptions.

**Applicability**
All candidates for recommendation for certification as a teacher are required to fulfill a student teaching requirement in the area of their academic preparation and at the level for which certification is being sought.

Students desiring certification in the elementary, secondary and K-12 programs are required to complete successfully 12 credit hours of student teaching.

Students in special education areas (emotional impairment, hearing impairment, cognitive impairment, physical and health impairment and visual impairment) are required to fulfill six credit hours of student teaching with nonimpaired children and an additional 10 credit hours of student teaching in their area of specialization.

Students desiring certification in bilingual education are required to fulfill eight credit hours of student teaching with English-speaking children and an additional four credit hours of student teaching in bilingual education.

**Application Deadlines**
Applications for student teaching may be obtained from www.emich.edu/coe/oa/app.html, and should be completed and returned to 206 Porter in accordance with the following schedule:

- **Fall student teaching:**
  - Previous January 15
  - (for certified teachers only)

- **Summer student teaching:**
  - Previous January 15

- **Winter student teaching:**
  - Previous June 15

- **Spring student teaching:**
  - Previous January 15
  - (for certified teachers only)

Applications for student teaching will be accepted after the deadline; however, placement priority is given to those students who file in accordance with the deadline dates and it is rarely possible to provide placements for those who apply late.

**Eligibility for Student Teaching**
To qualify for a student teaching placement, students must satisfy the following criteria:

1. Fulfill the requirements of the pre-student teaching field experience.
2. Demonstrate minimum levels of skills in reading, written English and mathematics as defined and measured by the state-mandated basic skills test.
3. Demonstrate competence in the teaching field(s) through a satisfactory score on state-mandated subject area test(s), if required by the state.
4. Provide written recommendations from course instructors and field supervisors demonstrating a minimum level of skill in working with students. These become a part of the student teacher’s file.
5. Have a positive recommendation from the designated representative of the department in which the major is located.
6. Register in the appropriate student teaching course (see course descriptions).
7. Be a first semester senior with the majority of major courses completed.
8. Carry a class load of no more than 15 credit hours. To be considered for more than 15 credit hours, the student must have a 3.0 cumulative GPA.
9. Complete one semester of resident study at EMU prior to student teaching. Exceptions are subject to approval by the dean of the College of Education or the Dean’s designee.

The following prerequisites are to be completed prior to student teaching and cannot be taken concurrently:

1. CURR304 Curriculum and Methods Elementary (Elementary) or CURR305 Curriculum and Methods Secondary (Secondary) and K-12;
2. EDPS332 Human Development and Learning (all except Special Education) or EDPS335 Life Span Human Growth and Development (Special Education);
3. SOED332 Schools in a Multicultural Society;
4. Any of the following courses that are required in the program of study: EDPS340 Introduction to Assessment and Evaluation, ECED341 Assessment of the Young Child, SPGN310 Measurement and Diagnosis in Special Education, PHED347 Assessment and Evaluation in Physical Education;
5. Secondary and K-12: the appropriate special methods course in the major or minor field;
7. Early childhood education: ECED302 Methods of Integrating Curriculum and Resources in EC and ECED303 Implementing the Curriculum in EC;
8. All state-mandated tests.

No student shall be assigned to student teaching whose GPA is less than 2.5 in work completed at Eastern Michigan University or less than 2.5 in the teaching major (including courses completed at other colleges if applicable). No student shall be assigned to student teaching who has received a grade lower than C or an unresolved F in any professional education course. Students enrolled in the elementary education program, if taking the three minor option, must attain a combined minimum GPA of 2.5 in the three teaching minors.

**Placements**
Students who meet all eligibility requirements at the time of application for student teaching will receive priority in placement. Placement during the requested semester can not be guaranteed for those who do not qualify at the time of application.

Students may not arrange their own student teaching assignments. Prior arrangement will not be honored by the College of Education Office of Academic Services. Placement could be delayed a full semester in these cases.

A preferred student teaching placement will be accommodated by the College of Education Office of Academic Services if possible. In requesting placement in a particular school district, the student is advised to avoid the following districts in which a parent or other relative is employed by the district board of education: districts in which the student has a record of significant prior involvement; and districts that are outside of the list of the student teaching agreements.

The director of student teaching must approve all placements outside the list of Eastern Michigan University cooperating districts. A request for a guest student teaching must be approved by the Office of Records and Teacher Certification and the director of student teaching and must be at an NCATE (National Council for Accreditation of Teacher Education) accredited institution. Guest status at another university requires a 3.0 University GPA.
A Post-Baccalaureate Certificate or a Master's degree in education is required for the following positions:

- Special Education Teacher
- School Principal
- Instructional Coordinator
- School Counselor
- School Psychologist
- School Social Worker
- School Librarian
- School Administrator
- School Nurse
- School Bus Driver
- School Janitor

Programs

Post-Baccalaureate Certification

- Special Education Certification
- School Counseling Certification
- School Administration Certification
- School Social Work Certification
- School Librarian Certification
- School Nurse Certification
- School Bus Driver Certification
- School Janitor Certification
- School Administrator Certification

Courses required for the above certifications include:

- EDU 201: Introduction to Special Education
- EDU 202: Special Education Law
- EDU 203: Special Education Assessment
- EDU 204: Special Education Intervention
- EDU 205: Special Education Technology
- EDU 206: Special Education Policy
- EDU 207: Special Education Research
- EDU 208: Special Education Ethics
- EDU 209: Special Education Administration
- EDU 210: Special Education Field Experience

Courses required for the above certifications include:

- EDU 211: School Counseling Theory and Practice
- EDU 212: School Counseling Assessment
- EDU 213: School Counseling Intervention
- EDU 214: School Counseling Technology
- EDU 215: School Counseling Policy
- EDU 216: School Counseling Research
- EDU 217: School Counseling Ethics
- EDU 218: School Counseling Administration
- EDU 219: School Counseling Field Experience
- EDU 220: School Counseling Internship

Courses required for the above certifications include:

- EDU 221: School Administration Theory and Practice
- EDU 222: School Administration Assessment
- EDU 223: School Administration Intervention
- EDU 224: School Administration Technology
- EDU 225: School Administration Policy
- EDU 226: School Administration Research
- EDU 227: School Administration Ethics
- EDU 228: School Administration Administration
- EDU 229: School Administration Field Experience
- EDU 230: School Administration Internship
Admission

Admission requirements to the University, teacher education and the Department of Special Education must be met by students intending to major in the programs listed below. However, students should indicate their intention to major in special education upon entrance to the University. Formal application for admission to any of the special education programs of study will be considered only when supported by a recommendation from a faculty member in the Department of Special Education and following acceptance into the teacher education program. Departmental faculty determine admissions.

Admission Criteria

(For all programs except speech and language impairment)

1. Completion of 36 credit hours and an EMU GPA of 2.5 or better.
2. Completion of SPGNC251 Education of Students with Exceptionalities and the introductory course in the major area of study with a grade of C or better. These introductory courses are:
   a. Emotional Impairment: SPED240 and SPED301
   b. Hearing Impairment: see statement under Teachers of Students with Hearing Impairment
   c. Cognitive Impairment: SPED240 and SPED350
   d. Physical Impairment and Health Impairment: SPED240 and SPED310
3. Successful completion of the state-mandated basic skills test.
4. Submission of a formal application for admission to the Department of Special Education supported by recommendation from a faculty member in the department.

Admission Criteria (Speech and Language Impairment)

The following criteria must be met before admission to the undergraduate program is granted:

1. Must complete 35 to 45 credit hours with a minimum GPA of 2.5.
2. Must have taken the Basic Skills Test, which assesses math, reading comprehension, grammar and writing skills. Must achieve or surpass the score established by the College of Education.

Continuance Criteria (All Programs)

Criteria for continuance in a program of study in the Department of Special Education is dependent upon:

1. Maintenance of a 2.5 GPA.
2. Maintenance of a 2.5 GPA in major courses in program of study.
3. Completion of all courses in the major with a grade of C or better. Students will be required to retake any major course in which they earn a grade below C. A major course may be repeated only once.
4. Demonstration of performance that indicates reasonable aptitude, maturity, stability, skill and understanding necessary for success in the professional field of special education.

The continuance or termination decision will be made by the faculty in the program area. Students may request a meeting with the faculty of a program area to apprise faculty of any extenuating circumstances that may aid faculty in arriving at a fair and equitable decision. The faculty decision will be final and will be transmitted to the student by writing by the department head.

Nothing in this department's procedures will negate University or College of Education action for students on academic, administrative or social probation.

Additional Continuance Criteria (Speech and Language Impairment)

To be allowed to continue in the speech-language pathology program, the student must meet the following criteria:

1. Maintenance of a cumulative overall GPA of 2.5 or better.
2. Maintenance of a cumulative major GPA of 2.5 or better.
3. Demonstration of behaviors which indicate reasonable stability, maturity, understanding and aptitude as judged necessary for predicted success as a speech-language pathologist. Such qualitative judgements will be made by the SLP faculty.
4. Students on academic probation will not be allowed to enroll in major courses until the probation is lifted and their overall GPA is 2.5.
5. Must pass a speech and hearing screening.

Termination from the Department

Students who fail to comply with the continuation criteria stated above will be notified in writing of their termination from the program. Students so notified have the right to appeal such termination through normal University channels. In some cases, a student will be required to meet with the full faculty for discussion of academic performance and continuation in the program.

General Information

Fieldwork in both general and special education is required. Pre- student teaching experiences are required of all candidates pursuing a teaching certificate (see Pre-Student Teaching on page 174). Majors in special education are required to complete practicums or pre-clinical experiences in addition to those required for teacher certification and should consult with their advisors regarding specific requirements within their designated areas of special education.

Students teaching in either elementary or secondary education must be successfully completed prior to special education student teaching placement. Special education student teaching assignments are arranged and approved by the department upon the recommendation of the faculty within the designated area of special education.

Teacher Certification and Special Education Endorsement

All program majors earn a provisional teaching certificate in elementary or secondary education. Additionally, successful completion of a major in special education results in the achievement of an endorsement as a teacher of students with a given disability. Majors in speech and language impairment choose between teacher certification or a health care specialty.

The professional entry-level credential in speech-language pathology (speech and language impaired) is the master's degree. Students who are awarded the bachelor's degree in speech-language pathology at Eastern Michigan University are expected to apply for admission to graduate degree programs. Those graduates of the bachelor's degree program at Eastern Michigan University who wish to pursue a master's degree in speech-language pathology should contact the College of Education for additional information.

Each of the programs of study in special education meets or exceeds minimum course, experience or competency requirements established by the Michigan State Board of Education for that endorsement area. However, meeting Michigan teaching certification and endorsement requirements does not necessarily meet requirements for teacher certification or endorsement in other states. All special education programs of study are recognized and approved for accreditation by the International Council for Exceptional Children.

The hearing impaired and speech and language impaired programs also are certified by national professional associations. The American Speech-Language-Hearing Association (ASHA) accredits the department's program in speech and language impairment and The Council of Education of the Deaf (CED) accredits the department's program in hearing impairment.

EMOTIONAL IMPAIRMENT MAJOR
(EMOT)

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation to the Michigan Department of Education for K-12 endorsement as a teacher of students with emotional impairment. This program of study meets all requirements of the Council for Exceptional Children. The Michigan Test for
Teacher Certification (MTTC) covering this field is #59, "Emotional Impairment." Students select Secondary or Elementary Teacher Certification. A minor from the respective approved lists is required in either instance and students must pass the certification test, related to the minor in order to be recommended for endorsement in the minor field. In addition, those selecting Elementary Certification must pass the “Elementary Education” certification test, #83, as well.

Elementary Teacher Certification and Endorsement in Emotional Impairment

General Education Requirements .......... 47 hours

* Area I Symbolics and Communication
  1. See page 24
  2. CTAS121 Fundamentals of Speech (2 hrs)
  3. ENGL313 Writing in the Professional World (3 hrs)
  4. MATH109 Mathematics for Elementary Teachers II (3 hrs)
  5. COSC101 Computer Science Concepts and Practical Applications (3 hrs)

* Area II Science and Technology
  1. See page 24
  2. PSY101 General Psychology (3 hrs)
  3. See page 24

* Area III Social Sciences
  1. See page 24
  2. See page 24
  3. SOCL105 Introductory Sociology (3 hrs)
  4. SOCL202 Social Problems (3 hrs)

* Area IV Arts and Humanities
  1. See page 25
  2. One course from the following:
     LITR204 Native American Literature (3 hrs)
     LITR260 African American Literature (3 hrs)
     FLAN215 The Culture of Mexican-Americans and Cubans in the United States (3 hrs)
  3. See page 25
  4. One course from the following:
     ART101 Art Integration for the Elementary Teacher (4 hrs)
     MUSC104 Elements of Music (2 hrs)

Physical Education/Graduation Requirement .................. 2 hours

PEGN210 Lifetime Wellness and Fitness (2 hrs)

Teacher of Students with Emotional Impairment Endorsement: 41 hours

SPGN251 Education of Students with Exceptionalities (3 hrs)
SPCH257 Physical Education for the Classroom Teacher (2 hrs)
SPGN271 Speech and Language Development in Children, Adolescents, and Young Adults with Exceptional Learning Needs (2 hrs)
SPGN390 Measurement and Diagnosis in Special Education (3 hrs)
SPGN395 Children, Adolescents, and Young Adults with Disabilities: School, Family, and Community Interaction (3 hrs)
SPGN461 Classroom Management and Intervention Strategies for Students with Disabilities (3 hrs)
SPGN481 Assistive Technology in Special Education (2 hrs)
SPGN490 Student Teaching Seminar—Special Education (2 hrs)
SPED380 Pre-clinical Experiences—Emotional Impairment (3 hrs)
SPED403 Children and Adolescents with Emotional Impairment (3 hrs)
SPSY630 Abnormal Psychology (3 hrs)
SPED401 Curriculum, Methods and Programming for Elementary Students with Emotional Impairment (4 hrs)
SPED409 Seminar: Current Topics in Emotional Impairment (2 hrs)
SPED480 Curriculum, Methods and Programming for Secondary Students with Emotional Impairment (4 hrs)
SPED488 Curriculum, Methods and Programming for High School Students with Learning Disabilities (2 hrs)

Professional Studies .................................................. 36 hours

Pre-admission phase: The Learner and the Community (4 hrs)
EDPS325 Lifespan Human Growth and Development (4 hrs)

Phase I: Technology, Diversity and Teaching Environments (may be taken with Phase II courses)
  1. SEDS328 Schools in a Multicultural Society (3 hrs)

Phase II: Curriculum and Assessment (may be taken with Phase I courses)
  1. CURR304 Curriculum and Methods: Elementary (3 hrs)

Phase III: Methods and Technology (may be taken with Phase IV courses)
  1. MATH381 The Teaching of Mathematics, K-6 (3 hrs)
  2. EDMD354 Media for the Classroom Teacher (1 hr)

Phase IV: Literacy, Culture and the Arts (may be taken with Phase III courses)
  1. RDNG300 Early Literacy (3 hrs)
  2. RDNG310 Literacy Across the Curriculum in the Intermediate Grades (3 hrs)

Phase V: Capstone Experience ....................................... 16 hours

EDUC499 Student Teaching (6 hrs)
EDUC491 Student Teaching (10 hrs)

Minor Requirements ................................................... 10-20 hours

Select a minor from the approved list of elementary minors for special education majors.

Program Total ........................................................... 136 hours

Note:
* This course satisfies both a general education and a major requirement.
* Admission to teacher education required.

Secondary Teacher Certification and Endorsement in Emotional Impairment

General Education Requirements .......... 47 hours

* Area I Symbolics and Communication
  1. See page 23
  2. CTAS121 Fundamentals of Speech (2 hrs)
  3. ENGL313 Writing in the Professional World (3 hrs)
  4. See page 23
  5. COSC101 Computer Science Concepts and Practical Applications (3 hrs)

* Area II Science and Technology
  1. See page 24
  2. PSY101 General Psychology (3 hrs)
  3. See page 24

* Area III Social Sciences
  1. See page 24
  2. See page 24
  3. SOCL105 Introductory Sociology (3 hrs)
  4. SOCL202 Social Problems (3 hrs)

* Area IV Arts and Humanities
  1. See page 25
  2. One course from the following:
     LITR204 Native American Literature (3 hrs)
     LITR260 African American Literature (3 hrs)
     FLAN215 The Culture of Mexican-American and Cuban in the United States (3 hrs)
  3. See page 25
  4. See page 25

Physical Education/Graduation Requirement .................. 2 hours

PEGN210 Lifetime Wellness and Fitness (2 hrs)

Teacher of Students with Emotional Impairment Endorsement: 43 hours

SPGN251 Education of Students with Exceptionalities (3 hrs)
SPGN271 Speech and Language Development in Children, Adolescents, and Young Adults with Exceptional Learning Needs (2 hrs)
SPGN390 Measurement and Diagnosis in Special Education (3 hrs)
SPGN395 Children, Adolescents, and Young Adults with Disabilities: School, Family, and Community Interaction (3 hrs)
HEARING IMPAIRMENT MAJOR (HEAR)

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation to the Michigan Department of Education for K-12 endorsement as a Teacher of Students with Hearing Impairment. This program of study meets all requirements of the Council for Exceptional Children. The Michigan Test for Teacher Certification (MTTC) covering this field is #62, "Hearing Impairment." Students select Secondary or Elementary Teacher Certification. A minor from the respective approved list is required in either instance and students must pass the certification test, related to the minor in order to be recommended for endorsement in the minor field. In addition, those selecting Elementary Certification must pass the "Elementary Education" certification test, #83, as well.

Registration for the first course in the hearing impaired sequence (SPH1228) is by permission only. If there is greater demand for enrollment than availability of places in the class, program faculty will determine who receives permission. Grade point average will be the primary criterion. It is essential to see an advisor in hearing impairment in order to begin the program sequence.

All students are considered provisional majors until such time as they successfully complete SPH199. The basic philosophy of the program is oral communication; however, students are exposed to manual communication during their course of study.

Elementary Teacher Certification and Endorsement in Hearing Impairment

General Education Requirements ........................................... 47 hours

Area I Symbolic and Communication
1. See page 23

2. CTA121 Fundamentals of Speech (2 hrs)
3. ENGL129 Writing in the Professional World (3 hrs)
4. MATH110 Mathematics for Elementary Teachers I (3 hrs)
5. COSC101 Computer Science Concepts and Practical Applications (3 hrs)

Area II Science and Technology
1. See page 24
2. PSY101 General Psychology (3 hrs)
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

One course from the following:
ART300 Art Integration for the Elementary Teacher (4 hrs)
MUSC104 Elements of Music (2 hrs)

Physical Education/Graduation Requirement ................................2 hours
PEGN210 Lifetime Wellness and Fitness (2 hrs)

Teachers of Students with Hearing Impairment Endorsement .......... 48 hours
SPHED257 Physical Education for Classroom Teacher (2 hrs)
SPHED350 Measurement and Diagnosis in Special Education (3 hrs)
SPHED359 Children, Adolescents, and Young Adults with Disabilities: School, Family and Community Interaction (3 hrs)
SPHED451 Classroom Management and Intervention Strategies for Students with Disabilities (3 hrs)
SPHED454 Assistive Technology in Special Education (2 hrs)
SPHED485 Curriculum, Programs and Services for Adolescents and Young Adults with Disabilities (2 hrs)
SPHED486 Transition and Related Field Experiences: Adolescents and Young Adults with Disabilities (2 hrs)
SPHED491 Student Teaching Seminar - Special Education (2 hrs)
SPHED494 Education of Students with Hearing Impairment (3 hrs)
SPHED337 Language Acquisition (3 hrs)
SPHED362 Fundamentals of Sign Communication (2 hrs)
SPHED367 Introductory Praxis - Students with Hearing Impairment (1 hr)
SPHED391 Language for Students with Hearing Impairment (3 hrs)
SPHED392 Introduction to Audiology (3 hrs)
SPHED494 Aural Habilitation/Rehabilitation (3 hrs)
SPHED435 Phonetics and Hearing Impairment (2 hrs)
SPHED436 Speech Methods for Students with Hearing Impairment (2 hrs)
SPHED437 Adaptive Curriculum for Students with Hearing Impairment (3 hrs)
SPHED487 Speech Praxis - Students with Hearing Impairment (1 hr)

Professional Studies ......................................................... 36 hours

Pre-admission phase: The Learner and the Community (4 hrs)
SPHED257 Physical Education for the Classroom Teacher (2 hrs)
SPHED350 Measurement and Diagnosis in Special Education (3 hrs)
SPHED359 Children, Adolescents, and Young Adults with Disabilities: School, Family and Community Interaction (3 hrs)
SPHED451 Classroom Management and Intervention Strategies for Students with Disabilities (3 hrs)
SPHED454 Assistive Technology in Special Education (2 hrs)
SPHED485 Curriculum, Programs and Services for Adolescents and Young Adults with Disabilities (2 hrs)
SPHED486 Transition and Related Field Experiences: Adolescents and Young Adults with Disabilities (2 hrs)
SPHED491 Student Teaching Seminar - Special Education (2 hrs)
SPHED494 Education of Students with Hearing Impairment (3 hrs)
SPHED337 Language Acquisition (3 hrs)
SPHED362 Fundamentals of Sign Communication (2 hrs)
SPHED367 Introductory Praxis - Students with Hearing Impairment (1 hr)
SPHED391 Language for Students with Hearing Impairment (3 hrs)
SPHED392 Introduction to Audiology (3 hrs)
SPHED494 Aural Habilitation/Rehabilitation (3 hrs)
SPHED435 Phonetics and Hearing Impairment (2 hrs)
SPHED436 Speech Methods for Students with Hearing Impairment (2 hrs)
SPHED437 Adaptive Curriculum for Students with Hearing Impairment (3 hrs)
SPHED487 Speech Praxis - Students with Hearing Impairment (1 hr)

EDMD300 Early Literacy (3 hrs)
RDNG310 Literacy Across the Curriculum in the Intermediate Grades (3 hrs)

**Phase V: Capstone Experience**
- EDC409 Student Teaching (6 hrs)
- EDC491 Student Teaching (10 hrs)

**Minor Requirements** 8-20 hrs
- Select a minor from the approved list of elementary minors for special education majors.

**Program Total** 141 hours

*Note:*
- This course satisfies both a general education and a major requirement.
- Admission to teacher education required.

### Secondary Teacher Certification and Endorsement in Hearing Impairment

**General Education Requirements** 47 hours

- **Area I: Symbolics and Communication**
  1. See page 23
  2. CTAS121 Fundamentals of Speech (2 hrs)
  3. ENGL123 Writing in the Professional World (3 hrs)
  4. See page 23
  5. COSC101 Computer Science Concepts and Practical Applications (3 hrs)

- **Area II: Science and Technology**
  1. See page 24
  2. PSY101 General Psychology (3 hrs)
  3. See page 24

- **Area III: Social Sciences**
  1. See page 24
  2. See page 24
  3. See page 24
  4. See page 24

- **Area IV: Arts and Humanities**
  1. See page 25
  2. See page 25
  3. See page 25
  4. See page 25

**Physical Education/Graduation Requirement** 2 hours

- PEGN210 Lifetime Wellness and Fitness (2 hrs)

**Teachers of Students with Hearing Impairment Endorsement** 51 hours

- SPN251 Education of Students with Exceptionalities (3 hrs)
- PHED257 Physical Education for the Classroom Teacher (2 hrs)
- SPN300 Measurement and Diagnosis in Special Education (3 hrs)
- SPN395 Children, Adolescents, and Young Adults with Disabilities: School, Family, and Community Interaction (3 hrs)
- SPN461 Classroom Management and Intervention Strategies for Students with Disabilities (3 hrs)
- SPN481 Assistive Technology in Special Education (2 hrs)
- SPN485 Curriculum, Programs and Services for Adolescents and Young Adults with Disabilities (2 hrs)
- SPN486 Transition and Related Field Experience: Adolescents and Young Adults with Disabilities (2 hrs)
- SPN491 Student Teaching Seminar - Special Education (2 hrs)
- SPH1228 Education of Students with Hearing Impairment (2 hrs)
- SPH337 Language Acquisition (3 hrs)
- SPH435 Fundamentals of Sign Communication (2 hrs)
- SPH436 Auditory Practice — Students with Hearing Impairment (1 hr)
- SPH491 Language for Students with Hearing Impairment (4 hrs)
- SPH492 Introduction to Audiology (2 hrs)
- SPH494 Aural Habilitation/Rehabilitation (3 hrs)
- SPH495 Phonetics and Hearing Impairment (2 hrs)
- SPH496 Speech Methods for Students with Hearing Impairment (2 hrs)

**TSPh437 Adaptive Curriculum for Students with Hearing Impairment (3 hrs)**

**TSPh487 Speech Pathologies — Students with Hearing Impairment (1 hr)**

**Professional Studies** 33 hours

- Pre-admission phase: The Learner and the Community 4 hours

- **Phase I: Curriculum and Assessment** 6 hours
  - EDPS325 Life Span Human Growth and Development (4 hrs)
  - CURR305 Curriculum and Methods: Secondary (3 hrs)

- **Phase II: Methods and Technology** 7 hours
  - RDNG311 Teaching Reading in the Secondary School (3 hrs)
  - EDMD345 Media for the Classroom Teacher (1 hr)
  - Methods Courses Subject Area Minor (3 hrs)

- **Phase III: Capstone Experience** 16 hours

  - EDC409 Student Teaching (6 hrs)
  - EDC491 Student Teaching (10 hrs)

**Minor Requirements** 17 hours

- Select a minor from the approved list of minors for secondary, K-12 and special education-secondary programs.

**Program Total** 147 hours

*Note:
- This course satisfies both a general education and a major requirement.
- Admission to teacher education required.

### Cognitive Impairment Major (COGN)

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation to the Michigan Department of Education for K-12 endorsement as a teacher of students with cognitive impairment. This program of study meets all requirements of the Council for Exceptional Children. The Michigan Test for Teacher Certification (MTTC) covering this field is #36, "Cognitive Impairment." Students select Secondary or Elementary Teacher Certification. A minor from the respective approved list is required in either instance and students must pass the certification exam related to the minor in order to be recommended for endorsement in the minor field. In addition, those selecting Elementary Certification must pass the "Elementary Education" certification test, #83, as well.

### Elementary Teacher Certification and Endorsement in Cognitive Impairment

**General Education Requirements** 47 hours

- **Area I: Symbolics and Communication**
  1. See page 23
  2. CTAS121 Fundamentals of Speech (2 hrs)
  3. ENGL123 Writing in the Professional World (3 hrs)
  4. MATH109 Mathematics for Elementary Teachers I (3 hrs)
  5. COSC101 Computer Science Concepts and Practical Applications (3 hrs)

- **Area II: Science and Technology**
  1. See page 24
  2. BIOL105 Introductory Biology for Non-majors (4 hrs)

- **Area III: Social Sciences**
  1. See page 24
  2. See page 24
  3. See page 24
  4. See page 24

- **Area IV: Arts and Humanities**
  1. See page 25
Secondary Teacher Certification and Endorsement in Cognitive Impairment

General Education Requirements

Area I: Symbolic and Communication
1. See page 23
2. CIIP 1221 Fundamentals of Speech (2 hrs)
3. ENGL 1203 Writing in the Professional World (3 hrs)
4. An Approved Math Elective
5. COSC 1101 Computer Science Concepts and Practical Applications (3 hrs)

Area II: Science and Technology
1. See page 24
2. BIOI 205 Introductory Biology for Non-majors (4 hrs)
3. PSY 1101 General Psychology (3 hrs)

Area III: Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement

PEGN 210 Lifetime Wellness and Fitness (2 hrs)

Teacher of Students with Cognitive Impairment Endorsement: 41 hours

SPGN 251: Education of Students with Exceptionalities (3 hrs)
PHED 257: Physical Education for the Classroom Teacher (2 hrs)
SPGN 271: Speech and Language Development in Children, Adolescents, and Young Adults with Exceptional Learning Needs (2 hrs)
SPGN 350: Measurement and Diagnosis in Special Education (3 hrs)
SPGN 359: Children, Adolescents, and Young Adults with Disabilities: School, Family, and Community Interaction (3 hrs)
SPGN 461: Classroom Management and Intervention Strategies for Students with Disabilities (3 hrs)
SPGN 481: Assistive Technology in Special Education (2 hrs)
SPGN 485: Curriculum, Programs and Services for Adolescents and Young Adults with Disabilities (2 hrs)
SPGN 486: Transition and Related Field Experiences: Adolescents and Young Adults with Disabilities (2 hrs)
SPGN 491: Student Teaching Seminar - Special Education (2 hrs)
SPC I 50: Pre-clinical Experiences - Cognitive Impairment (3 hrs)
SPC I 50: Introduction to Cognitive Impairment (3 hrs)
SPC I 427: Education of the Elementary Student with Cognitive Impairment (2 hrs)
SPC I 429: Curriculum Design and Educational Programs for Students with Cognitive Impairment (3 hrs)
SPG 468: Education of Children with Learning Disabilities (2 hrs)
SPG 469: Education of Students in Programs for Moderate or Severe Cognitive Impairment (4 hrs)

Professional Studies

Pre-admission phase: The Learner and the Community: 4 hours
EDPS 325: Life Span Human Growth and Development (4 hrs)

Phase I: Technology, Diversity and Teaching Environments (may be taken with Phase II courses)
3 hours
TOFDS 328: School in a Multicultural Society (3 hrs)

Phase II: Curriculum and Assessment (may be taken with Phase I courses)
3 hours
CURL 304: Curriculum and Methods: Elementary (3 hrs)

Phase III: Methods and Technology (may be taken with Phase IV courses)
4 hours
MATH 380: Teaching of Mathematics, K-6 (3 hrs)
EDMD 345: Media for the Classroom Teacher (1 hr)

Phase IV: Literacy, Culture and the Arts (may be taken with Phase III courses)
6 hours
RDNG 300: Early Literacy (3 hrs)
RDNG 310: Literacy Across the Curriculum in the Intermediate Grades (3 hrs)

Phase V: Capstone Experience
16 hours
EDUC 399: Student Teaching (6 hrs)
EDUC 491: Student Teaching (10 hrs)

Minor Requirements

Select a minor from the approved list of elementary minors for special education majors
8-20 hours

Program Total

134 hours

Note:
*This course satisfies both a general education and a major requirement.
**Admission to teacher education required.

Programs

Secondary Teacher Certification and Endorsement in Cognitive Impairment

General Education Requirements

Area I: Symbolic and Communication
1. See page 23
2. CIIP 1221 Fundamentals of Speech (2 hrs)
3. ENGL 1203 Writing in the Professional World (3 hrs)
4. An Approved Math Elective
5. COSC 1101 Computer Science Concepts and Practical Applications (3 hrs)

Area II: Science and Technology
1. See page 24
2. BIOI 205 Introductory Biology for Non-majors (4 hrs)
3. PSY 1101 General Psychology (3 hrs)

Area III: Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement

PEGN 210 Lifetime Wellness and Fitness (2 hrs)

Teacher of Students with Cognitive Impairment Endorsement: 41 hours

SPGN 251: Education of Students with Exceptionalities (3 hrs)
PHED 257: Physical Education for the Classroom Teacher (2 hrs)
SPGN 271: Speech and Language Development in Children, Adolescents, and Young Adults with Exceptional Learning Needs (2 hrs)
SPGN 350: Measurement and Diagnosis in Special Education (3 hrs)
SPGN 359: Children, Adolescents, and Young Adults with Disabilities: School, Family, and Community Interaction (3 hrs)
SPGN 461: Classroom Management and Intervention Strategies for Students with Disabilities (3 hrs)
SPGN 481: Assistive Technology in Special Education (2 hrs)
SPGN 485: Curriculum, Programs and Services for Adolescents and Young Adults with Disabilities (2 hrs)
SPGN 486: Transition and Related Field Experiences: Adolescents and Young Adults with Disabilities (2 hrs)
SPGN 491: Student Teaching Seminar - Special Education (2 hrs)
SPC I 50: Pre-clinical Experiences - Cognitive Impairment (3 hrs)
SPC I 50: Introduction to Cognitive Impairment (3 hrs)
SPC I 427: Education of the Elementary Student with Cognitive Impairment (2 hrs)
SPC I 429: Curriculum Design and Educational Programs for Students with Cognitive Impairment (3 hrs)
SPGN 468: Education of Children with Learning Disabilities (2 hrs)
SPG 469: Education of Students in Programs for Moderate or Severe Cognitive Impairment (4 hrs)

Professional Studies

Pre-admission phase: The Learner and the Community: 4 hours
EDPS 325: Life Span Human Growth and Development (4 hrs)

Phase I: Technology, Diversity and Teaching Environments (may be taken with Phase II courses)
3 hours
TOFDS 328: School in a Multicultural Society (3 hrs)

Phase II: Curriculum and Assessment (may be taken with Phase I courses)
3 hours
CURL 304: Curriculum and Methods: Elementary (3 hrs)

Phase III: Methods and Technology (may be taken with Phase IV courses)
4 hours
MATH 380: Teaching of Mathematics, K-6 (3 hrs)
EDMD 345: Media for the Classroom Teacher (1 hr)

Phase IV: Literacy, Culture and the Arts (may be taken with Phase III courses)
6 hours
RDNG 300: Early Literacy (3 hrs)
RDNG 310: Literacy Across the Curriculum in the Intermediate Grades (3 hrs)

Phase V: Capstone Experience
16 hours
EDUC 399: Student Teaching (6 hrs)
EDUC 491: Student Teaching (10 hrs)
Minor Requirements ........................................ 17 hours
Select a minor from the approved list of minors for secondary, K-12 and special education-secondary programs.

Program Total ............................................. 140 hours

Note:
*This course satisfies both a general education and a major requirement.
†Admission to teacher education required.

TEACHER OF STUDENTS WITH PHYSICAL AND OTHER HEALTH IMPAIRMENT MAJOR (POHI)

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation to the Michigan Department of Education for K-12 endorsement as a Teacher of Students with Physical Impairment and Students with Other Health Impairment. This program of study meets all requirements of the Council for Exceptional Children. The Michigan Test for Teacher Certification (MTTC) covering this field is #58, “Physical Impairment and Other Health Impairment.” Students may select Secondary or Elementary Teacher Certification. A minor from the respective approved lists is required in either instance and students must pass the certification test related to the minor in order to be recommended for endorsement in the minor field. In addition, those selecting Elementary Certification must pass the "Elementary Education" certification test, #83, as well.

Elementary Teacher Certification and Endorsement in Physical Impairment and Health Impairment

General Education Requirements .................................. 47 hours
Area I: Literacy and Communication
1. See page 23
2. MATH109 Mathematics for Elementary Teachers II (3 hrs)
3. COSC101 Computer Science Concepts and Practical Applications (3 hrs)

Area II: Science and Technology
1. See page 24
2. BIO1105 Introductory Biology for Non-majors (4 hrs)
3. PSY101 General Psychology (3 hrs)

Area III: Social Science
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. One course from the following:
   ART100 Art: Introduction to the Elementary Teacher (4 hrs)
   MUSC104 Elements of Music (2 hrs)

Physical Education/Graduation Requirement .................................. 2 hours
PEGN210 Lifespan Wellness and Fitness (2 hrs)

Teacher of Students Physical Impairment and Other Health Impairment Endorsement .................................. 45 hours
SPGN231 Introduction to Special Education (3 hrs)
PHED237 Physical Education for the Classroom Teacher (2 hrs)
SPGN241 Speech and Language Development in Children, Adolescents, and Young Adults with Exceptional Learning Needs (2 hrs)
SPGN350 Measurement and Diagnosis in Special Education (3 hrs)
SPGN395 Children, Adolescents, and Young Adults with Disabilities: School, Family and Community Interaction (3 hrs)

†SPGN461 Classroom Management and Intervention Strategies for Students with Disabilities (3 hrs)
†SPGN481 Lifespan Physical Education (2 hrs)
†SPGN485 Curriculum, Programs for Adolescents and Young Adults with Disabilities (2 hrs)
†SPGN491 Transition and Related Field Experiences: Adolescents and Young Adults with Disabilities (2 hrs)
†SPGN499 Special Education Seminar — Special Education (2 hrs)
SPED240 Special Education — POHI (3 hrs)
SPED210 Developmental Sciences for Teachers of the Physically and Health Impaired (4 hrs)
SPED300 Introduction to Cognitive Impairment (3 hrs)
SPED302 Pathology of Physical Health Impairment (3 hrs)
†SPED102 Ancillary Services and Health Procedures for Teachers of Physically Impaired (2 hrs)
†SPED141 Educational Strategies for Teachers of the Physically Impaired (4 hrs)
†SPED1468 Education of Children with Learning Disabilities (2 hrs)

Professional Studies ................................................................ 36 hours
Pre-admission phase: The Learner and the Community
EDSP325 Life Span Human Growth and Development (4 hrs)
Phase I: Technology, Diversity and Teaching Environments (may be taken with Phase II courses)
EDSP328 Schools in a Multicultural Society (3 hrs)
Phase II: Curriculum and Assessment (may be taken with Phase I courses)
EDSP355 Teaching Elementary Education (6 hrs)
CURR364 Curriculum and Methods: Elementary (3 hrs)
Phase III: Methods and Technology (may be taken with Phase IV courses)
EDSP343 Methods and Technology (3 hrs)
MATH109 Mathematics for Elementary Teachers II (3 hrs)
EDSP355 Media for the Classroom Teacher I (1 hr)
Phase IV: Literacy, Culture and the Arts (may be taken with Phase III courses)
RDNG320 Early Literacy (3 hrs)
RDNG310 Late Literacy Across the Curriculum in the Intermediate Grades (3 hrs)
Phase V: Capstone Experience
EDUC499 Student Teaching (6 hrs)
EDUC491 Student Teaching (10 hrs)

Minor Requirements ............................................... 8-20 hours
Select a minor from the approved list of elementary minors for special education majors.

Program Total ............................................. 138 hours

Note:
*This course satisfies both a general education and a major requirement.
†Admission to teacher education required.

Secondary Teacher Certification and Endorsement in Physical Impairment and Health Impairment

General Education Requirements .................................. 47 hours
Area I: Symbols and Communication
1. See page 23
2. CTAS121 Fundamentals of Speech (2 hrs)
3. ENGL323 Writing in the Professional World (3 hrs)
4. MATH109 Mathematics for Elementary Teachers II (3 hrs)
5. COSC101 Computer Science Concepts and Practical Applications (3 hrs)

Area II: Science and Technology
1. See page 24
2. BIO1105 Introductory Biology for Non-majors (4 hrs)
3. PSY101 General Psychology (3 hrs)

Area III: Social Science
1. See page 24
2. See page 24
3. See page 24

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. One course from the following:
   ART100 Art: Introduction to the Elementary Teacher (4 hrs)
   MUSC104 Elements of Music (2 hrs)

Physical Education/Graduation Requirement .................................. 2 hours
PEGN210 Lifespan Wellness and Fitness (2 hrs)

Teacher of Students Physical Impairment and Other Health Impairment Endorsement .................................. 45 hours
SPGN231 Introduction to Special Education (3 hrs)
PHED237 Physical Education for the Classroom Teacher (2 hrs)
SPGN241 Speech and Language Development in Children, Adolescents, and Young Adults with Exceptional Learning Needs (2 hrs)
SPGN350 Measurement and Diagnosis in Special Education (3 hrs)
SPGN395 Children, Adolescents, and Young Adults with Disabilities: School, Family and Community Interaction (3 hrs)

†SPGN461 Classroom Management and Intervention Strategies for Students with Disabilities (3 hrs)
†SPGN481 Lifespan Physical Education (2 hrs)
†SPGN485 Curriculum, Programs for Adolescents and Young Adults with Disabilities (2 hrs)
†SPGN491 Transition and Related Field Experiences: Adolescents and Young Adults with Disabilities (2 hrs)
†SPGN499 Special Education Seminar — Special Education (2 hrs)
SPED240 Special Education — POHI (3 hrs)
SPED210 Developmental Sciences for Teachers of the Physically and Health Impaired (4 hrs)
SPED300 Introduction to Cognitive Impairment (3 hrs)
SPED302 Pathology of Physical Health Impairment (3 hrs)
†SPED102 Ancillary Services and Health Procedures for Teachers of Physically Impaired (2 hrs)
†SPED141 Educational Strategies for Teachers of the Physically Impaired (4 hrs)
†SPED1468 Education of Children with Learning Disabilities (2 hrs)
SPEECH/LANGUAGE PATHOLOGY MAJOR (SPEE)

**Elementary or Secondary Teacher Certification/Health Care Track**

Successful completion of this course of study, in the context of other program requirements, with respect to K-12 teacher certification, satisfies the undergraduate portion of the requirements for the professional entry-level credential at the master's degree level. This program leads toward, but does not satisfy, the requirements for recommendation to the Michigan Department of Education for K-12 endorsement as a Teacher of Students with Speech and Language Impairment. This program of study meets all requirements of the Council for Exceptional Children and of the American Speech-Language-Hearing Association. The Michigan Test for Teacher Certification (MTTC) covering this field is #57, "Speech and Language Impairment."

Prospective teachers may select Secondary or Elementary Certification. A minor from the respective approved lists (or the planned program, if Elementary Certification is required) in another field and is not limited to the minor field. Additional requirements are listed for the "Elementary Certification" certification test, #83, as well.

Elementary Teacher Certification and Endorsement in Speech/Language Impairment

**General Education Requirements**

<table>
<thead>
<tr>
<th>Area</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>I: Symbols and Communication</td>
<td>47 hours</td>
</tr>
<tr>
<td>II: Science and Technology</td>
<td>3 hours</td>
</tr>
<tr>
<td>III: Social Sciences</td>
<td>3 hours</td>
</tr>
<tr>
<td>IV: Arts and Humanities</td>
<td>6 hours</td>
</tr>
</tbody>
</table>

**Area I: Symbols and Communication**

1. See page 23
2. CIAS11 Fundamentals of Speech (2 hrs)
3. ENGL23 Writing in the Professional World (3 hrs)
4. MATH109 Mathematics for Elementary Teachers II (3 hrs)
5. COSC101 Computer Science Concepts and Practical Applications (3 hrs)

**Area II: Science and Technology**

1. See page 24
2. BIOL105 Introductory Biology for Non-majors (4 hrs)
3. PSY101 General Psychology (3 hrs)

**Area III: Social Sciences**

1. See page 24
2. See page 24
3. SOCI105 Introductory Sociology (3 hrs)
4. SOCI202 Social Problems (3 hrs)

**Area IV: Arts and Humanities**

1. See page 25
2. See page 25
3. See page 25
4. One course from the following:
   - ART300 Art Integration for the Elementary Teacher (4 hrs)
   - MUSC104 Elements of Music (2 hrs)

**Physical Education/Graduation Requirements**

<table>
<thead>
<tr>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEGN210 Lifetime Wellness and Fitness</td>
<td>2 hours</td>
</tr>
</tbody>
</table>

**Teacher of Students with Speech and Language Impairment Endorsement**

<table>
<thead>
<tr>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPGN251 Education of Students with Exceptionalities (3 hrs)</td>
<td>43 hours</td>
</tr>
<tr>
<td>SPGN290 Measurement and Diagnosis in Special Education (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPGN481 Assistive Technology in Special Education (2 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPEI32 Acoustic Phonetics Speech Science (2 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPST354 Applied Phonetics (2 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPST355 Communication Disorders (3 hrs)</td>
<td></td>
</tr>
</tbody>
</table>
SPS336 Physiological Phonetics: Anatomy and Physiology (3 hrs)
SPS337 Language Acquisition (3 hrs)
SPS340 Phonological and Articulation Disorders (3 hrs)
SPS342 Language Disorders in Children (3 hrs)
SPS343 Clinical Methods in Speech-Language Pathology (2 hrs)
SPS347 Management of Acquired Neurogenic Communication Disorders (3 hrs)
SPS452 Voice (3 hrs)
SPS454 Stuttering (3 hrs)
SPH1392 Introduction to Audiology (2 hrs)
SPH1349 Auditory Rehabilitation/Rehabilitation (3 hrs)

Professional Studies ............................................................................ 26 hours
Pre-admission phase: The Learner and the Community 4 hours
EDPS325 Life-Span Human Growth and Development (4 hrs)
Phase I: Technology, Diversity and Teaching Environments (may be taken with Phase II courses) 3 hours
*SOFD328 Schools in a Multicultural Society (3 hrs)
Phase II: Curriculum and Assessment (may be taken with Phase I courses) 3 hours
*CURR404 Curriculum and Methods: Elementary (3 hrs)
Phase III: Methods and Technology (may be taken with Phase IV courses) 4 hours
*MAT101 Introduction to Mathematics, K-6 (3 hrs)
*EDMD345 Media for the Classroom Teacher (1 hr)
Phase IV: Literacy, Culture and the Arts (may be taken with Phase III courses) 6 hours
RDNG300 Early Literacy (3 hrs)
RDNG310 Literacy Across the Curriculum in the Intermediate Grades (3 hrs)
Phase V: Captanage Experience: 6 hours
*EDUC499 Student Teaching (6 hrs)

Minor Requirements ................................................................. 20 hours
Select a minor from the approved list of elementary minors for special education majors.

Program Total ................................................. 138 hours

Note:
*This course satisfies both a general education and a major requirement.
**Admission to teacher education required.

Secondary Teacher Certification and Endorsement in Speech-Language Impairment

General Education Requirements .................................................. 47 hours

Area I: Symbolic and Communication
1. See page 23
2. CTAS121 Fundamentals of Speech (2 hrs)
3. ENGL323 Writing in the Professional World (3 hrs)
4. See page 23
5. COSC101 Computer Science Concepts and Practical Applications (3 hrs)
Area II: Science and Technology
1. See page 24
2. BIOL105 Introductory Biology for Non-majors (4 hrs)
3. PSY101 General Psychology (3 hrs)
Area III: Social Sciences
1. See page 24
2. See page 24
3. SOCL105 Introductory Sociology (3 hrs)
4. SOCL202 Social Problems (3 hrs)
Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ................................ 2 hours
PEGN210 Lifetime Wellness and Fitness (2 hrs)

Teacher of Students with Speech and Language Impairment
Endorsement .................................................................................. 43 hours
SPGN251 Education of Students with Exceptionalities (3 hrs)
SPGN350 Measurement and Diagnosis in Special Education (3 hrs)
SPGN481 Assistive Technology in Special Education (2 hrs)
SPS332 Acoustic Phonetics: Speech Science (2 hrs)
SPS334 Applied Phonetics (2 hrs)
SPS335 Communication Disorders (3 hrs)
SPS336 Physiological Phonetics: Anatomy and Physiology (3 hrs)
SPS337 Language Acquisition (3 hrs)
SPS340 Phonological and Articulation Disorders (3 hrs)
SPS342 Language Disorders in Children (3 hrs)
SPS343 Clinical Methods in Speech—Language Pathology (2 hrs)
SPS347 Management of Acquired Neurogenic Communication Disorders (3 hrs)
SPS452 Voice (3 hrs)
SPS454 Stuttering (3 hrs)
SPH1392 Introduction to Audiology (2 hrs)
SPH1349 Auditory Rehabilitation/Rehabilitation (3 hrs)

Professional Studies ............................................................................ 17-20 hours
Pre-admission phase: The Learner and the Community 4 hours
EDPS325 Life-Span Human Growth and Development (4 hrs)
Phase I: Curriculum and Assessment: 6 hours
*SOFD328 Schools in a Multicultural Society (3 hrs)
*CURR405 Curriculum and Methods: Secondary (3 hrs)
Phase II: Methods and Technology: 4 hours
*RDNG311 Teaching Reading in the Secondary School (3 hrs)
*EDMD345 Media for the Classroom Teacher (1 hr)
Phase III: Captanage Experience: 6 hours
*EDUC499 Student Teaching (6 hrs)

Minor Requirements ................................................................. 20 hours
Select a minor from the approved list of minors for secondary, K-12 and special education-secondary programs.

Program Total ................................................. 129 hours

Note:
*This course satisfies both a general education and a major requirement.
**Admission to teacher education required.

Speech/Language Impairment — Health Care Track

General Education Requirements .................................................. 44 hours

Area I: Symbolic and Communication
1. See page 23
2. CTAS121 Fundamentals of Speech (2 hrs)
3. ENGL323 Writing in the Professional World (3 hrs)
4. See page 23
5. COSC101 Computer Science Concepts and Practical Applications (3 hrs)
Area II: Science and Technology
1. See page 24
2. BIOL105 Introductory Biology for Non-majors (4 hrs)
3. PSY101 General Psychology (3 hrs)
Area III: Social Sciences
1. See page 24
2. See page 24
3. SOCL105 Introductory Sociology (3 hrs)
4. SOCL202 Social Problems (3 hrs)
Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25
Visual Impairment Major (VISU)

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation to the Michigan Department of Education for K-12 as a teacher of students with visual impairments. This program meets all requirements of the Council for Exceptional Children: The Michigan Test for Teacher Certification (MTTC) covering this field is #61, "Visual Impairment." Students may select Secondary or Elementary Teacher Certification. A minor from the respective approved list is required in either instance and students must pass the certification test related to the minor in order to be recommended for endorsement in the minor field. In addition, those selecting Elementary Certification must pass the "Elementary Education" certification test, #83, as well.

Elementary Teacher Certification and Endorsement in Visual Impairment

General Education Requirements ................................................. 47 hours

Area I: Symbolic and Communication
1. See page 23
2. CTAS21 Fundamentals of Speech (2 hrs)
3. ENGL232 Writing in the Professional World (3 hrs)
4. MATH109 Mathematics for Elementary Teachers I (3 hrs)
5. COSC101 Computer Science Concepts and Practice Applications (3 hrs)

Area II: Science and Technology
1. See page 24
2. PSY101 General Psychology (3 hrs)
3. See page 24

Area III: Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV: Arts and Humanities
1. See page 25

2. See page 25
3. See page 25
4. One course from the following:
   ART300 Art Integration for the Elementary Teacher (4 hrs)
   MUSC104 Elements of Music (2 hrs)

Physical Education/Graduation Requirement ................................ 2 hours
PEGN210 Lifetime Wellness and Fitness (2 hrs)

Speech/Language Pathology Requirements .................................. 46 hours

- SPGN251 Education of Students with Exceptionalities (3 hrs)
- SPGN350 Measurement and Diagnosis in Special Education (3 hrs)
- SPGN481 Assistive Technology in Special Education (2 hrs)
- SPS332 Acoustic Phonetics: Speech Science (2 hrs)
- SPS334 Applied Phonetics (2 hrs)
- SPS335 Communication Disorders (2 hrs)
- SPS336 Physiologic Phonetics: Anatomy and Physiology (3 hrs)
- SPS337 Language Acquisition (3 hrs)
- SPS340 Phonological and Articulation Disorders (3 hrs)
- SPS342 Language Disorders in Children (3 hrs)
- SPS343 Clinical Methods in Speech — Language Pathology (2 hrs)
- SPS347 Management of Acquired Neurogenic Communication Disorders (3 hrs)
- SPS452 Voice (3 hrs)
- SPS454 Stuttering (3 hrs)
- SPH392 Introduction to Audiology (2 hrs)
- SPH394 Auditory Habilitation/Rehabilitation (3 hrs)

Minor Requirements .......................................................... 22-24 hours

University Elective Courses ................................................. 8-10 hours

Program Total ........................................................................... 124 hours

Note:
*This course satisfies both a general education and a major requirement.
Admission to teacher education required.

Visual Impairment Major (VISU)

Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation to the Michigan Department of Education for K-12 as a teacher of students with visual impairments. This program meets all requirements of the Council for Exceptional Children: The Michigan Test for Teacher Certification (MTTC) covering this field is #61, "Visual Impairment." Students may select Secondary or Elementary Teacher Certification. A minor from the respective approved list is required in either instance and students must pass the certification test related to the minor in order to be recommended for endorsement in the minor field. In addition, those selecting Elementary Certification must pass the "Elementary Education" certification test, #83, as well.

Elementary Teacher Certification and Endorsement in Visual Impairment

General Education Requirements ................................................. 47 hours

Area I: Symbolic and Communication
1. See page 23
2. CTAS21 Fundamentals of Speech (2 hrs)
3. ENGL232 Writing in the Professional World (3 hrs)
4. MATH109 Mathematics for Elementary Teachers I (3 hrs)
5. COSC101 Computer Science Concepts and Practice Applications (3 hrs)

Area II: Science and Technology
1. See page 24
2. PSY101 General Psychology (3 hrs)
3. See page 24

Area III: Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV: Arts and Humanities
1. See page 25

2. See page 25
3. See page 25
4. One course from the following:
   ART300 Art Integration for the Elementary Teacher (4 hrs)
   MUSC104 Elements of Music (2 hrs)

Physical Education/Graduation Requirement ................................ 2 hours
PEGN210 Lifetime Wellness and Fitness (2 hrs)

Speech/Language Pathology Requirements .................................. 46 hours

- SPGN251 Education of Students with Exceptionalities (3 hrs)
- SPGN350 Measurement and Diagnosis in Special Education (3 hrs)
- SPGN481 Assistive Technology in Special Education (2 hrs)
- SPS332 Acoustic Phonetics: Speech Science (2 hrs)
- SPS334 Applied Phonetics (2 hrs)
- SPS335 Communication Disorders (2 hrs)
- SPS336 Physiologic Phonetics: Anatomy and Physiology (3 hrs)
- SPS337 Language Acquisition (3 hrs)
- SPS340 Phonological and Articulation Disorders (3 hrs)
- SPS342 Language Disorders in Children (3 hrs)
- SPS343 Clinical Methods in Speech — Language Pathology (2 hrs)
- SPS347 Management of Acquired Neurogenic Communication Disorders (3 hrs)
- SPS452 Voice (3 hrs)
- SPS454 Stuttering (3 hrs)
- SPH392 Introduction to Audiology (2 hrs)
- SPH394 Auditory Habilitation/Rehabilitation (3 hrs)

Minor Requirements .......................................................... 22-24 hours

University Elective Courses ................................................. 8-10 hours

Program Total ........................................................................... 124 hours

Note:
*This course satisfies both a general education and a major requirement.
Admission to teacher education required.
Secondary Teacher Certification and Endorsement in Visual Impairment

General Education Requirements ......................................... 47 hours
Area I: Symbolic and Communication
  1. See page 24
  2. CTPS121 Fundamentals of Speech (2 hrs)
  3. ENGL329 Writing in the Professional World (3 hrs)
  4. See page 23
  5. CSCI110 Computer Concepts and Practical Applications (5 hrs)
Area II: Science and Technology
  1. See page 24
  2. PSY101 General Psychology (3 hrs)
  3. See page 24
Area III: Social Science
  1. See page 24
  2. See page 24
  3. See page 24
  4. See page 24
Area IV: Arts and Humanities
  1. See page 25
  2. See page 25
  3. See page 25
  4. See page 25

Physical Education/Graduation Requirement ......................... 2 hours
PEGN210 Lifetime Wellness and Fitness (2 hrs)

Teacher of Students with Visual Impairment Endorsement ........... 45 hours
SPGN251 Education of Students with Exceptionalities (3 hrs)
SPED257 Physical Education for the Classroom Teacher (2 hrs)
SPGN271 Speech and Language Development in Children, Adolescents,
  and Young Adults with Exceptional Learning Needs (2 hrs)
SPGN390 Measurement and Diagnosis in Special Education (3 hrs)
SPGN395 Children, Adolescents, and Young Adults with Disabilities,
  School, Family and Community Interaction (3 hrs)
SPGN461 Classroom Management and Intervention Strategies for
  Students with Disabilities (3 hrs)
SPGN481 Assistive Technology in Special Education (2 hrs)
SPGN485 Curriculum, Programs and Services for Adolescents and
  Young Adults with Disabilities (2 hrs)
SPGN486 Transition and Related Field Experiences: Adolescents and
  Young Adults with Disabilities (2 hrs)
SPGN491 Student Teaching Seminar — Special Education (2 hrs)
SPVF165 Braille (3 hrs)
SPVF166 The Eye and Vision — Anatomy and Physiology (2 hrs)
SPVF168 Mobility Training for Persons with Visual Impairment (2 hrs)
SPVF169 Community Considerations for Persons with Visual Impairment
  (3 hrs)
SPVF64 Methods of Teaching Children who are Blind (3 hrs)
SPVF65 Braille II: Nemeth Code (3 hrs)
SPVF67 Education of Children of Visual Impairment (2 hrs)
SPVF69 Technology for Persons with Visual Impairment (3 hrs)

Professional Studies ..................................................... 33 hours
Pre-admission phase: The Learner and the Community
  1. EDP525 Life Span Human Growth and Development (4 hrs)
  Phase I: Curriculum and Assessment ................................. 6 hours
    1. SOFD328 Schools in a Multicultural Society (3 hrs)
    2. CURR305 Curriculum and Methods: Secondary (3 hrs)
  Phase II: Methods and Technology .................................. 7 hours
    1. RDNG111 Teaching Reading in the Secondary School (3 hrs)
    2. EDM345 Media for the Classroom Teacher (1 hr)
    Method Course Subject Area (3 hrs)
  Phase III: Capstone Experiences ................................. 16 hours
    1. EDUG499 Student Teaching (6 hrs)
    2. EDUC491 Student Teaching (10 hrs)

Minor Requirements .................................................... 17-20 hours
  Select a minor from the approved list of minors for secondary, K-12
  and special education secondary programs.

University Elective Courses ........................................... 0 hours
Program Total .......................................................... 144 hours

"PLANNED PROGRAM" MINOR
AVAILAble TO SPECIAL EDUCATION
MAJORS SEEKING ELEMENTARY
TEACHER CERTIFICATION (PP)

Required Courses ....................................................... 23 hours
CURR404 Curriculum and Methods: Elementary (3 hrs)
RDNG100 Early Literacy (3 hrs)
RDNG310 Literacy Across the Curriculum in the Intermediate
  Grades (3 hrs)
EDPS325 Life Span Human Growth and Development (4 hrs)
SOFD328 Schools in a Multicultural Society (3 hrs)
EDMD345 Media for the Classroom Teacher (1 hr)
GEOG348 Teaching Social Studies in Elementary Schools (3 hrs)
MATH381 The Teaching of Mathematics, K-6 (3 hrs)

Restricted Elective Courses ........................................... 7 hours
  One course from the following:
    1. ESC102 Elementary School Science (3 hrs)
    2. BIOL305 Life Science for Elementary Teachers (3 hrs)
  Four hours from the following:
    1. LITR207 Introduction to Children's Literature (3 hrs)
    2. EDPS210 Standard American Red Cross First Aid (2 hrs)
    3. EDPS320 Health Education in the Elementary Grades (2 hrs)
    4. EDTE301 Art Integration for the Elementary Teacher (4 hrs)
    5. CTAR222 Drama and Play in Human Experience (3 hrs)
    6. MUSC101 Elements of Music (3 hrs)
    7. MUSC242 Recreational Music (2 hrs)
    8. MUSC103 Introduction to Music Therapy (2 hrs)

Planned Program Total ............................................... 30 hours

DEPARTMENT OF TEACHER EDUCATION

Campus Address: 313 Porter Building
Internet: www.emich.edu/coe/teach.ed
Telephone: 734.487.3260
E-mail: donald.bennion@emich.edu

See pages 273, 277, 279, 280, 286, 343 and 348 for course descriptions.

The Department of Teacher Education provides undergraduate courses in psychological and social foundations of education, curriculum and instruction, reading, educational media, technology and early childhood education. These courses, along with courses in other University departments, comprise the programs for preparing elementary, secondary and K-12 teachers.
The department provides coordination and a portion of the course work for programs for persons seeking to become elementary teachers: elementary teachers with early childhood endorsement, secondary teachers and teachers of K-12 subjects.

The Department of Teacher Education administers majors and minors in elementary science group, language arts group, social studies group, and reading and minors in art groups early childhood education and structure of the disciplines.

Elementary education and early childhood education students are required to attend group advising sessions before meeting individually with an advisor. Students should visit the Teacher Education office in 313 Porter to pick up a copy of the group advising schedule as part of the advising process pursuant to the declaration of intent.

Graduate study leads to the master's degree in early childhood education, elementary education, middle level education, secondary education; common learning in curricula, reading, social foundations, educational psychology (development and personality research and measurement, concentration on educational media and technology. For descriptions of graduate courses and programs, consult the graduate catalog.

**ELEMENTARY EDUCATION PROGRAM WITH AN INTEGRATED SCIENCE MAJOR (INSC)**

**Elementary Teacher Certification**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in science; certification code DJ. The certification test covering this field is #16, "Science."

**General Education Requirements .................................................. 37 hours**

*Area I Symbolic and Communication*

1. See page 23
2. See page 23
3. See page 23
4. MATH109 Mathematics for Elementary Teachers II (3 hrs)
5. See page 23

*Area II Science and Technology*

1. PHY100 Physics for Elementary Teachers*
2. One course from the following:
   - *PSY101 General Psychology*
   - *PSY102 General Psychology*
3. CHEM101 Chemistry for Elementary Teachers*

*Area III Social Sciences*

1. See page 24
2. See page 24
3. GEOG110 World Regions (3 hrs)
4. See page 24

*Area IV Arts and Humanities*

1. See page 25
2. See page 25
3. See page 25
4. MUSC104 Elements of Music (2 hrs)

**Additional Requirements ....................................................... 6 hours**

LITR207 Introduction to Children's Literature (3 hrs)
MATH108 Mathematics for Elementary Teachers I (3 hrs)

**Physical Education/Graduation Requirement .................................. 2 hours**

**Major Requirements ................................................................. 36 hours**

*Required Courses 25-26 hours*

- *PHY100 Physics for Elementary Teachers (3 hrs)*
- PHY110 Teaching Elementary Physical Science (3 hrs)
- *CHEM101 Chemistry for Elementary Teachers (3 hrs)*
- ESSC202 Earth Science for Elementary Teachers (3 hrs)
- ESSC311 Weather and Climate for Elementary Teachers (3 hrs)

**BIOL105 Introductory Biology for Non-majors (4 hrs)**
**BIOL205 Life Science for Elementary Teachers (5 hrs)**

One course from the following:

- ASTR203 Exploration of the Universe (3 hrs)
- ASTR205 Principles of Astronomy (4 hrs)

**Restricted Elective Courses 10-11 hours**

Ten to eleven hours from the following:

- ASTR204 Astronomical Investigations (1 hr)
- BIOL205 Field Biology (4 hrs)
- BIOL324 Global Ecology and the Environment (4 hrs)
- BOTN215 Economic Botany (3 hrs)
- BOTN305 Biology of Plants (4 hrs)

Either:
- CHEM115/116 Chemistry and Society with lab (4 hrs)
- CHEM117/118 Fundamentals of Chemistry with lab (4 hrs)

**CHEM120 Fundamentals of Organic and Biochemistry (4 hrs)**

**CHEM121/122 General Chemistry I with lab (4 hrs)**

**ESSC110 Physical Geology (4 hrs)**

**ESSC111 The Earth System through Time (4 hrs)**

**ESSC106 National Physical Monuments (2 hrs)**

**ESSC107 Natural Environmental Hazards (3 hrs)**

**ESSC220 Rocks of Michigan (2 hrs)**

**ESSC307 Essentials of Oceanography for Elementary Teachers (3 hrs)**

**ESSC312 Plate Tectonics for Elementary Teachers (3 hrs)**

**ESSC315 Water and the Environment for Elementary Teachers (3 hrs)**

**ESSC414 Teaching Science with Dinosaurs (3 hrs)**

**PHY101 Physical Science of the Aros (3 hrs)**

**PHY110 Physical Science (4 hrs)**

**PHY111 Teaching Elementary Physical Science (3 hrs)**

**ZOOY101 Biology of Animals (4 hrs)**

**ASTR377/378/379 Special Topics (1/2-3 hrs)**

**ASTR378/379/380 Special Topics (1/2-3 hrs)**

**ASTR590/591/592 Special Topics (1/2-3 hrs)**

**BIOL377/378/379 Special Topics (1/2-3 hrs)**

**BIOL477/478/479 Special Topics (1/2-3 hrs)**

**BIOL590/591/592 Special Topics (1/2-3 hrs)**

**PHY117/118 Teaching Introductory Physics (3 hrs)**

**ZOOY377/378/379 Special Topics (1/2-3 hrs)**

**ZOOY477/478/479 Special Topics (1/2-3 hrs)**

**ZOOY590/591/592 Special Topics (1/2-3 hrs)**

**CHEM377/378/379 Special Topics (1/2-3 hrs)**

**CHEM477/478/479 Special Topics (1/2-3 hrs)**

**CHEM590/591/592 Special Topics (1/2-3 hrs)**

**ESSC377/378/379 Special Topics (1/2-3 hrs)**

**ESSC477/478/479 Special Topics (1/2-3 hrs)**

**ESSC590/591/592 Special Topics (1/2-3 hrs)**

**PHY377/378/379 Special Topics (1/2-3 hrs)**

**PHY477/478/479 Special Topics (1/2-3 hrs)**

**PHY590/591/592 Special Topics (1/2-3 hrs)**

**Minor Requirements ............................................................... 0-24 hours**

The required structure of the disciplines minor is automatically met within this curriculum. An additional minor may be added if desired. Credit hours for an additional minor will vary.

**Professional Studies ................................................................. 55 hours**

Preadmission Phase: The Learner and the Community 8 hours
EDPS322 Human Development and Learning (4 hrs)
FETE201 Field Experience (1 hr)
SPGN251 Education of Students with Exceptionalities (3 hrs)

Courses that require formal admission to the Teacher Education Program:
Phase I: Technology, Diversity, and Teaching Environments (may be taken with Phase II courses): 11 hours
TEDU253 Technology Education for Children (3 hrs)
HLED320 Health Education in the Elementary Grades (2 hrs)
RDNG300 Early Literacy (3 hrs)
SOFD328 Schools in a Multicultural Society (3 hrs)

Phase II: Curriculum and Assessment (may be taken with Phase I courses): 7 hours
CURR304 Curriculum and Methods: Elementary (3 hrs)
FETE301 Field Experience II: Elementary (1 hr)
EDP5340 Introduction to Assessment and Evaluation (3 hrs)
Students may not proceed to Phase III until Phase II is completed.

Phase III: Methods and Technology (may be taken with Phase IV courses): 7 hours
BIOL303 Life Science for Elementary Teachers (3 hrs)
MATH181 The Teaching of Mathematics, K-6 (3 hrs)
EDMT330 Instructional Applications of Media and Technology (2 hrs)
PHED257 Physical Education for the Classroom Teacher (2 hrs)

Phase IV: Literacy, Culture, and the Arts (may be taken with Phase III courses): 10 hours
RDNG310 Literacy Across the Curriculum in the Intermediate Grades (3 hrs)
FETE401 Field Experience III: Elementary (1 hr)
ART300 Art Integration for the Elementary Teacher (4 hrs)
MUSC260 Elementary Music Education (2 hrs)

Phase V: Capstone Experience: 12 hours
EDUC492 Student Teaching (12 hrs)

University Elective Courses .............................................. 0 hours
Program Total ........................................................................ 136 hours

Note:
*This course satisfies both a general education and a major requirement.
If PSY101 is in the program, choose 21 credit hours of restricted electives; if PSY102 is in the program, choose 20 credit hours of restricted electives. The selection of electives must include at least six hours of courses at the 300-level or higher. (BIOL303 is the other three hours for the major requirement of nine credit hours at the 300-level or higher.) Students may not take more than 18 credit hours from any one department. (BIOL, BOTN, ESCI, and ZOOL courses are in the same department, ESSC courses are in the same department, PHY and ASTR courses are in the same department.) The major requires a total of 36 credit hours.

ELEMEN TARY EDUCATION PROGRAM
LANGUAGE ARTS GROUP MAJOR (LAG)
Elementary Teacher Certification

Successful completion of this major and the certification test #01 (Language Arts) qualifies the student for endorsement in Language Arts, certification code 0X. Students planning to take the Michigan State Subject Area Test for certification should take the test when all of the course requirements are completed.

General Education Requirements .................................... 40 hours
Area I: Symbolics and Communication
1. See page 23
2. See page 23
3. One course from the following:
   *ENGL225 Intermediate English Composition
   *ENGL323 Writing in the Professional World
   *CTAC225 Listening Skills

Area II: Science and Technology
1. PHY110 Physics for Elementary Teachers (3 hrs)
2. One course from the following:
   PSY101 General Psychology (3 hrs)
   PSY102 General Psychology with Lab (4 hrs)
3. CHEM101 Chemistry for Elementary Teachers (3 hrs)

Area III: Social Science
1. See page 24
2. See page 24
3. GEOG110 World Regions (3 hrs)
4. See page 24

Area IV: Art and Humanities
1. See page 25
2. One course from the following:
   *LITR204 Native American Literature
   *LITR268 Multicultural Children's Literature
   *LITR269 African American Literature
3. See page 25
4. MUSC104 Elements of Music (2 hrs)

Additional Requirements .................................................. 6 hours
ESSC202 Earth Science for Elementary Teachers (3 hrs)
MATH109 Mathematics for Elementary Teachers I (5 hrs)

Physical Education/Graduation Requirement .......................... 2 hours

Major Requirements ......................................................... 36 hours

Required Courses ............................................................. 15 hours
RDNG300 Early Literacy (3 hrs)
RDNG310 Literacy Across the Curriculum in the Intermediate Grades (3 hrs)
ENGL307 Writing Process for Elementary Teachers (3 hrs)
LING201 An Introduction to Linguistics (3 hrs)
LITR207 Children's Literature (3 hrs)

Restricted Elective Courses ............................................... 21 hours
One course from the following:
*ENGL225 Intermediate English Composition (3 hrs)
*ENGL323 Writing in the Professional World (3 hrs)

One course from the following:
*CTAC225 Listening Skills (3 hrs)
*CTAC227 Interpersonal Skills (3 hrs)

One course from the following:
*LITR204 Native American Literature (3 hrs)
*LITR268 Multicultural Children's Literature (3 hrs)
*LITR269 African American Literature (3 hrs)

One course from the following:
RDNG220 Instructional Uses of Trade Books (3 hrs)
RDNG350 Integrated Language Arts Interaction (3 hrs)

One course from the following:
CTAR332 Improvising and Role-Play (3 hrs)
CTAR354 Oral Interpretation of Literature for the Young (3 hrs)

One course from the following:
CTAR222 Drama and Play in the Human Experience (3 hrs)

One course from the following:
ENGL450 Critical Evaluation of Children's Literature (3 hrs)
ENGL451 Controversy in Children's Literature (3 hrs)
LITR351 World Mythology (3 hrs)
LITR352 Ballads and Folktale (3 hrs)
LITR454 Children's Literature Fiction (3 hrs)

Minor Requirements ....................................................... 6-25 hours

The required structure of the disciplines minor is automatically met within this curriculum. An additional minor may be added if desired. Credit hours for an additional minor will vary.
ELEMENTARY EDUCATION PROGRAM
MATHEMATICS MAJOR FOR THE
ELEMENTARY TEACHING CERTIFICATE (MATH)

Elementary Teacher Certification

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in mathematics, certification code EX. This program of studies meets all requirements of the National Council of Teachers of Mathematics. The Michigan Test for Teacher Certification (MTTC) covering this field is #89. "Mathematics (Elementary)." At least nine hours in the major must be taken at Eastern Michigan University.

General Education Requirements

Area I: Symbolics and Communication
1. See page 23
2. See page 23
3. See page 23
4. MATH120 Calculus I*
5. See page 23

Area II: Science and Technology
1. PHYS100 Physics for Elementary Teachers (3 hrs)
2. PSY101 General Psychology (3/4 hrs)
3. CHEM101 Chemistry for Elementary Teachers (3 hrs)

Area III: Social Sciences
1. See page 24
2. See page 25
3. GEOG110 World Regions (3 hrs)
4. See page 24

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. MUSC104 Elements of Music (2 hrs)

Additional Requirements

ESSC202 Earth Science for Elementary Teachers (3 hrs)
LITR207 Introduction to Children's Literature (3 hrs)

Physical Education/Graduation Requirement

Major Requirements

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH108</td>
<td>Math for Elementary Teachers I</td>
<td>3 hrs</td>
</tr>
<tr>
<td>MATH109</td>
<td>Math for Elementary Teachers II</td>
<td>3 hrs</td>
</tr>
<tr>
<td>MATH120</td>
<td>Calculus I</td>
<td>4 hrs</td>
</tr>
<tr>
<td>MATH210</td>
<td>Algebra for Elementary Teachers</td>
<td>3 hrs</td>
</tr>
<tr>
<td>MATH240</td>
<td>Geometry for Elementary Teachers</td>
<td>3 hrs</td>
</tr>
<tr>
<td>MATH301</td>
<td>Advanced Topics in Mathematics</td>
<td>3 hrs</td>
</tr>
<tr>
<td>MATH403</td>
<td>Current Research in Elementary School Mathematics</td>
<td>3 hrs</td>
</tr>
</tbody>
</table>

Restricted Elective Courses

8 hours

Minor Requirements

0 hours

Professional Studies

Pre-Admission Phase: The Learner and the Community

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDFS322</td>
<td>Human Development and Learning</td>
<td>4 hrs</td>
</tr>
<tr>
<td>FETE301</td>
<td>Field Experience I</td>
<td>1 hr</td>
</tr>
<tr>
<td>SPGN251</td>
<td>Education of Students with Exceptionalities</td>
<td>3 hrs</td>
</tr>
</tbody>
</table>

The following courses require formal admission to the teacher education program:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH108</td>
<td>Math for Elementary Teachers I</td>
<td>3 hrs</td>
</tr>
<tr>
<td>MATH109</td>
<td>Math for Elementary Teachers II</td>
<td>3 hrs</td>
</tr>
<tr>
<td>MATH120</td>
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</tr>
<tr>
<td>MATH403</td>
<td>Current Research in Elementary School Mathematics</td>
<td>3 hrs</td>
</tr>
</tbody>
</table>

University Elective Courses

60 hours

Program Total

139 hours

Note:
*This course satisfies both a general education and a major requirement.
ELEMENTARY EDUCATION PROGRAM
SOCIAL STUDIES GROUP MAJOR (SSG)

Elementary Teacher Certification

Recommendation for endorsement in social studies (certification code 3X) requires a major of 30 credit hours covering economics, geography, history and political science. The Michigan Test for Teacher Certification (MTTC) covering social studies is #84, “Social Studies.”

General Education Requirements ............................................. 34-35 hours

**Area I: Symbolic and Communication**
1. See page 23
2. See page 23
3. See page 23
4. MATH100 Mathematics for Elementary Teachers I (3 hrs)
5. See page 23

**Area II: Science and Technology**
1. PHY100 Physics for Elementary Teachers (3 hrs)
2. On one course from the following:
   - PSY101 General Psychology (3 hrs)
   - PSY102 General Psychology (4 hrs)
   - CHEM101 Chemistry for Elementary Teachers (5 hrs)

**Area III: Social Sciences**
1. PLSC112/113 American Government* (3 hrs)
2. HIST123 The United States, 1877 to the Present* (3 hrs)
3. GEOG107 Introduction to Geography* (3 hrs)
4. HIST34 The United States, 1877 to the Present* (3 hrs)

**Area IV: Arts and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. MUSC104 Elements of Music (2 hrs)

Additional Requirements .................................................. 9 hours

**ESSC202 Earth Science for Elementary Teachers (3 hrs)**
**GEOG110 World Regions**
**LITR207 Introduction to Children's Literature (3 hrs)**
**MATH108 Mathematics for Elementary Teachers I (3 hrs)**

Physical Education/Graduation Requirement ................................ 2 hours

Major Requirements ....................................................... 36 hours

**PLSC112/113 American Government (3/3 hrs)**
**PLSC301 The American Legal System (3 hrs)**
**GEOG107 Introduction to Geography (3 hrs)**
**GEOG110 World Regions (3 hrs)**

**BIOL303 Life Science for Elementary Teachers (3 hrs)**
**MATH381 The Teaching of Mathematics, K-6 (3 hrs)**
**EDMT130 Instructional Applications of Media and Technology (2 hrs)**
**PHED257 Physical Education for the Classroom Teacher (2 hrs)**

Phase IV: Literacy, Culture and the Arts (may be taken with Phase III courses) ............................................. 10 hours

**RDNG310 Literacy Across the Curriculum in the Intermediate Grades (3 hrs)**
**FETE401 Field Experience III: Elementary (1 hr)**
**ART300 Art Integration for the Elementary Teacher (4 hrs)**
**MUSC290 Elementary Music Education (2 hrs)**

Program Total ................................................................... 139 hours

Note:
*This course satisfies both a general education and a major requirement.

**Minor Requirements** .................................................... 0-25 hours
The required structure of the discipline minor is automatically met within this curriculum. An additional minor may be added if desired. Credit hours for an additional minor will vary.

Professional Studies ...................................................... 58 hours

**Pre-admission:** Phase I: The Learner and the Community 8 hours
EDPS322 Human Development and Learning (4 hrs)
FETE201 Field Experience (1 hr)
SPGN251 Education of Students with Exceptionalities (3 hrs)

**Courses that require formal admission to the Teacher Education Program**
Phase II: Technology, Diversity, and Teaching Environments (may be taken with Phase II courses) 11 hours
TEDU253 Technology Education for Children (3 hrs)
HLED320 Health Education in the Elementary Grades (2 hrs)
RDNG300 Early Literacy (3 hrs)
SOFQ328 School in a Multicultural Society (3 hrs)

Phase II: Curriculum and Assessment (may be taken with Phase I courses) 7 hours
CURR304 Curriculum and Methods: Elementary (3 hrs)
EDPS340 Introduction to Assessment and Evaluation (3 hrs)
FETE301 Field Experience II: Elementary (1 hr)

Students must pass Phase II before proceeding to Phase III.

Phase III: Methods and Technology (may be taken with Phase IV courses) 10 hours
**BIOL303 Life Science for Elementary Teachers (3 hrs)**
**MATH381 The Teaching of Mathematics, K-6 (3 hrs)**
**EDMT330 Instructional Applications of Media and Technology (2 hrs)**
**PHED257 Physical Education for the Classroom Teacher (2 hrs)**

Phase IV: Literacy, Culture and the Arts (may be taken with Phase III courses) 10 hours
**RDNG310 Literacy Across the Curriculum in the Intermediate Grades (3 hrs)**
**FETE401 Field Experience III: Elementary (1 hr)**
**ART300 Art Integration for the Elementary Teacher (4 hrs)**
**MUSC290 Elementary Music Education (2 hrs)**
Phase V: Capstone Experience: 
EDUC 92 Student Teaching (12 hrs) 
12 hours

University Elective Courses ............................................. 0 hours

Program Total ............................................................... 139 hours

Notes:
*This course satisfies both a general education and a major requirement.

**Reading Major (RDNG)**

Successful completion of this major and the certification test qualifies the student for endorsement in Reading; certification code B/R. Students planning to take the Michigan State Subject Area Test for certification should take the test when all the course requirements are completed.

General Education Requirements ...................................... 46 hours

**Area I Symbolics and Communication**
1. See page 23
2. See page 23
3. See page 23
4. MAT 109 Mathematics for Elementary Teachers II (3 hrs)
5. See page 23

**Area II Science and Technology**
1. PHY 100 Physics for Elementary Teachers (3 hrs)
2. One course from the following:
   PSY 10 General Psychology (3 hrs)
   PSY 102 General Psychology (4 hrs)
3. CHEM 101 Chemistry for Elementary Teachers (3 hrs)

**Area III Social Sciences**
1. See page 24
2. See page 24
3. GEOG 110 World Regions (3 hrs)
4. See page 24

**Area IV Art and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. MUSC 10 Elements of Music (2 hrs)

**Additional Requirements** .............................................. 6 hours

ESS 202 Earth Science for Elementary Teachers (3 hrs)
亦LTR 207 Introduction to Children's Literature (3 hrs)
MATH 108 Mathematics for Elementary Teachers I (3 hrs)

**Physical Education/Graduation Requirement** ..................... 2 hours

Major Requirements .......................................................... 30 hours

**Required Courses** ..................................................... 24 hours

RDNG 210 Issues and Trends in Literacy Education (3 hrs)
RDNG 240 Reading and Writing Connections in the Elementary Grades (3 hrs)
RDNG 230 Early Literacy (3 hrs)
RDNG 310 Literacy Across the Curriculum in the Intermediate Grades (3 hrs)
FETE 401 Field Experience III: Elementary (1 hr)
RDNG 340 Literacy Assessment in the Elementary Schools (3 hrs)
RDNG 350 Reading and the Culturally and Linguistically Diverse Learner (5 hrs)
RDNG 400 Program Development for Struggling Readers (3 hrs)

**Restricted Elective Courses** ......................................... 6 hours

One course from the following:
CTAC 225 Listening Behavior (3 hrs)
RDNG 350 Integrated Language Arts Instruction (3 hrs)

One course from the following:
亦LTR 207 Introduction to Children's Literature (3 hrs)
RDNG 230 Instructional Uses of Tradebooks (3 hrs)

Minor Requirements ....................................................... 0-25 hours

The required structure of the discipline minor is automatically set within this curriculum. An additional minor may be added if desired. Credit hours for an additional minor will vary.

**Professional Studies** .................................................. 51 hours

**Pre-admission Phase:** The Learner and the Community (6 hrs)
EDPS 322 Human Development and Learning (4 hrs)
FETE 201 Field Experience (1 hr)
RDNG 251 Education of Students with Exceptionalities (3 hrs)

**Courses that require formal admission to the Teacher Education Program:**

Phase I: EDA 400 Field Experience I: Elementary (1 hr)
EDPS 340 Introduction to Assessment and Evaluation (3 hrs)
Students may not proceed to Phase II until Phase I is completed.

Phase III: Methods and Technology (may be taken with Phase IV courses):
10 hours
BIOL 102 Life Science for Elementary Teachers (1 hr)
MATH 201 Teaching of Mathematics K-6 (3 hrs)
EDMT 310 Instructional Applications of Media and Technology (2 hrs)

Phase IV: Literacy, Culture, and the Arts (may be taken with Phase III courses):
6 hours
*RDNG 310 Literacy Across the Curriculum in the Intermediate Grades (3 hrs)
FETE 401 Field Experience III: Elementary (1 hr)
ART 300 Art Integration for the Elementary Teacher (4 hrs)
MUSC 300 Elementary Music Education (2 hrs)

**Phase VI: Capstone Experience:**
EDUC 92 Student Teaching (12 hrs)
12 hours

University Elective Courses .............................................. 0 hours

Program Total ............................................................... 135 hours

Notes:
*This course satisfies both a professional study and a major requirement.

**EDUC 92 satisfies both a major requirement and a professional study requirement.

**Elementary Education Program with Three Minors (3MIN)**

**General Education Requirements** ................................ 46 hours

**Area I Symbolics and Communication**
1. See page 23
2. See page 23
3. See page 23
4. MATH 109 Mathematics for Elementary Teachers II (3 hrs)
5. See page 23

**Area II Science and Technology**
1. PHY 100 Physics for Elementary Teachers (3 hrs)
2. One course from the following:
   PSY 10 General Psychology (3 hrs)
   PSY 102 General Psychology (4 hrs)
3. CHEM 101 Chemistry for Elementary Teachers (3 hrs)

**Area III Social Sciences**
1. See page 24
2. See page 24
3. See page 24
4. MUSC 10 Elements of Music (2 hrs)

**also**

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**Arts Group Minor (ARTS)**

**Course Requirements**

For the Arts Group Minor (ARTS) program, students must complete a total of 20 hours of arts courses. This includes:

- At least 12 hours in courses numbered 300 or above.
- A minimum of 12 hours must be in the arts discipline.
- No more than 8 hours can be completed in the same area of study.
- At least 9 hours must be in courses numbered above 300.
- At least 3 hours must be in courses numbered above 400.

**Examples of Arts Courses**

- **Music**: Introduction to Music, Theory of Music, Performance, Composition.
- **Dance**: Dance Technique, Contemporary Dance, Modern Dance.
- **Visual Arts**: Painting, Drawing, Sculpture, Studio Art.
- **Drama**: Acting, Directing, Playwriting, Theatre History.
- **Film**: Film Theory, Screenwriting, Filmmaking, Cinema Studies.

**Additional Requirements**

- A minimum of 12 hours must be in courses numbered above 300.
- No more than 8 hours can be completed in the same area of study.
- At least 9 hours must be in courses numbered above 400.

**Example Courses**

- **Music**: Composition, Music Theory, Opera Studies.
- **Dance**: Dance Technique, Modern Dance, Jazz Dance.
- **Visual Arts**: Studio Art, Painting, Drawing.
- **Drama**: Acting, Directing, Playwriting.
- **Film**: Screenwriting, Filmmaking, Film Theory.

**Notes**

- Specific courses may have prerequisites.
- Consult with an advisor for course selection.
- The program requirements are subject to change without notice.
INTEGRATED ELEMENTARY SCIENCE MINOR (INSC)
Elementary and Special Education-Elementary Teacher Certification

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in science. Certification test covering this field is #16, "Science."

**Required Courses**
- CHEM101 Chemistry for Elementary Teachers (3 hrs)
- ESSC202 Earth Science for Elementary Teachers (3 hrs)
- BIOL303 Life Science for Elementary Teachers (3 hrs)
- PHY100 Physics for Elementary Teachers (3 hrs)
- One course from the following:
  - ASTR203 Exploration of the Universe (3 hrs)
  - ASTR205 Principles of Astronomy (4 hrs)
- Two courses from the following:
  - PHY311 Teaching Elementary Physical Science (3 hrs)
  - ESSC311 Weather and Climate for Elementary Teachers (3 hrs)
  - BIOL105 Biology and the Human Species (4 hrs)

**Restricted Elective Courses**
- 8 to 9 hours: ASTR204 Astronomical Investigations (1 hr)
- BIOL105 Introductory Biology for Non-majors (4 hrs)
- BIOL205 Field Biology (4 hrs)
- BIOL324 Global Ecology and the Environment (4 hrs)
- BOTN215 Economic Botany (3 hrs)
- BOTN130 Biology of Plants (4 hrs)

**Other Courses**
- 24 hours

**Minor Total**

---

**Note:**
- Not open to those with credit in MUSC106
- Students are advised that some of the courses listed have prerequisites that are not necessarily met by other courses in the program. In order to avoid taking extra hours, students should select courses for which the prerequisites have been met.

---

### Integrated Elementary Science Minor (INSC)

**Elementary and Special Education-Elementary Teacher Certification**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in science. Certification test covering this field is #16, "Science."

**Required Courses**

- **CHEM101 Chemistry for Elementary Teachers (3 hrs)**
- **ESSC202 Earth Science for Elementary Teachers (3 hrs)**
- **BIOL303 Life Science for Elementary Teachers (3 hrs)**
- **PHY100 Physics for Elementary Teachers (3 hrs)**
- One course from the following:
  - **ASTR203 Exploration of the Universe (3 hrs)**
  - **ASTR205 Principles of Astronomy (4 hrs)**
- Two courses from the following:
  - **PHY311 Teaching Elementary Physical Science (3 hrs)**
  - **ESSC311 Weather and Climate for Elementary Teachers (3 hrs)**
  - **BIOL105 Biology and the Human Species (4 hrs)**

**Restricted Elective Courses**

- 8 to 9 hours: **ASTR204 Astronomical Investigations (1 hr)**
- **BIOL105 Introductory Biology for Non-majors (4 hrs)**
- **BIOL205 Field Biology (4 hrs)**
- **BIOL324 Global Ecology and the Environment (4 hrs)**
- **BOTN215 Economic Botany (3 hrs)**
- **BOTN130 Biology of Plants (4 hrs)**

**Other Courses**

- **24 hours**

**Minor Total**

---

**Note:**
- Not open to those with credit in MUSC106
- Students are advised that some of the courses listed have prerequisites that are not necessarily met by other courses in the program. In order to avoid taking extra hours, students should select courses for which the prerequisites have been met.
PHYS7/478/479 Special Topics (1/2/3 hrs)
PHYS95/991/992 Special Topics (1/2/3 hrs)

Minor Total ............................................ 24 hours

Note: Do not take ESSC108. For transfer students with ESSC108 credits completed, ESSC108 automatically substitutes for ESSC202 and fulfills the requirement. Students cannot use ESSC108 as an elective if they also have ESSC202.

LANGUAGE ARTS GROUP MINOR (LAG)
Elementary and Special Education-Elementary Teacher Certification

Successful completion of this minor and the certification test #01 “Language Arts” qualifies the student for endorsement in language Arts certification code BX. Students planning to take the Michigan State Subject Area Test for certification should take the test when all the course requirements are completed.

Required Courses ...................................... 12 hours
RDNG300 Early Literacy (3 hrs)
RDNG310 Literacy Across the Curriculum in the Intermediate Grades (3 hrs)
ENGL307 Writing Process for Elementary Teachers (3 hrs)
LNG201 An Introduction to Linguistics (3 hrs)

Restricted Elective Courses ........................... 11 hours
One course from the following:
CTAC227 Listening Skills (3 hrs)
CTAC227 Interpersonal Skills (3 hrs)
CTAC374 Intercultural Communication (3 hrs)

One course from the following:
LITR204 Native American Literature (3 hrs)
LITR208 Multicultural Children's Literature (3 hrs)
LITR260 African American Literature (3 hrs)

One course from the following:
LITR207 Children's Literature (3 hrs)
RDNG220 Instructional Uses of Trade Books (3 hrs)

One course from the following:
CTAR322 Theatre for Children (3 hrs)
CTAR323 Improvising and Role-Play (3 hrs)
CTAR374 Oral Interpretation of Literature for Children (3 hrs)

Minor Total ............................................ 24 hours

SOCIAL STUDIES GROUP MINOR (ELEMENTARY) (SS)
Elementary and Special Education-Elementary Teacher Certification

Successful completion of this minor, in the context of other program requirements, qualifies the student for recreditemption for endorsement in social studies, certification code BX. The Michigan Test for Teacher Certification (MTTC) covering this field is #84, “Social Studies.”

Required Courses ...................................... 24 hours
PSCI12/113 American Government (3 hrs)
PSCI201 The American Legal System (3 hrs)
GEOG107 Introduction to Geography (3 hrs)
GEOG110 World Regions (3 hrs)

One course from the following:
ECON100 Introduction to Economic Problems and Policies (3 hrs)
ECON201 Principles of Macroeconomics (3 hrs)

One course from the following:
ECON300 Contemporary Economics (3 hrs)
ECON321 Minority Workers in the Labor Market (3 hrs)
ECON328/WMST328 Economics of Women (3 hrs)

ECON375 Economic History of the United States (3 hrs)
ECON385 Economic Development (3 hrs)

One course from the following:
HIST123 The United States to 1877 (3 hrs)
HIST124 The United States, 1877 to the Present (3 hrs)

One course from the following:
HIST106 Asian and African Civilizations (3 hrs)
HIST107 World History to 1500 (3 hrs)
HIST110 World History since 1500 (3 hrs)

Minor Total ............................................ 24 hours

READING MINOR (ELEMENTARY) (RDNG)
Elementary Certification

Successful completion of this minor and the certification test qualifies the student for endorsement in reading, certification code BX. Students planning to take the Michigan State Subject Area Test for certification should take the test when all the course requirements are completed.

Required Courses ...................................... 18 hours
FETE401 Field Experience III: Elementary (1 hr)
RDNG210 Issues and Trends in Literacy Education (3 hrs)
RDNG230 Word Study in the Reading Program (3 hrs)
RDNG240 Reading and Writing Connections in the Elementary Grades (3 hrs)
RDNG300 Early Literacy (3 hrs)
RDNG210 Literacy Across the Curriculum in the Intermediate Grades (3 hrs)
RDNG300 Literacy Assessment in the Elementary Schools (3 hrs)

Restricted Elective Course ............................ 3 hours
One course from the following:
LITR207 Introduction to Children's Literature (3 hrs)
RDNG220 Instructional Uses of Trade Books (3 hrs)

Minor Total ............................................ 21 hours

STRUCTURE OF THE DISCIPLINES MINOR (SDSC)
Elementary Certification

Note: Effective with students who enter under (or change to) the 1998 and later catalogs, the program for prospective elementary teachers will include the structure of the disciplines minor, either in connection with one of the majors from the approved list of majors for elementary or in connection with two additional minors.

The structure of the discipline minor is a liberal arts minor that varies in credit numbers depending on the major or minors with which it is selected. To select a structure of the discipline minor, a student shall select either Option I or Option II below. This applies only to elementary education students who do not have an early childhood minor (ECM) (early childhood students must see an early childhood adviser for information on majors and minors).

Option I: Select a major from the recommended majors listed below and choose the structure of the disciplines as the corresponding minor.

Integrated Science
Language Arts Group
Mathematics for Elementary Teaching Certification
Social Studies (for Elementary) Group
Reading
Option II: Select three minors from below:

a. You must choose at least one of the following:

- Integrated Science
- Language Arts Group Minor
- Math for Elementary Teaching Certification Minor
- Social Studies (for Elementary) Group Minor
- Reading Minor

b. A second minor from list (a) above or from among the following:

- Art Group Minor
- Elementary Music Education Minor (Vocal or Instrumental)
- French Language Minor (Elementary Education)
- German Language Minor (Elementary Education)
- Spanish Language Minor (Elementary Education)
- Health Minor
- Technology and Design Education Minor

c. The structure of the discipline minor is the third choice in option II.

All of the following courses are required for prospective elementary teachers. Only those that are not applied to either (a) or (b) the student’s major or (b) the student’s other two minors may be applied to the structure of the discipline minor. A number of these courses also satisfy a general education requirement. The structure of the discipline minor does not lead to subject-area certification.

ENGL121 Composition II: Researching the Public Experience (3 hrs)
CTAS121/124 Fundamentals of Speech (2/3 hrs)
LITR207 introduction to Children’s Literature (3 hrs)
MATH108 Mathematics for Elementary Teachers I (3 hrs)
MATH109 Mathematics for Elementary Teachers II (3 hrs)
MATH381 The Teaching of Mathematics, K-6 (3 hrs)
PHY100 Physics for Elementary Teachers (3 hrs)
CHEM101 Chemistry for Elementary Teachers (3 hrs)
ESSC202 Earth Science for Elementary Teachers (3 hrs)
BIOL303 Life Science for Elementary Teachers (3 hrs)
TEDU233 Technology Education for Children (3 hrs)
ART300 Art Integration for the Elementary Teacher (4 hrs)
MUSC104 Elements of Music (2 hrs)
MUSC230 Elementary Music Education (2 hrs)
PSY101/102 General Psychology (3/4 hrs)
PLSCI112/113 American Government (3 hrs)
GEOG110 World Regions (3 hrs)
HLED320 Health Education in the Elementary Grades (2 hrs)
PHED257 Physical Education for the Classroom Teacher (2 hrs)

Any three-credit history course except HIST100 (3 hrs)

Minor Total .......................................................... 24 hours

**POST-BACCALAUREATE ELEMENTARY AND SECONDARY TEACHER CERTIFICATION PROGRAMS**

Students pursuing this program will complete either elementary or secondary teacher certification requirements. Students wishing to pursue an endorsement in any area of special education, in addition to their teaching certificate, should see the master’s teacher certification and endorsement in special education program described under the Department of Special Education. Students wishing to be certified in any of the following areas have requirements that differ from the general programs listed below and must obtain additional information from the College of Education Office of Academic Services: art, music (vocal and instrumental), physical education, Japanese, marketing education, business services and technology education (business education), technology education (technology and design or industrial technology), or industrial-vocational education. General procedures for obtaining post-baccalaureate certification can be found under the College of Education.

Initial contact for all post-baccalaureate students should be with the College of Education Office of Academic Services.

**Admission Requirements**

1. Minimum undergraduate grade point average (GPA) of 2.5. Applicants with less than a 2.5 GPA should contact the Second Bachelor’s Office, 301 Pierce.
2. Official score from the Michigan Test for Teacher Certification (MTTC) on file at Eastern Michigan University.
4. Personal statement.
5. Compliance with all other admissions requirements.

**Program Requirements**

**The student must:**

1. Have a review of previous course work, performed by the College of Education Office of Academic Services, to determine those requirements already completed, both for the teaching subject major or minor and for certification.
2. Successfully complete general studies requirements as needed.
3. Successfully complete major or minor requirements for elementary or secondary education.
4. Successfully complete required hours of fieldwork experience. Presently a minimum of 100 clock hours of field experience is required, including required FETE courses.
5. Successfully complete professional education course requirements, either elementary or secondary.
6. Successfully complete student teaching.

**Exit Criteria**

1. Successful completion of all course work on program (designated minimum GPA overall, and in major/minors).
2. Successful completion of required student teaching.

**Curricula**

Most courses required for post-baccalaureate certification are undergraduate courses (course numbers under 500). It is important to note that 600-level or higher courses may not be used on a program of study.

**POST-BACCALAUREATE PROGRAM IN ELEMENTARY EDUCATION**

**General Studies Requirements**

Students must complete a minimum of 40 credit hours in general education, which include the areas listed below. Many students can meet most general studies requirements through courses previously taken as part of a bachelor’s degree. This is current practice:

- a course in history
- a course in earth science
- a course in either physics or chemistry
- a course in literature
- a course in written communication
- a course in oral communication
- a course in the arts: art, dance, music or theater
- a course in world religions
- a course in U.S. government
- a course in general psychology
- a course in calculus or MATH108
- MATH109 or equivalent
Professional Education Sequence
Pre-admission Phase: The Learner and the Community
+ EDPS322 Human Development and Learning (4 hrs)
+ FETE201 Field Experience I: Early Childhood (1 hr)
One course from the following:
SPGN310 The Exceptional Child in the Regular Classroom (3 hrs)
SPGN251 Education of Students with Exceptionalities (3 hrs)

Phase I: Curriculum, Assessment and the Social Context
Prerequisite: Admission to the Teacher Education program.
- HLED320 Health Education in the Elementary Grades (2 hrs)
- SOC320 Schools in a Multicultural Society (3 hrs)
- EDPS340 Introduction to Assessment and Evaluation (3 hrs)
- CURR304 Elementary Curriculum and Methods (3 hrs)
- FETE301 Field Experience II: Elementary (1 hr)
- RDNG300 Early Literacy (3 hrs)

Phase II: Content Methods and Technology
- EMT350 Technology and Media in the Classroom (3 hrs)
- RDNG310 Literacy Across the Curriculum in the Intermediate Grades (3 hrs)
- FETE401 Field Experience III: Elementary (1 hr)
- BIOL303 Life Science for Elementary Teachers (3 hrs)
- MATH381 The Teaching of Mathematics (3 hrs)

Phase III: Capstone Experience
Prerequisite: Completion of Phases I and II.
- EDUC492 Student Teaching (12 hrs)

100 Clock Hours Pre-Student Teaching Required
Note:
+ Corequisites

MAJOR/MINOR REQUIREMENTS FOR POST-BACCALAUREATE PROGRAMS IN ELEMENTARY EDUCATION

One approved major and minor, or three approved minors are required. The planned program in structure of the disciplines may be used as a minor except for programs including a special education major, an early childhood minor or a bilingual-bicultural minor. See below for list of approved majors and minors.

Recommended Teaching Majors
- Elementary Science Group (available until December 2003)
- Language Arts Group
- Mathematics for the Elementary Teaching Certificate
- Reading
- Social Studies Group Major for Elementary Education

Additional Teaching Majors
- Biology
- Comprehensive Major in Communication and Theater Arts
- Earth Science
- Geography
- History
- Spanish
- Special Education (see Department of Special Education)

Approved Minors
- Arts Group
- Bilingual-Bicultural Education (Spanish-English)
- Biology

Communication Minor for Elementary and Special Education
Early Childhood Education
Elementary Music Education
Elementary Integrated Science
French, German and Spanish Language
Geography
Health
History
Language Arts Group
Mathematics for the Elementary Teaching Certificate
Physical Education for Special Education (available only to special education majors)
Political Science
Reading
Social Studies Group
Sociology
Structure of the Disciplines
Technology and Design

POST-BACCALAUREATE PROGRAM IN SECONDARY EDUCATION

General Studies Requirements
Students must complete a minimum of 40 credit hours in general studies, which include the areas listed below. Many students can meet most general studies requirements through courses previously taken as part of a bachelor's degree.

- a course in history
- a course in science with a laboratory component
- a course in literature
- a course in written communication
- a course in oral communication
- a course in mathematics
- a course in the arts: art, dance, music or theater
- a course in U.S. government
- a course in general psychology

Major/Minor Requirements
Students must complete one approved major and one approved minor.

Approved Majors for Secondary Education
- Biology
- Business Education
- Chemistry
- Communication and Theater Arts (speech)
- Computer Science
- Earth Science
- Economics
- French
- Geography
- German Language
- History
- Language, Literature and Writing (English)
- Marketing Education
- Mathematics
- Physics
- Political Science
- Psychology (requires an additional major)
- Social Studies
- Sociology
- Spanish
- Vocational Education
Approved Minors for Secondary Education
- Bilingual-Bicultural Education (Spanish-English)
- Biology
- Chemistry
- Comprehensive Minor in Communication and Theatre Arts (speech)
- Computer Science
- Earth Science
- Economics
- French Language
- Geography
- German Language
- Health
- History
- Language, Literature and Writing (English)
- Mathematics
- Physical Education
- Physical Education for Special Education Majors (available only to special education majors)
- Physics
- Political Science
- Psychology
- Sociology
- Spanish Language

Approved K-12 (Secondary Certificate)
- Art Education
- Japanese Language and Culture
- Music (Instrumental)
- Music (Vocal)
- Physical Education
- Special Education
- Technology and Design Education

Professional Education Sequence

Pre-admission Phase: The Learner and the Community
- EDP5322 Human Development and Learning (4 hrs)
- ETE401 Field Experience I: Secondary (1 hr)

One course from the following:
- SPN310 The Exceptional Child in the Regular Classroom (3 hrs)
- SPN251 Education of Students with Exceptionalities (3 hrs)

Phase I: Curriculum, Assessment, and the Social Context
Prerequisite: Admission to the teacher education program
- SOF328 Schools in a Multicultural Society (3 hrs)
- EDP340 Introduction to Assessment and Evaluation (3 hrs)
- CURR305 Curriculum and Methods: Secondary (3 hrs)
- ETE402 Field Experience II: Secondary (1 hr)

Phase II: Content, Methods and Technology
- EDES330 Technology and Media in the Classroom (2 hrs)
- HEDNG311 Teaching Reading in the Secondary School (3 hrs)
- ETE402 Field Experience II: Secondary (1 hr)

Methods of Teaching in Subject Areas (2-4 hrs)

Phase III: Capstone Experience
Prerequisite: Completion of Phases I and II.
- EDUC492 Student Teaching (12 hrs)

100 Clock Hours Pre-Student Teaching Required

Note:

Consequences
COLLEGE OF HEALTH AND HUMAN SERVICES

Dean:
Jeanne Thomas
206 Everett L. Marshall Building
734.487.0077

Associate Dean:
Polly Buchanan
206 Everett L. Marshall Building
734.487.0077

Coordinator - CHHS Advising:
Martha Sutten
206 Everett L. Marshall Building
734.487.0918

Administrative Assistant:
Judy Stokes
206 Everett L. Marshall Building
734.487.0077

Schools:
• Health Promotion and Human Performance
• Health Sciences
• Nursing
• Social Work
MISSION STATEMENT
To prepare students to become professionals within the Health and Human Services systems.

The College of Health and Human Services provides tomorrow's professionals with the appropriate combination of knowledge and skills to enable them to enhance the quality of life and facilitate social change to meet societal needs. The programs in the college focus on the preparation of professionals for a unique combination of health and human service disciplines. As a result, curricula are built around an integration of knowledge with practice. Experiential education that is community-based strongly links theory and practice. The curricula focus on a holistic view of individuals, groups, families, communities, the process of change, and the interrelationships of people, institutions, and services.

The Everett L. Marshall Building provides excellent facilities for the School of Health Promotion and Human Performance. Health Science, Nursing, and Social Work. The design of the Marshall building addresses four goals: to foster a sense of community; to provide a healthy environment by using green/sustainable materials and furnishings to provide cutting-edge technology for teaching and learning; and to use universal design to meet the needs of everyone who uses the building, regardless of their physical ability or stature.

The classrooms in Marshall have cutting-edge instructional technology controlled from a touch panel at the podium. The furnishings in the rooms are adjustable to accommodate students of different physical stature or those with disabilities. Student tables and chairs are on casters so that rooms can be arranged to accommodate different teaching and learning styles, e.g. lecture, small group, large group or role-play. There are more than 1,000 network connections in the building and wireless service in the Commons areas to enable students with laptop computers to easily communicate with peers or professors and to provide easy access to the Internet. Two student commons areas and a cafe in a two-story atrium space provide comfortable environments for studying or group work. The building also serves as a demonstration site for environmentally-conscious design. Furnishings and finishings were selected to "do no harm" to the earth's environment.

State-of-the-art laboratory spaces include the clinical lab sciences suite, two occupational therapy labs, a nursing skills lab, a nursing assessment lab and a social work laboratory. A home care unit resembles an apartment. Students can mock-up different home environments to simulate clients' homes for delivery of home health care or to design supportive environments for people who are frail or disabled.

The Marshall Building houses the dean of the College of Health and Human Services, the School of Health Science, and the schools of Nursing and Social Work. The School of Health Promotion and Human Performance is located next door in the Porter Building (Room 318). The goal of the college is to create an environment that fosters a sense of community and belonging for all students, faculty, and staff. The College Advising Center is located on the second floor in Marshall to meet the needs of prospective and incoming students.

The College of Health and Human Services Advising Center
206 Marshall Building
www.emich.edu/chhs/advising
734-487-0910
E-mail: chhsadvising@emich.edu

The Center advises all undeclared undergraduate students interested in programs related to Health and Human Services. The goal of the Center is to facilitate retention and academic achievement of students interested in health and human service careers.

SCHOOL OF HEALTH
Promotion and Human Performance

Campus Address: 318 Porter Building
Internet: www.emich.edu/chhs/human
Telephone: 734.487.4385
E-mail: ian.haestmark@emich.edu

See pages 250, 300, 331, 333, 344 and 352 for course descriptions.

Any student who has started his/her academic career after the Fall 1996 semester shall take the PEGN210 Lifestyle Wellness and Fitness course. In addition, students may elect up to eight credit hours of physical education activity courses that enhance students' personal development, health-related fitness and their use of leisure. All students seeking admission to a professional major program must apply in 318 Porter. Upon acceptance into a program, declared major students are assigned a faculty advisor.

In addition, the school provides career education in the fields of health, physical education, adapted physical education, exercise science, athletic training and orthotics and prosthetics.

Three physical education facilities are available for student use. Warner Physical Education Building dedicated in 1964, houses the majority of areas used by the school to instruct students in their career preparation. The facility includes three gymnatoriums, a dance studio, a weight room, a gymnastics room, sports medicine lab, orthotics and prosthetics lab and four classrooms.

Adjacent and attached to Warner are Brown Field House and the Olds-Robie Rec/IM building, where classes are taught in facilities such as the indoor track, raquetball/paddleball courts and a 50-meter swimming pool.

The school is affiliated with the American Alliance and Michigan Associations of Health, Physical Education, Recreation, and Dance; the American College of Sport Medicine; the American School Health Administration; the Society for Public Health Education; and the National Athletic Trainers Association. It also sponsors the student professional organizations Eta Sigma Gamma (health) and Delta Pi Kappa (physical education). Other student organizations include the Student Athletic Trainer Club, the Student Exercise Science Club, and the Physical Education Organization.

Endorsements
State of Michigan Endorsement as a Physical Education Teacher for Students with Disabilities.

Fieldwork is a criterion of individual professional programs. Extracurricular assignments enhance the practical application of knowledge learned in the classroom.

Certification is dependent upon the professional program a student selects. Each of the major and minor programs allows students to fulfill professional preparation for different careers.

Graduate study leads to the master's degree in physical education with emphasis in pedagogy, exercise physiology and athletic administration. A master's degree in health education and a post graduate certificate in orthotics and prosthetics is also available. For descriptions of graduate courses and programs, consult the graduate catalog.

Activity Courses for General Students
Students are required to wear apparel appropriate for safe and efficient participation in the particular course activity. Students may utilize the locker room by paying a locker and towel fee. This fee is payable at the Collier's Office, 201 Pierce.
CURRICULUM FOR SPORTS MEDICINE (SPMD)

Sports medicine is a comparatively new field of study that integrates sports, medicine, the sciences and other health-related areas into a professional curriculum. It is identified under different approaches and titles including athletic training, cardiovascular rehabilitation, exercise physiology and biomechanics.

The curriculum leads to a bachelor of science degree in sports medicine. The course of study consists of a minimum of 58 hours in general education, a minimum of 62 (for A.T.) credit hours in the major and 17 to 20 hours of free electives. Students must participate in a variety of practice experiences prior to completing a full-time internship in their senior year. The program has established special course prerequisites, GPA requirements and candidacy admission requirements. No outside minor is needed.

SPORTS MEDICINE — ATHLETIC TRAINING (SPMD ATTR)

Accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP)

All forms and the most up to date information about the athletic training education program at Eastern Michigan University can be obtained from the program Web site at: www.emich.edu/gec/sportsmedicinesports

Students in the sports medicine athletic training curriculum that are applying to begin their clinical experience must obtain and submit a medical physical to be reviewed by physicians that are part of the EMU sports medicine team. They must obtain, complete and submit an application for SPMD225 Practicum I and complete the Hepatitis B vaccination form prior to enrolling in the clinical education coursework. These forms may be printed from the Athletic Training Web site or picked up from their athletic training advisor.

The athletic training educational program at Eastern Michigan University is a rigorous and intense program that places specific requirements and demands on the students enrolled in the program. An objective of this program is to prepare graduates to enter a variety of employment settings and to render care to a wide spectrum of individuals engaged in physical activity. The technical standards set forth by the athletic training educational program establish the essential qualities considered necessary for students admitted to this program to achieve the knowledge, skills and competencies of an entry-level athletic trainer, as well as meet the expectations of the program's accrediting agency (Commission on Accreditation of Allied Health Education Programs (CAAHEP)). The following abilities and expectations must be met by all students admitted to the athletic training educational program. In the event a student is unable to fulfill these technical standards, with or without reasonable accommodation, the student will not be admitted into the program.

Compliance with the program's technical standards does not guarantee a student's eligibility for the National Athletic Trainers' Association Board of Certification (NATA/BOC) certification exam.

Candidates for selection to the athletic training educational program must demonstrate:

- The capacity to assimilate, analyze, synthesize, integrate concepts and problem solve to formulate assessment and therapeutic judgments and to be able to distinguish deviations from the norm.
- Sufficient postural and neurovascular control, sensory function and coordination to perform appropriate physical examinations using accepted techniques; and accurately, safely and efficiently use equipment and materials during the assessment and treatment of patients.
- The ability to communicate effectively with patients and colleagues, including individuals from different cultural and social backgrounds; this includes, but is not limited to, the ability to establish rapport with patients and communicate judgments and treatment information effectively. Students must be able to understand and speak the English language at a level consistent with competent professional practice.
- The ability to record the physical examination results and a treatment plan clearly and accurately.
- The capacity to maintain composure and continue to function well during periods of high stress.
- The perseverance, diligence and commitment to complete the athletic training education program as outlined and sequenced.
- Flexibility and the ability to adjust to changing situations and uncertainty in clinical situations.
- Affective skills and appropriate demeanor and rapport that relate to professional education and quality patient care.

Candidates for selection to the athletic training educational programs will be required to verify they understand and meet these technical standards or that they believe that, with certain accommodations, they can meet the standards.

The Access Services Office will evaluate a student who says he/she could meet the program's technical standards with accommodation and confirm that the stated condition qualifies as a disability under applicable laws.

If a student says he/she can meet the technical standards with accommodation, then the University will determine whether it agrees that the student can meet the technical standards with reasonable accommodation; this includes a review of whether the accommodations requested are reasonable, taking into account whether accommodation would jeopardize clinical/patient safety or the educational process of the student or the institution, including all coursework, clinical experiences and internships deemed essential to graduation.

Students entering the athletic training program are listed as "interns" and cannot be considered for candidacy until the following criteria are met:

1. Officially enroll in the program at the Academic Advising Center (Pierce Hall) and complete a sports medicine application at 318 Porter.
2. Overall GPA at Eastern Michigan University of 2.9 (transfer GPA evaluated separately).
3. Completion of 50 hours of the program.
4. Grades of C or above in BIOL105 Introductory Biology for Nonmajors, and SPMD338 Laboratory in Human Anatomy.
5. Completion of Practicum I, application, Technical Standards, a medical examination by a physician and Hepatitis B vaccination form.
6. Completion of the following courses with a grade of B or above:
   - SPMD119 Orientation to Sports Medicine
   - SPMD201 Human Anatomy for Sports Medicine
   - SPMD202 Human Physiology for Sports Medicine
   - SPMD225 Practicum I
7. Currently enrolled in SPMD220 Practicum II
8. Three letters of recommendation, two professional and one personal.
10. One page response to the statement: "I should be admitted into the Athletic Training Education Program because..."

When an "intern" has successfully achieved the above, he/she must apply for candidacy. The application form can be obtained from the program coordinator or the clinical coordinator or online at the program's Web site (www.emich.edu/athleticsportsmedicine). The "intern" will be notified of the date and time for a personal interview with the Athletic Training Education Committee.

General Education Requirements

<table>
<thead>
<tr>
<th>Area I Symbolic and Communication</th>
<th>48 hours</th>
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<tbody>
<tr>
<td>1. See page 23</td>
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<td>2. See page 23</td>
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<td>4. See page 23</td>
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<td>5. See page 23</td>
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<table>
<thead>
<tr>
<th>Area II Science and Technology</th>
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<tbody>
<tr>
<td>1. CHEM120 Fundamentals of Organic and Biochemistry (4 hrs)</td>
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<tr>
<td>2. BIOL105 Introductory Biology for Non-major (4 hrs)</td>
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<td>3. One course from the following:</td>
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<td>PSY101 General Psychology (3 hrs)</td>
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<td>PSY102 General Psychology (4 hrs)</td>
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When an "intent" has successfully achieved the above, he or she must complete the candidacy application, including the application form, three letters of recommendation (two professional and one personal) and a biographical sketch, and turn it in to their advisor. Once accepted into candidacy, the student must maintain a minimum 2.75 GPA. The student will not be allowed to complete the internship experience (SPMD480) if the GPA falls below 2.75. In addition, a grade of C or better must be attained in the following courses: PHED300, SPMD325, SPMD410, SPMD430, SPMD431, SPMD432 and SPMD480. If the above are not met, the course(s) in question must be retaken.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Area</th>
<th>Course Details</th>
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<tbody>
<tr>
<td>Area II: Science and Technology</td>
<td>One course from the following: CHEM120 Fundamentals of Organic and Biochemistry*, CHEM121/122 General Chemistry I (with lab)*</td>
</tr>
<tr>
<td>Area II: Science and Technology</td>
<td>One course from the following: BIOL105 Introductory Biology for Non-majors*, BIOL110 Introductory Biology*</td>
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<tr>
<td>Area II: Science and Technology</td>
<td>3. PSY101 General Psychology*</td>
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<tr>
<td>Area III: Social Sciences</td>
<td>1. See page 23</td>
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<td>Area IV: Arts and Humanities</td>
<td>5. See page 23</td>
</tr>
</tbody>
</table>

**Physical Education/Graduation Requirement**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEG210 Lifetime Wellness and Fitness</td>
<td>2 hours</td>
</tr>
</tbody>
</table>

**Sports Medicine—Athletic Training**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTCD104 Sports Nutrition (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD310 Advanced First Aid and Emergency Care (2 hrs)</td>
<td></td>
</tr>
<tr>
<td>PHED300 Physiology of Exercise (4 hrs)</td>
<td></td>
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<tr>
<td>SPMD119 Orientation to Sports Medicine (1 hr)</td>
<td></td>
</tr>
<tr>
<td>SPMD201 Anatomy for Sports Medicine (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD203 Physiology for Sports Medicine (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD219 Introduction to Athletic Training (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD221 Therapeutic Modalities for Athletic Trainers (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD225 Practicum I (2 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD290 Practicum II (2 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD295 Assessment of Lower Body Injuries (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD296 Assessment of Upper Body Injuries (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD305 Kinesthesia-Therapeutic Mechanics (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD380 Behavioral Aspects of Sports Medicine (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD396 Practicum III (1 hr)</td>
<td></td>
</tr>
<tr>
<td>SPMD399 Supervised Practicum (2 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD419 Medical Aspects of Athletic Training (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD451 Legal Aspects of Sports Medicine (2 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD485 Seminar in Athletic Training (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD490 Internship Athletic Training (8 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD280 Pharmacology for Sports Medicine (2 hrs)</td>
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</tr>
</tbody>
</table>

**University Elective Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td></td>
<td>9 hours</td>
</tr>
</tbody>
</table>

**Program Total**

| Total Hours | 124 hours |

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**SPORTS MEDICINE—EXERCISE SCIENCE (SPMD EXSC)**

Students entering the exercise science program are listed as "intents" and will be considered for candidacy when the following criteria are met:

1. Declare intent to major in exercise science with the Academic Advising Center in Pierce Hall and the School of Health Promotion and Human Performance.
2. Achieve an overall GPA at Eastern Michigan University of 2.75 (transfer GPA evaluated separately).
3. The following courses must be completed with a grade of C or better: BIOL105, CHEM120, PHY221, SPMD119, SPMD201, SPMD202 and SPMD318.

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**Major Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL105 Introductory Biology for Non-majors (4 hrs)</td>
<td></td>
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<tr>
<td>BIOL110 Introductory Biology I (5 hrs)</td>
<td></td>
</tr>
<tr>
<td>CHEM120 Fundamentals of Organic and Biochemistry (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>CHEM121/122 General Chemistry I (with lab) (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>PSY101 General Psychology (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>PHY221 Mechanics, Sound and Heat (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD119 Orientation to Sports Medicine (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD201 Anatomy for Sports Medicine (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD202 Physiology for Sports Medicine (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD204 Sports Nutrition (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>PHED300 Physiology of Exercise (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD305 Pharmacology for Sports Medicine (2 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD325 Practicum in Exercise Science (2 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD380 Behavioral Aspects of Sports Medicine (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD410 Laboratory Techniques in Human Performance: Analysis (4 hrs)</td>
<td></td>
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<tr>
<td>SPMD430 Principles of Electrodynamics (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD431 Pathology for Sports Medicine (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SPMD432 Introduction to Exercise Programming (3 hrs)</td>
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</tr>
<tr>
<td>SPMD480 Internship—Exercise Science (8 hrs)</td>
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</tbody>
</table>

**Pre-Candidacy Course Requirement**

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>BIOL105 Introductory Biology for Non-majors (4 hrs)</td>
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<td>SPMD431 Pathology for Sports Medicine (3 hrs)</td>
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<tr>
<td>SPMD480 Internship—Exercise Science (8 hrs)</td>
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</tbody>
</table>

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**Required Courses (Pre-Candidacy)**

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</tr>
</thead>
<tbody>
<tr>
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<td>BIOL110 Introductory Biology I (5 hrs)</td>
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<td>SPMD202 Physiology for Sports Medicine (3 hrs)</td>
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<tr>
<td>SPMD480 Internship—Exercise Science (8 hrs)</td>
<td></td>
</tr>
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</table>

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**Program Total**

| Hours | 65-66 hours |

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**Additional Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>PHY221 Mechanics, Sound and Heat (4 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

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**Program Total**

| Hours | 124 hours |
Physical Education Non-Teaching Major (PHED)

The physical education non-teaching option is available for students who wish to pursue careers in health and wellness other than the teaching of physical education. Graduates have found employment in fitness centers, as coaches of sports teams and other sport-related fields and have used the degree for entry into graduate study in athletic administration, occupational and physical therapy and related careers.

General Education Requirements .................................................. 47 hours

Area I Symbolic and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

Area II Science and Technology
1. See page 24
2. PSY101 General Psychology (3 hrs)
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Physical Education/Graduation Requirement ......................... 2 hours
PEGN210 Lifetime Wellness and Fitness (2 hrs)

Major Requirements .............................................................. 37 hours
PHED210 Standard American Red Cross First Aid (2 hrs)
PHED100 History and Foundation of Physical Education (2 hrs)
PHED200 Anatomy and Physiology (5 hrs)
PHED204 Kinesiology (3 hrs)
PHED215 Methods of Teaching Individual Sports (3 hrs)
PHED217 Methods of Teaching Team Sports (3 hrs)
PHED219 Methods of Teaching Rhythmic Activities, Fundamental Movements and Movement Education (5 hrs)
PHED260 Motor Development (2 hrs)
PHED300 Physiology of Exercise (4 hrs)
PHED315 Methods of Teaching Conditioning Activities (2 hrs)
PHED317 Methods of Teaching Elementary Physical Education (2 hrs)
PHED330 Adapted Physical Education (3 hrs)
PHED360 Motor Learning (3 hrs)

Professional Education Courses ........................................... 30 hours
EDPS322 Human Development and Learning (4 hrs)
RDNG311 Teaching of Reading (3 hrs)
SPED328 Schooling in Multicultural Society (3 hrs)
PHED370 Physical Education Applied Technologies (2 hrs)
PHED415 Curriculum and Instruction in Physical Education (3 hrs)
PHED470 Assessment and Evaluation in Physical Education (2 hrs)
PHED495 Senior Seminar (1 hr)
EDUC496 Student Teaching (elementary experience) (6 hrs)
EDUC497 Student Teaching (secondary experience) (6 hrs)

Minor Requirements .............................................................. 20 hours
Select a minor from the approved list of minors for secondary K-12 and special education-secondary programs.

Program Total ................................................................. 136 hours

COACHING MINOR (COAC)

This program is intended for students planning to pursue coaching as a full- or part-time activity. The minor is not considered a teacher minor for education majors.

Minor Requirements .............................................................. 24 hours

Required Courses ................................................................. 12 hours
SPMD380 Behavioral Aspects of Sport Medicine (3 hrs)
PHED499 Drug Use and Abuse (3 hrs)
PHED200 Anatomy and Physiology (5 hrs)
PHED421 Legal Aspects of Sport, Physical Education, and Recreation (2 hrs)

Restricted Elective Courses .................................................... 10 hours
Four to six hours from the following:
ATHL263 Theory of Football (2 hrs)
ATHL265 Theory of Baseball (2 hrs)
ATHL267 Theory of Basketball (2 hrs)
ATHL268 Theory of Coaching Swimming (2 hrs)
ATHL269 Theory of Track and Field (2 hrs)
Other Theory Coaching Courses

Four to six hours from the following:
ATHL261 Techniques of officiating I (2 hrs)
ATHL262 Techniques of officiating II (2 hrs)
PHED305 Practical Concepts of Conditioning (2 hrs)
PHED316 Foundations of Coaching (2 hrs)
PHED360 Motor Learning (3 hrs)
PHED389 Sport and Activity for the Disabled (1 hr)
PHED405 Women in Sports (2 hrs)
PHED472/478/479 Special Topics (see advisor) (1/2/3 hrs)

Minor Total ......................................................... 24 hours

SCHOOL HEALTH MINOR (HLT)
While designed to provide preparation for teaching health in schools, the school health minor is not restricted to those preparing to work in health-related fields. It is an excellent background for graduate programs in the school-health and community-health disciplines.

Minor Requirements ............................................ 24 hours
PHED270 Principles of Health Education (3 hrs)
PHED305 Current Health Issues I (3 hrs)
PHED315 Current Health Issues II (3 hrs)
PHED335 Instructional Skills and Strategies for Health Education (3 hrs)
PHED355 Health Education Program Planning (3 hrs)
PHED450 Health Education Assessment (3 hrs)
PHED490 Drug Use and Abuse (3 hrs)
PHED460 Concepts in Sexuality Education (3 hrs)

Minor Total ......................................................... 24 hours

SCHOOL HEALTH MINOR (HLTT)
Elementary, Secondary, Special Education-Elementary and Special Education-Secondary Teacher Certification
Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in health, certification code MA. The Michigan Test for Teacher Certification (MTTC) covering this field is #45, "Health."

Minor Requirements ............................................ 24 hours
PHED270 Principles of Health Education (3 hrs)
PHED305 Current Health Issues I (3 hrs)
PHED315 Current Health Issues II (3 hrs)
PHED335 Instructional Skills and Strategies for Health Education (3 hrs)
PHED355 Health Education Program Planning (3 hrs)
PHED450 Health Education Assessment (3 hrs)
PHED490 Drug Use and Abuse (3 hrs)
PHED460 Concepts in Sexuality Education (3 hrs)

Minor Total ......................................................... 24 hours

PHYSICAL EDUCATION MINOR (PEDT)
Secondary, K-12 and Special Education-Secondary Teacher Certification
Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in physical education, certification code MB. The Michigan Test for Teacher Certification (MTTC) covering this field is #44, "Physical Education," and should be taken at the completion of the program.

Minor Requirements ............................................ 25 hours
PHED200 Anatomy and Physiology (5 hrs)
PHED204 Kinesiology (Biomechanics of Physical Activity) (3 hrs)
PHED260 Motor Development (2 hrs)
PHED300 Physiology of Exercise (4 hrs)
PHED315 Methods of Teaching Conditioning Activities (2 hrs)
PHED350 Adapted Physical Education (3 hrs)
PHED415 Curriculum and Instruction in Physical Education (3 hrs)
PHED450 Field Experience in Adapted Physical Education (4 hrs)

Minor Total ......................................................... 24 hours

One course from the following:
PHED215 Methods of Teaching Individual Sports (3 hrs)
PHED217 Methods of Teaching Team Sports (3 hrs)

PHYSICAL EDUCATION MINOR FOR SPECIAL EDUCATION MAJORS (PESP)
Special Education-Elementary and Special Education-Secondary Teacher Certification (available only to special education majors)

This program is intended for special education majors interested in a teaching minor in adapted physical education. The minor in adapted physical education is designed for undergraduates who wish to complete the State of Michigan Endorsement for Teachers of Students with Disabilities. Because it is a minor, students are required to meet University requirements governing minors as well as the competencies in the Revised Administrative Rules for Special Education (April 1997).

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in physical education, certification code MB. The Michigan Test for Teacher Certification (MTTC) covering this field is #44, "Physical Education," and should be taken at the completion of the program.

Minor Requirements ............................................ 24 hours

Required Courses .............................................. 20 hours
PHED200 Anatomy and Physiology (5 hrs)
PHED260 Motor Development (2 hrs)
PHED300 Physiology of Exercise (4 hrs)
PHED330 Adapted Physical Education (3 hrs)
PHED388 Assessment in Adapted Physical Education (1 hr)
PHED389 Sport and Activity for the Disabled (1 hr)
PHED415 Curriculum and Instruction in Physical Education (3 hrs)
PHED434 Adapted Preschool Physical Education (1 hr)

Restricted Elective Courses .................................. 4 hours

Four hours from the following:
PHED215 Methods of Teaching Individual Sports (3 hrs)
PHED217 Methods of Teaching Team Sports (3 hrs)
PHED313 Methods of Teaching Gymnastics (2 hrs)
PHED315 Methods of Teaching Conditioning Activities (2 hrs)
PHED317 Methods of Teaching Elementary Physical Education (2 hrs)
PHED415 Methods of Teaching Aquatics (2 hrs)
PHED445 Curriculum and Instruction in Physical Education (3 hrs)
PHED450 Field Experience in Adapted Physical Education (4 hrs)

Minor Total ......................................................... 24 hours

Note:
1. This course is required for those students seeking the State of Michigan Endorsement as a Physical Education Teacher for Students with Disabilities.
2. Majors in physically and recreationally disabled (POHD) are exempt from this requirement. However, students must select an additional five elective credits in consultation with an advisor.

205
CLINICAL LABORATORY SCIENCES PROGRAM

The clinical laboratory sciences program offers two tracks, the clinical certification track that includes substances of medical technology, cytochemistry and histotechnology; and the professional track. Each leads to the bachelor of science degree. The tracks are designed to prepare graduates for employment in hospitals, physicians' offices, private laboratories, public health agencies, pharmaceutical companies and academic or industrial research. The professional track is the preferred course of study for students considering graduate school or advanced studies in the clinical sciences. The professional track can also be used as preparation for careers in medicine, dentistry, and veterinary science.

Advising is available through the clinical laboratory sciences program. To assist students, students should meet with their adviser each semester in which they are enrolled in classes. The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences.

National Accrediting Agency for Clinical Laboratory Sciences
8110 West Bryn Mawr Ave.
Suite 670
Chicago, IL 60631

Clinical Laboratory Sciences/Medical Technology

Clinical Certification Track and Professional Track

This curriculum is a four-year program at Eastern Michigan University with two options or tracks:

1. Clinical certification track: The medical technology option consists of seven semesters of course work in general education, basic sciences and clinical sciences and includes 23 weeks of rotation through an accredited clinical laboratory. These rotations for the clinical track include:

   University of Michigan, Ann Arbor
   Garden City Hospital, Garden City
   St. Joseph Mercy Hospital, Ann Arbor
   Providence Hospital, Southfield
   Henry Ford Hospital, Detroit
   William Beaumont Hospital, Royal Oak

   The cytochemistry and histotechnology options consist of six semesters of course work and 12 months of clinical rotations through an accredited clinical laboratory. These programs are accredited by the National Accrediting Agency for Clinical Laboratory Sciences.

2. Pre-professional track: This option consists of eight semesters of course work in general education and at least 24 credits of advanced science courses. Students will be required to complete the 80-hour program and either the EMU cumulative GPA of 2.0 must be maintained. However, a cumulative GPA of less than 2.7 may be considered for acceptance into the clinical track.

b. No grade below C in any mathematics or science courses.

c. A grade of D (including D- and E) in two courses in the clinical laboratory sciences major may, upon recommendation by the Program Review Committee, result in dismissal from the CLS program.

d. Freedom from any kind of probation, administrative, academic or social, must be maintained. While on academic probation, no student may register for, remain in, or receive credit for science courses or practicum courses within the clinical laboratory sciences program.

Successful completion of the clinical track and the bachelor of science degree qualifies students to take the national registry examination in medical technology. The two certifying agencies recommended are the American Society of Clinical Pathologists and the National Certification Agency for Clinical Laboratory Personnel.

Clinical Track Requirements

Students must first be accepted into Eastern Michigan University before they can be considered for the Clinical Laboratory Science Program Screening Committee. However, admission to EMU does not guarantee admission into the clinical track program.

Students entering the program will be classified initially as clinical laboratory sciences "inert." Application for full admission to the clinical track program should be made during the winter semester of their junior year.

Application packets can be obtained from the program director. Completed applications must be in the office by March 15 in order to be considered for acceptance for the winter semester.

Selection criteria include overall EMU GPA, letters of recommendation, overall science GPAs, interview evaluations and completed application form.

Admission to the clinical laboratory sciences curriculum/clinical track is competitive and is based on the following:

1. A minimum GPA of 2.7 on a 4.0 scale with no grade below C in any science, mathematics or preprofessional course. The prerequisite courses may be taken at EMU, or other four-year college/university or at a community college.

2. A minimum science GPA of 2.7.

3. Completion of at least 60 hours of university credit, including 45 credit hours of prerequisite mathematics and science courses, as indicated on the application form.

4. Three letters of recommendation. It is suggested that references should include a science instructor and an employer.

5. Students must document that they will have completed all prerequisite clinical laboratory sciences courses prior to beginning clinical rotations in the spring of their senior year.

The first three years of clinical laboratory sciences are the same for both the professional and clinical tracks. It is likely that acceptance into the
Clinical track will be highly competitive. Clinical laboratory sciences majors who are not accepted into the clinical track program, yet desire to sit for the registry examination in medical technology, have the following options:

1. Completion of the bachelor of science degree in clinical laboratory sciences (professional track) at Eastern Michigan University and filing a resubmission to the clinical track program.

2. Completion of all required course work for the bachelor of science degree in clinical laboratory sciences and application to an approved hospital-based school of medical technology. The faculty advisors will assist the student in the application process. Students are selected for internship placement through a statewide computer matching process. The selection process is completed in February each year, with internships usually beginning during the month of July. A bachelor of science in clinical laboratory sciences will qualify the student to apply to hospitals within Michigan and throughout the United States.

Hospital-based schools of medical technology (interview programs) affiliated with the University are:

- Detroit Medical Center, Detroit
- St. John Hospital, Detroit
- Genesys-St. Joseph, Flint

Professional Track Requirements
The professional track is designed for students with an interest in the clinical sciences, whose career goals may not include working as a registered medical technologist in a hospital laboratory setting.

Students electing the professional track of the clinical laboratory sciences program complete eight semesters of academic course work.

The curriculum includes an optional but recommended cooperative education experience. Work opportunities are diverse and include employment in pharmaceutical companies, analytical laboratories and research laboratories. The clinical practicum is not required for the professional track.

Formal application into the professional track is not required. Students must maintain an overall GPA of 2.0 in the major and satisfy University requirements for graduation. Registration for cooperative courses requires a 2.5 overall GPA and 2.5 in the sciences.

These curricula lead to a bachelor of science in the clinical laboratory sciences program.

Histotechnology Track
Specialization in Histotechnology
Program Director: Peggy Wenz (William Beaumont Hospital)

Histotechnologists perform a variety of diagnostic and research procedures in the anatomic sciences. Their training involves the processing and staining of tissue specimens that have been removed from humans or animals by biopsy or autopsy. Advanced techniques involve the use of the electron microscope, immunofluorescent microscopy, autoradiography, cytochemistry and medical photography.

Students may be accepted into the histotechnology specialization after completing the required science, mathematics and clinical laboratory science courses. University general education requirements must also be met. The senior year consists of a 12-month internship at William Beaumont Hospital School of Histotechnology.

Specialization in Cytogenetics
Program Director: Jim Zatlowksi (Henry Ford Hospital)

Cytogenetic technologists work independently under general supervision and can interpret and implement established procedures to prepare biological specimens for cytogenetics analysis, perform the analysis and construct and interpret karyotypes.

Students may be accepted into the cytogenetics specialization after completing the required science, mathematics and clinical laboratory science courses. University general education requirements must also be met. The senior year consists of a 12-month internship at Henry Ford in the Cytogenetics department. The program consists of an integrated presentation of didactic material and intensive laboratory study in the area of cytogenetics that includes specimen preparation, cell culture, chromosomal analysis, microscopy, and photography.

Clinical Laboratory Sciences
Major — Clinical Track
Specialization in Medical Technology (CLSC)

An active articulation agreement exists between this program and a community college. For further details, see the Articulation Agreement section, page 15.

General Education Requirements .................................................. 49 hours

- Area I: Symbolic and Communication
  1. See page 23
  2. See page 23
  3. See page 23
  4. One course from the following:
     MATH 170 Elementary Statistics (3 hrs)
     SOCL 250 Social Statistics I (3 hrs)
     See page 23
- Area II: Science and Technology
  1. CHEM 111/112 General Chemistry I with lab (4 hrs)
  2. BIOL 110 Introductory Biology (5 hrs)
     See page 24
- Area III: Social Sciences
  1. See page 24
  2. See page 24
  3. See page 24
  4. See page 24
- Area IV: Arts and Humanities
  1. See page 25
  2. See page 25
  3. See page 25
  4. See page 25

Additional Requirements .................................................. 13 hours

- CHEM 113 General Chemistry II (3 hrs)
- CHEM 124 General Chemistry II Laboratory (1 hr)
- CHEM 270 Survey of Organic Chemistry (4 hrs)
- CHEM 271 Organic Chemistry Lab (1 hr)
- CHEM 351 Foundations of Biochemistry I (4 hrs)

Physical Education/Graduation Requirement ................................... 2 hours

Major Requirements .......................................................... 57 hours

- CLSC 200 Clinical Laboratory Techniques (3 hrs)
- CLSC 203 Molecular Diagnostics (3 hrs)
- CLSC 207 Urinalysis, Body Fluids, and Hemostasis (3 hrs)
- CLSC 335 Clinical Immunology (4 hrs)
- CLSC 401 Laboratory Management/Edication (3 hrs)
- CLSC 402 Clinical Chemistry (3 hrs)
- CLSC 407 Hematology (4 hrs)
- CLSC 432 Clinical Microbiology (3 hrs)
- CLSC 433 Clinical Microbiology Laboratory (2 hrs)
- CLSC 434 Immunohematology (3 hrs)
- CLSC 450 Hematology/Hematology Practicum (5 hrs)
- CLSC 452 Clinical Immunology/Immunohematology Practicum (5 hrs)
- CLSC 454 Clinical Chemistry Practicum (5 hrs)
- CLSC 455 Clinical Chemistry Laboratory (2 hrs)
- CLSC 456 Clinical Microbiology Practicum (5 hrs)
- CLSC 457 Clinical Methods Practicum (1 hr)
- CLSC 459 Clinical Hematology Practicum (3 hrs)

Minor Requirements .......................................................... 0 hours

No minor is required.

University Elective Courses .................................................. 3 hours

- BIOL 301 and BIOL 305 are recommended.

Program Total ........................................................................ 124 hours
CLINICAL LABORATORY SCIENCES
MAJOR — PRE-PROFESSIONAL TRACK
(CLSP)

General Education Requirements .................................. 49 hours

Area I Symbolic and Communication
1. See page 25
2. See page 25
3. See page 25
4. One course from the following:
   MATH170 Elementary Statistics (3 hrs)
   SOCL250 Social Statistics I (3 hrs)
5. See page 25

Area II Science and Technology
1. CHEM121/122 General Chemistry I with lab (4 hrs)†
2. BIOL110 Introductory Biology (5 hrs)
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement ................. 2 hours

Major Requirements ........................................... 53 hours

CHEM123 General Chemistry II (3 hrs)
CHEM124 General Chemistry II Laboratory (1 hr)
CHEM201 Survey of Organic Chemistry (4 hrs)
CHEM217 Organic Chemistry Lab (1 hr)
CHEM281 Quantitative Analysis (4 hrs)
CHEM351 Foundations of Biochemistry I (4 hrs)
CLSC200 Clinical Laboratory Techniques (3 hrs)
CLSC300 Molecular Diagnostics (3 hrs)
CLSC307 Urinalysis, Body Fluids, and Hemostasis (3 hrs)
CLSC335 Clinical Immunology (4 hrs)
CLSC401 Laboratory Management/Education (3 hrs)
CLSC402 Clinical Chemistry (3 hrs)
CLSC407 Hematology (4 hrs)
CLSC412 Clinical Microbiology (3 hrs)
CLSC433 Clinical Microbiology Laboratory I (3 hrs)
CLSC434 Immunohematology (3 hrs)
CLSC455 Clinical Chemistry Laboratory II (3 hrs)
CLSC459 Clinical Microbiology Practicum I (3 hrs)

Minor Requirements ........................................... 0 hours

No minor is required.

University Elective Courses .................................. 20 hours

BIOL301 Genetics and MIRC329 General Microbiology are recommended

Program Total ................................................. 124 hours

Note:
†MATH105 or math placement level of four is a prerequisite for CHEM121/122.

CYTOGENETICS CURRICULA (CLSP CYGN)

General Education Requirements .................................. 49 hours

Area I Symbolic and Communication
1. See page 25
2. See page 25
3. See page 25
4. One course from the following:
   MATH170 Elementary Statistics (3 hrs)
   SOCL250 Social Statistics I (3 hrs)
5. See page 25

Area II Science and Technology
1. CHEM121/122 General Chemistry I with lab (4 hrs)†
2. BIOL110 Introductory Biology (5 hrs)
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Additional Requirements .................................... 21 hours

BIOL301 Genetics (3 hrs)
BIOL305 Cell Physiology (4 hrs)
CHEM123 General Chemistry II (3 hrs)
CHEM124 General Chemistry II Laboratory (1 hr)
CHEM270 Survey of Organic Chemistry (4 hrs)
CHEM271 Organic Chemistry Laboratory (1 hr)
CHEM351 Foundations of Biochemistry I (4 hrs)
ZOOL404 Mammalian Histology (3 hrs)

Physical Education/Graduation Requirement ................. 2 hours

Major Requirements ........................................... 51 hours

CLSC209 Clinical Laboratory Techniques (3 hrs)
CLSC300 Molecular Diagnostics (3 hrs)
CLSC335 Clinical Immunology (4 hrs)
CLSC401 Laboratory Management/Education (3 hrs)
CLSC402 Clinical Chemistry (3 hrs)
CLSC407 Hematology (4 hrs)
CLSC412 Clinical Microbiology (3 hrs)
CLSC433 Clinical Microbiology Laboratory I (3 hrs)
CLSC434 Immunohematology (3 hrs)
CLSC455 Clinical Chemistry Laboratory II (3 hrs)
CLSC459 Clinical Microbiology Practicum I (3 hrs)

Minor Requirements ........................................... 0 hours

No minor is required.

University Elective Courses .................................. 2 hours

MIRC329 and CLSC401 are recommended

Program Total ................................................. 125 hours

Note:
†MATH105 or math placement level of four is a prerequisite for CHEM121/122.
## Histotechnology Curricula (CLSP HIST)

**General Education Requirements**
- Area I: Symbolics and Communication
  - 1. See page 23
  - 2. See page 28
  - 3. See page 23
  - 4. One course from the following:
    - MATH 170 Elementary Statistics (3 hrs)
    - SOCL 250 Social Statistics I (3 hrs)
  - 5. See page 23

**Area II Science and Technology**
- 1. CHEM 121/122 General Chemistry I with lab (4 hrs)
- 2. BIOL 110 Introductory Biology (5 hrs)
- 3. See page 24

**Area III Social Sciences**
- 1. See page 24
- 2. See page 24
- 3. See page 24
- 4. See page 24

**Area IV Arts and Humanities**
- 1. See page 25
- 2. See page 25
- 3. See page 25
- 4. See page 25

**Additional Requirements**
- CHEM 23 General Chemistry II (3 hrs)
- CHEM 24 General Chemistry II Laboratory (1 hr)
- CHEM 170 Organic Chemistry (4 hrs)
- CHEM 271 Organic Chemistry Laboratory (1 hr)
- CHEM 351 Foundations of Biochemistry I (4 hrs)
- ZOOL 201 Human Anatomy and Physiology I (3 hrs)
- ZOOL 202 Human Anatomy and Physiology II (3 hrs)
- ZOOL 404 Mammalian Histology (3 hrs)

**Physical Education/Graduation Requirements**
- 70 hours

**Major Requirements**
- 50 hours
  - CLSC 200 Clinical Laboratory Techniques (3 hrs)
  - CLSC 300 Molecular Diagnostics (3 hrs)
  - CLSC 307 Urinalysis, Body Fluids, and Hemostasis (3 hrs)
  - CLSC 335 Clinical Immunology (4 hrs)
  - CLSC 407 Hematology (4 hrs)
  - CLSC 321 Clinical Microbiology (3 hrs)
  - CLSC 433 Clinical Microbiology Laboratory (2 hrs)
  - Select either Option I or II

**Option I**
- CLSC 405/406 Cyrotechnique Clinical Internship (28 hrs)

**Option II**
- CLSC 416 Basic Histotechnique and Histochromic Staining Methods (12 hrs)
- CLSC 417 Basic Electron Microscopy (8 hrs)
- CLSC 418 Immunohistochemical Techniques (4 hrs)
- CLSC 419 Internship Special Histotechnology (4 hrs)

**Minor Requirements**
- 0 hours

**University Elective Courses**
- 2 hours
  - BIOL 301, MIRC 329 and CLSC 401 are recommended.

**Program Total**
- 125 hours

Note:
- MATH 105 or math placement level of four is a prerequisite for CHEM 121/122.

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## Dietetics Major (DTC)

This specialized educational program, accredited by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, integrates academic study with professional practice experience in a coordinated program in dietetics. Upon completion of the bachelor of science degree in dietetics, students qualify for membership in the American Dietetic Association and/or are eligible to take the Licensure Examination for Registered Dietitians. Excellent career opportunities for dietitians are available in hospitals and other health care facilities; in community agencies; in industry; university; and school food service programs in business; in teaching in research; or in private practice.

This is a second admissions program with both online and on-campus delivery methods. Both programs begin in fall of the junior year. Please be aware that admission to the University is not a guarantee of entry into the dietetics program. Students interested in the on-campus cohort must submit program applications by January 15 of their sophomore year for entrance into the professional phase of the program the following fall semester. Students interested in the online cohort are encouraged to visit the Continuing Education Web site (www.emunonline.edu) for the application deadline. In addition, prospective students can print the application and a fact sheet to share with potential preceptors.

The applicant for either delivery method must meet the following requirements to be considered for the professional phase of the program:

1. Junior standing achieved by completing 56 or more credit hours or equivalent.
2. Minimum GPA of 2.75.
3. Satisfactory completion (C or above) of the following courses prior to entrance into the professional phase of the program: BIOL 105 Introductory Biology for Non-majors, CHEM 121/122 General Chemistry I and lab, CHEM 270 Survey of Organic Chemistry, CHEM 351 Survey of Biochemistry, CTAS 121/122 Fundamentals of Speech, DTC 250 Careers and Nutrition in Dietetics, DTC 282 Principles of Human Nutrition, DTC 251 Experimental Foods, ENGL 121 Composition II: Researching the Public Experience, HUM 226 Computers for Health and Human Services (or equivalent substitute), MIRC 328 Introductory Microbiology, SOC 105 Introductory Sociology, SOC 235 Social Statistics I, and ZOOL 326 Human Physiology (or equivalent substitute).

Application forms that describe the requirements in more detail may be obtained from the director of the dietetics program or accessed online at www.emunonline.edu. The availability of clinical facilities limits the number of students accepted to each class. Therefore, a screening procedure is used to select the most qualified students for the available positions in the program. Academic status, letter of recommendation and a personal statement are considered in this screening procedure.

Students accepted into the dietetics program who desire to substitute courses taken at other colleges and/or universities for the 200- and/or 400-level dietetics courses are accepted at the discretion of the program faculty. A theoretical and/or practical examination may be required. Proven prior learning may be accepted with alternative activities assigned in substitution.

Criteria for continuation in the professional phase of the program are as follows:

1. Students receive a C grade or better in any required course in science and major courses after being admitted to the program.
2. A letter grade of D (D+ or D) in one required course automatically denies the student the right to matriculate and require academic counseling. Automatic dismissal from the dietetics program occurs when the student receives letter grades of D (D+ or D) in any of the following:
   - any two dietetics courses (DTC prefix), or
   - any two required science courses, or
   - any one dietetics course, and one required science or management course.
3. Students must be in one dietetics course or one science or management course.
Health Administration Curriculum (HLAD)
The curriculum concentrates on the principles and processes utilized in the field of health administration and management. The program is designed to prepare those seeking a career in the administrative sector of the health care delivery system in any of its forms. It is also appropriate for those already working in the health care field in some other capacity but wishing to redirect their career toward the area of health administration. Practicing health administrators without previous formal education in the field also may find this program beneficial for career advancement.

All students must take a one-semester internship during their junior or senior year unless waived by the program director due to significant administrative experience. No outside minor is required. However, many students elect the gerontology minor.

A degree completion track, health services management, has been established for persons with clinical associate degrees from accredited community colleges who have had five or more years of experience subsequent to that degree completion. Associate degree trained nurses, respiratory therapists and others interested in the degree completion option in health services management should contact the program director. Successful completion of the degree completion track leads to the same degree as the regular program major.

Degree Completion Articulation with Washtenaw Community College and Schoolcraft College
An active articulation agreement exists between this program and a community college. For further details, see the Articulation Agreements section, page 13.

A B.S in health administration articulation agreement has been established with the programs of radiography, nursing and dental assisting at Washtenaw Community College and a B.S in health administration articulation agreement with health information technology at Schoolcraft College, which permit graduates of these two-year degree programs to complete their bachelor's degree in two years, or the equivalent of four full-time semesters at Eastern Michigan University, culminating with a degree in health administration. Unlike the health services management track, which is a generic degree for completion for clinicians with a two-year clinical degree, these articulations provide selected transfer students with an efficient degree completion curriculum that fits into a traditional four-year undergraduate schedule. Graduates of the programs in radiography, nursing and dental assisting at Washtenaw Community College and health information technology at Schoolcraft College should contact the program director (program in health administration) or their academic advisor for complete details about these degree completion opportunities.

A minor in health administration is available to undergraduate students at Eastern Michigan University. The curriculum for the minor in health administration includes 20 to 22 hours. Students interested in the minor should contact the program in writing and meet with the program's minor curriculum advisor.

General Education Requirements

<table>
<thead>
<tr>
<th>Area I: Symbolics and Communication</th>
<th>48 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. See page 23</td>
<td></td>
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<tr>
<td>2. See page 23</td>
<td></td>
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<tr>
<td>3. See page 23</td>
<td></td>
</tr>
<tr>
<td>4. One course from the following:</td>
<td></td>
</tr>
<tr>
<td>MATH 118 Linear Models and Probability (3 hrs)</td>
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<tr>
<td>SOCL 250 Social Statistics I (3 hrs)</td>
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<tr>
<td>5. See page 23</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Area II: Science and Technology</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. See page 24</td>
<td></td>
</tr>
<tr>
<td>2. BIOL 105 Introductory Biology for Non-majors (4 hrs)</td>
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<tr>
<td>3. See page 24</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area III: Social Sciences</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. See page 24</td>
<td></td>
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<tr>
<td>2. See page 24</td>
<td></td>
</tr>
<tr>
<td>3. ECON 201 Principles of Macroeconomics (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>4. ECON 202 Principles of Microeconomics (3 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

Area IV: Arts and Humanities

| 1. See page 25                     |         |
| 2. See page 25                     |         |
| 3. See page 25                     |         |
| 4. See page 25                     |         |

| Physical Education/Graduation Requirement | 2 hours |
| Major Requirements | 57 hours |

 Required Courses in Health Administration

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLAD 301</td>
<td>The U.S. Health Care System (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>HLAD 310</td>
<td>Administration of Health Care Organizations (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>HLAD 311</td>
<td>Management of Health Services (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>HLAD 416</td>
<td>Health Planning (3 hrs)</td>
<td></td>
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<tr>
<td>HLAD 417</td>
<td>Health Regulation (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>HLAD 420</td>
<td>Financial Management of Health Institutions (3 hrs)</td>
<td></td>
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<tr>
<td>HLAD 421</td>
<td>Managed Care (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>HLAD 425</td>
<td>Decision Making for Health Administrators (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>HLAD 480</td>
<td>Internship Seminar in Health Administration (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>HLAD 488</td>
<td>Internship (6 hrs)</td>
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</tbody>
</table>

Required Courses in Associated Health Professions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHPR 200</td>
<td>Medical Terminology (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>AHPR 208</td>
<td>Ethical Dimensions in Health Care Delivery (2 hrs)</td>
<td></td>
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<tr>
<td>AHPR 305</td>
<td>Data Analysis for the Health Sciences (3 hrs)</td>
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</tbody>
</table>

One course from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMT 384</td>
<td>Human Resource Management (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>DS 265</td>
<td>Business Statistics I (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>PSY 201</td>
<td>Quantitative Methods in Psychology (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>ECON 310</td>
<td>Economic Statistics (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>SOCL 250</td>
<td>Social Statistics I (3 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

Minor Requirements

| 0 hours |
| No minor is required. |

University Elective Courses

| 17 hours |
| The following courses are suggested as possible electives: |
| HLAD 207/208 | Cooperative Education in Health Education (3 hrs) | |
| HLAD 479 | Special Topics in Health Administration (3 hrs) | |
| ENGL 225 | Intermediate English Composition (3 hrs) | |
| ENGL 323 | Written in the Professional World (3 hrs) | |
| ENGL 324 | Principles of Technical Communication (3 hrs) | |
| ENGL 326 | Research Writing (3 hrs) | |
| ACC 342 | Managerial Cost Accounting (3 hrs) | |
| ECON 320 | Labor Economics (3 hrs) | |
| ECON 352 | American Labor Unions (3 hrs) | |
| LAW 409 | Employment Law (3 hrs) | |
| PLSC 332 | Intergovernmental Relations and Federalism (3 hrs) | |
| PSY 360 | Abnormal Psychology (3 hrs) | |
| SOC 311 | Social Gerontology (3 hrs) | |
| SOC 312 | Medical Sociology (3 hrs) | |
| SOCL 402 | Complex Organizations (3 hrs) | |
| PSY 351 | Industrial Psychology (3 hrs) | |

For permissible College of Business courses (maximum 30 hours), see a program advisor.

Program Total

| 124 hours |
HEALTH SERVICES MANAGEMENT TRACK CURRICULUM (HLAD)

This is a degree completion track leading to the bachelor of science in health administration for persons holding an accredited associate's degree in a recognized health service or clinical discipline. Such disciplines include nursing, respiratory therapy or other specialized two-year programs of study.

For degree completion, students in this curriculum, up to 22 credit hours may be awarded and credited toward the bachelor of science obligation of 124 credit hours on the basis of supervised clinical course work taken in the associate degree curriculum. These credits may be based on supervised clinical courses that have no exact equivalence at Eastern Michigan University. This is determined in consultation with the program director of the health administration program.

General Education Requirements

Area I Symbolics and Communication
1. See page 22
2. See page 23
3. See page 23
4. See page 23
5. See page 23

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24
4. See page 24
5. See page 24

Area III Social Science
1. See page 34
2. See page 34
3. See page 34
4. See page 34

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement

- 2 hours

Major Requirements

- 30 hours

AHPH200 Medical Terminology (1 hr)
AHPH208 Ethical Dimensions in Health Care Delivery (2 hrs)
AHPH305 Data Analysis for the Health Sciences (3 hrs)
AHPH450 Legal Issues in Health Care (6 hrs)
HLAD305 U.S. Health Care System (3 hrs)
HLAD310 Administration of Health Care Organizations (3 hrs)
HLAD311 Management of Health Care Services (3 hrs)
HLAD420 Financial Management of Health Institutions (3 hrs)
HLAD425 Decision Making for Health Administrators (3 hrs)
3 to 22 hours transferred credit awarded in consultation with an advisor.
One course from the following:
HLAD416 Health Planning (3 hrs)
HLAD417 Health Regulation (3 hrs)

Minor Requirements

- 21 hours

Minor in management for non-business majors is required.

University Elective Courses

- 5-24 hours

Program Total

- 124 hours

Note:
*This course satisfies both a general education and a major requirement. The program requires MATH118 or higher.

OCCUPATIONAL THERAPY PROGRAM (OT)

Program of Study
Occupational therapy advising for occupational therapy-intent students is performed by the College of Health and Human Services Advising Center. After acceptance into the occupational therapy programs, students are assigned a faculty advisor. All students in the occupational program must meet with their advisors before registering each semester.

Combined Bachelor's-Master's Degree in Occupational Therapy (OCTH)

Established in 1941, Eastern Michigan University's Occupational Therapy Program has a long-standing tradition of excellence.

Occupational therapy is one of the fastest growing fields in the health professions. Therapists work with people of all ages whose lives have been disrupted by a physical injury or accident, a psychiatric illness or developmental disability. Career opportunities are available in a variety of settings including community agencies, hospitals, rehabilitation facilities, long-term care facilities, schools, camps, home health care agencies and industrial plants.

The 3+2 Program
Our innovative 3+2 program, will combine three years of undergraduate coursework and two years of upper level coursework. Students will graduate with both a bachelor of science (B.S.) and master of occupational therapy (M.O.T.) degree after completion of the program. Students who already have a bachelor's degree in another field can enter the upper level portion of the program and earn a M.O.T. degree. After entrance into the upper-level OT courses, students can complete the full-time program in two and a half years, including six months of full-time fieldwork.

Requirements for Continuance
Your admission to Eastern Michigan University does not guarantee continuation in the occupational therapy program. To be considered for upper-level courses in the program, you must meet the following requirements:

1. Completion of the following prerequisite courses with a grade of B or better in five of the six courses with a maximum of one C:
   - Anatomy and Physiology
     ZOOL201 Human Anatomy and Physiology I (3 hrs)
     ZOOL202 Human Anatomy and Physiology II (3 hrs)
   - Neuroscience
     ZOOL217 Neuroanatomy (3 hrs)
   - Medical Terminology
     AHPH200 Medical Terminology (1 hr)
   - Statistics
     One course from the following:
     MATH260 Statistical Methods (3 hrs)
     MATH270 Probability and Statistics I (4 hrs)
     MATH371 Mathematical Statistics I: Probability Theory (3 hrs)
     MATH374 Applied Statistics (3 hrs)
     SOCL250 Social Statistics I (3 hrs)
     EDPS5221 Statistical Applications in Educational Research (2 hrs)
     EDPS531 Inferential Statistics (2 hrs)
   - Human Growth and Development
     One course from the following:
     EDPS325 Life Span Human Growth and Development (4 hrs)
     IHEH260 Aging to Infancy: A Life Course Retrospective (3 hrs)

2. Have a cumulative GPA of 2.75 or higher.
3. Completion of 80 hours of volunteer, work, or service learning experience with individuals who have special needs in a variety of com-
Criteria for entry into RECR449 Therapeutic Recreation Practicum are:

1. Obtain a minimum of 2.5 GPA overall and 2.75 GPA in all major core and required courses;
2. Complete 250 hours of verified volunteer or paid work experience in four or more therapeutic recreation service agencies serving people with disabilities;
3. Complete all therapeutic recreation core courses;
4. Complete all therapeutic recreation required courses; and
5. Complete 90 percent of all academic courses.

General Education Requirements.................................. 48 hours

Area I Symbolics and Communication
1. See page 23
2. See page 23
3. CITA227 Interpersonal Communications (3 hrs)
4. See page 23
5. IFHS226 Computers for Health and Human Services (3 hrs)

Area II Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. CTA222 Drama and Play in Human Experience (3 hrs)

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. CTA222 Drama and Play in Human Experience (3 hrs)

Physical Education/Graduation Requirement .................. 2 hours
PEGS210 Lifetime Wellness and Fitness (2 hrs)

Major Requirements.................................................. 54 hours

Recreation Core Courses 26 hours
RECR106 Introduction to Recreation and Leisure (3 hrs)
RECR200 Recreation for Persons with Disabilities (3 hrs)
RECR250/251/252/253 Fieldwork in Recreation/Therapeutic Recreation (1/1/1/1 hrs)
RECR260 Recreation Leadership (3 hrs)
RECR410 Professional Preparation (2 hrs)
RECR449 Therapeutic Recreation Practicum (8 hrs)

Choose one from the following:
- RECR295 Practical Research in Recreation (3 hrs)
- RECR449 Grant Writing in Recreation (3 hrs)

Choose one from the following:
- RECR460 Park and Recreation Administration (3 hrs)
- HLAD310 Administration of Health Care Organizations (3 hrs)

Therapeutic Recreation Courses 28 hours
AHPR200 Medical Terminology (1 hr)
RECR300 Principles of Therapeutic Recreation (3 hrs)
RECR320 Leisure Education (3 hrs)
RECR340 Therapeutic Recreation Process I (3 hrs)
RECR400 Therapeutic Recreation Process II (3 hrs)
RECR430 Issues in Therapeutic Recreation (3 hrs)
NURS276 Pharmacology for Sports Medicine (2 hrs)
SPMD201 Human Anatomy for Sports Medicine (2 hrs)
SPMD202 Human Physiology for Sports Medicine (3 hrs)
COUN450 Introduction to the Counseling Process (3 hrs)

Choose one from the following:
- RECR180 Activity Analysis and Adaptation (2 hrs)
- SPGN481 Adaptive Technology in Special Education (2 hrs)

University Elective Courses .................................... 20 hours
Twenty hours selected from the courses below or other courses in consultation with the therapeutic recreation advisor.

RECR251/252/253 Fieldwork in Recreation/Therapeutic Recreation (1/1/1 hr)
RECR310 Camping for Special Populations (2 hrs)
RECR321 Legal Issues in Recreation (3 hrs)
RECR330 Therapeutic Recreation: Substance Abuse (3 hrs)
RECR360 Recreation Program Planning (3 hrs)
RECR381 Special Events in Recreation (3 hrs)
RECR390 Outdoor Recreation (3 hrs)
RECR400 Park Planning and Design (3 hrs)
RECR460 Park and Recreation Administration (3 hrs)
RECR465 Park and Recreation Management (3 hrs)
RECR470 Grant Writing in Recreation (3 hrs)
RECR477/478/479 Special Topics (1/2/3 hrs)
RECR481 Adapted Aquatics (2 hrs)
RECR497/498/499 Directed Study (1/2/3 hrs)
RECR410 Leisure and Aging (3 hrs)
PHED389 Sport and Activity for the Disabled (1 hr)
TDU100 Arts and Crafts (3 hrs)
CTAR222 Drama/Theatre for Persons with Disabilities (2 hrs)

Minor Requirements............................................... 0 hours
No minor is required.

Program Total ..................................................... 124 hours

Health Administration Minor (HLAD)

Minor Requirements............................................... 14-15 hours
HLAD310 Administration of Health Care Organizations (2 hrs)
HLAD311 Management of Health Services (3 hrs)
HLAD420 Financial Management of Health Institutions (3 hrs)
AHPR401 Legal Issues in Health Care (3 hrs)
AHPR200 Medical Terminology (1 hr)

One course from the following:
- HLAD300 Health Care Issues (2 hrs)
- HLAD305 The U.S. Health Care System (3 hrs)

Elective Courses .................................................. 5-6 hours
Two courses from the following:
- HLAD416 Health Planning (3 hrs)
- HLAD417 Health Regulation (3 hrs)
- HLAD421 Managed Care (3 hrs)
- HLAD425 Decision-Making for Health Administrators (3 hrs)
- HLAD479 Special Topics (3 hrs)
- AHPR208 Ethical Dimensions in Health Care Delivery (2 hrs)
- AHPR305 Data Analysis for the Health Sciences (3 hrs)
- SWRK431 Substance Abuse (3 hrs)
- SWRK438 The Interdisciplinary Health Care Team (3 hrs)
- GERT401 Gerontology Interdisciplinary Seminar (3 hrs)
- AAS351 The Social Context of African American Health (3 hrs)

Minor Total ....................................................... 20 hours

Human Nutrition Minor (NUTR)

This non-teaching minor benefits students enrolled in the majors of nursing, sports medicine, hotel and restaurant management, occupational therapy, education, psychology and biology.

Required Courses .................................................. 15 hours
DTC358 Food and Culture (3 hrs)
DTC372 Nutrition of the Life Cycle (3 hrs)
DTC375 Complementary and Alternative Medicine (3 hrs)
DTC370 Nutrition Therapy III (3 hrs)
Once admitted to the EMU clinical nursing program, students must complete all nursing (NURS) courses, DTC202 Principles for Nutrition, and MCRS236 Introductory Microbiology, with a grade of C or better within a period of six calendar years to be considered eligible for graduation. Nursing courses must be taken in the sequence specified by the Department of Nursing.

The University may give credit for nursing courses taken at another college or university; however, the department reserves the right to make the final decision on course substitution based on examination of course materials.

Academic and Professional Integrity

Students are expected to assume responsibility for their learning, to support the ethics and goals of their profession, and to practice honestly and in the fulfillment of scholarly and professional endeavors. Students must abide by the University code of conduct. Students who violate the University code of conduct will be subject to appropriate disciplinary action.

The School of Nursing recognizes its responsibilities to the public and to the nursing profession. Students and faculty must promote academic and professional integrity and take action when a violation of such integrity occurs. The department reserves the right to retain only those students who, in the judgment of the faculty, satisfy the requirements of scholarship, clinical competence and personal integrity suitable for nursing.

Clinical Learning Experience

Fieldwork in nursing is provided through clinical learning experiences under the supervision of faculty in a variety of health agencies such as ambulatory care settings, acute care settings, medical centers, community hospitals, public schools, nursing homes, county health agencies and home health care agencies. Students are expected to provide their own transportation to clinical agencies.

Nursing students are assessed $15 per credit hour on all clinical laboratory courses. A portion of these funds goes to the department to help defray the cost of updating, replacing and maintaining equipment and supplies used in the classroom laboratories (skills labs, health assessment and computer labs).

Following receipt of the bachelor of science in nursing degree (B.S.N.), students are eligible to sit for the national nursing licensure examination (NCLEX-RN).

This nursing program is approved by the state of Michigan Board of Nursing. It is accredited by the Commission on Collegiate Nursing Education.

Nurses who are licensed to practice nursing in the state of Michigan and wish to complete a bachelor of science in nursing degree are eligible for consideration for admission. Registered nurse students must apply to and be accepted by the University. In addition, registered nurse students must:

1. Meet with RN/B.S.N. coordinator;
2. Show transcripts demonstrating graduation from a diploma or associate degree program of nursing;
3. Show a current unrestricted license to practice nursing in Michigan.
4. Show submission of a TOEFL score of 500/173 (paper/computer) or above for students for whom English is a second language. A MELAB test is also acceptable.

All information related to academic and professional integrity and clinical learning experiences also apply to RN/B.S.N. completion students.

The School of Nursing offers courses for registered nurses at off-campus sites. These sites are Jackson, Brighton, Monroe, Livonia and the Northwest Activity Center in Detroit.
**Nursing Major — B.S.N. (NUR)**

This curriculum leads to the bachelor of science in nursing (B.S.N.) degree and requires the following courses to complete the 124 hours needed for graduation. Curriculum revisions may result in changes in nursing courses listed below, as well as prerequisite courses. Potential nursing students should consult with the School of Nursing and/or the College of Health and Human Services Advising Center for the most accurate information.

### General Education Requirements

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### Area II: Science and Technology

1. CHEM 120 Fundamentals of Organic and Biochemistry (4 hrs)
2. PSY 101 General Psychology (3 hrs)
3. ZOOL 201 Human Anatomy and Physiology I (3 hrs)

### Area III: Social Sciences

1. See page 24                        |
2. See page 24                        |
3. One course from the following:
   - ANTH 135 Introduction to Cultural Anthropology
   - SDCL 105 Introductory Sociology
4. See page 24                        |

### Area IV: Arts and Humanities

1. See page 25                        |
2. See page 25                        |
3. See page 25                        |
4. See page 25                        |

### Additional Requirements

- DTC 023 Nutrition for Health Professionals (3 hrs)
- MICR 203 Introduction to Microbiology (3 hrs)
- ZOOL 202 Human Anatomy and Physiology II (3 hrs)
- One course from the following:
  - HHS 260 Aging to Intancy: A Life Course Retrospective (3 hrs)
  - EDPS 325 Life Span Human Growth and Development (3 hrs)

### Physical Education/Graduation Requirement

- 2 hours

### Major Requirements

- 60 hours
  - NUR 220 The Art and Science of Nursing I (2 hrs)
  - NUR 209 The Art and Science of Nursing I Laboratory (3 hrs)
  - NUR 220 Health Assessment (2 hrs)
  - NUR 250 The Art and Science of Nursing II (2 hrs)
  - NUR 251 The Art and Science of Nursing II Laboratory (3 hrs)
  - NUR 260 Pathophysiology (4 hrs)
  - NUR 270 Pharmacology (3 hrs)
  - NUR 275 Essentials of Professional Nursing Practice I (3 hrs)
  - NUR 230 Care of Childbearing Families (2 hrs)
  - NUR 205 Nursing Care of Childbearing Families Laboratory (3 hrs)
  - NUR 305 Child Family Health Nursing (3 hrs)
  - NUR 320 Adult Health Nursing I (2 hrs)
  - NUR 331 Adult Health Nursing I Laboratory (3 hrs)
  - NUR 350 Psychiatric/Mental Health Nursing (2 hrs)
  - NUR 351 Psychiatric/Mental Health Nursing Laboratory (3 hrs)
  - NUR 372 Nursing Research (2 hrs)
  - NUR 375 Essentials of Professional Nursing Practice II (3 hrs)
  - NUR 404 Adult Health Nursing II (2 hrs)
  - NUR 405 Adult Health Nursing II Laboratory (3 hrs)
  - NUR 450 Community Health Nursing (2 hrs)
  - NUR 451 Community Health Nursing Practice (3 hrs)
  - NUR 475 Essentials of Professional Nursing Practice III (3 hrs)

### University Elective Courses

- 2-3 hours

### Program Total

- 124 hours

---

**Nursing Major — B.S.N. Completion (NURC)**

An active articulation agreement exists between this program and a community college. For further details, see the Articulation Agreements section, page 13.

### General Education Requirements

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### Area II: Science and Technology

1. CHEM 120 Fundamentals of Organic and Biochemistry (4 hrs)
2. PSY 101 General Psychology (3 hrs)
3. ZOOL 201 Human Anatomy and Physiology I (3 hrs)

### Area III: Social Sciences

1. See page 24                        |
2. See page 24                        |
3. See page 24                        |
4. See page 24                        |

### Area IV: Arts and Humanities

1. See page 25                        |
2. See page 25                        |
3. See page 25                        |
4. See page 25                        |

### Additional Requirements

- 12-13 hours
  - MICR 28 Introduction to Microbiology (3 hrs)
  - ZOOL 202 Human Anatomy and Physiology II (3 hrs)
  - One course from the following:
    - HHS 279 Special Topics (3 hrs)
    - EDPS 325 Life Span Human Growth and Development (4 hrs)
  - One course from the following:
    - DTC 202 Principles of Human Nutrition (3 hrs)
    - DTC 203 Nutrition for Health Professionals (3 hrs)
    - DTC 204 Sports Nutrition (3 hrs)

### Physical Education/Graduation Requirement

- 2 hours

### Major Requirements

- 60 hours

### Required Courses

- 55 hours
  - NUR 220 Health Assessment (2 hrs)
  - NUR 260 Pathophysiology (4 hrs)
  - NUR 270 Pharmacology (3 hrs)
  - NUR 275 Essentials of Professional Nursing Practice I (3 hrs)
  - NUR 302 Nursing Research (2 hrs)
  - NUR 405 Essentials of Professional Nursing Practice II (3 hrs)
  - NUR 450 Community Health Nursing (2 hrs)
  - NUR 451 Community Health Nursing Practice (3 hrs)
  - NUR 475 Essentials of Professional Nursing Practice III (3 hrs)
  - NCLEX-RN Exam (30 hrs)

### Restrictive Elective Courses

- 5 hours
  - Five hours from the following:
    - NUR 470 Community Mental Health (1 hr)
    - NUR 477/478/479 Special Topics (1/2/3 hrs)
    - NUR 500 Advanced Pathophysiology (3 hrs)
    - NUR 502 Advanced Health Assessment (3 hrs)
    - NUR 506 Nursing Theory for Practice and Research (3 hrs)

### University Elective Courses

- 2-3 hours

### Program Total

- 124 hours

---

**Note:**

A lab fee of $15 per credit hour is assessed on each clinical laboratory course.
The undergraduate social work program offers students a general foundation of knowledge, values and skills integral to entry-level professional social work careers. It includes a fully accredited major in social work. The school also offers a master's in social work (for more information please consult the graduate catalog).

The school supports three student organizations: the Student Social Work Organization, a student chapter of the National Association of Black Social Workers and the TriPride Student Organization. Members of the student organizations sponsor social activities and community service projects and serve on faculty committees. All social work students are encouraged to be involved in student organizations.

Admissions

Students who wish to become majors in the School of Social Work need to formally apply while enrolled in SWRK251 prior to taking their first 300-level social work class. Successful applicants will:

1. Complete a declaration of major form;
2. Have a minimum 2.3 GPA;
3. Have a post-high school minimum of 40 hours volunteer, internship or work experience as a social welfare agency or organization that is documented by a reference letter from the supervisor of that experience;
4. Achieve a C or better in SWRK120, SWRK222 and SWRK251;
5. Complete a written essay on their interest in social work as a career;
6. Review the B.S.W. student handbook online at the social work homepage.

Field Experience

The required field experience is two semesters in field placement in a social agency designated by the social work faculty as a training agency for EMU students. This placement component is taken during students' senior year, either fall and winter terms or winter and spring-summer terms. Students will be in the field 16 hours per week for the semester in the field placement cycle. Open only to social work majors. Eligibility for field placement includes the following:

1. All students should obtain and read a copy of the department field placement policies.
2. Students must have a 2.3 overall GPA at the time of entering and during field placement (no probation).
3. At least a C in each required social work class.
4. Students must have completed all required social work courses through the 300-level before beginning field placement and must have senior standing.
5. A field placement application must be obtained, completed by the student and returned to the field placement coordinator by the date set by the field coordinator or by March at the latest if placement is desired fall/winter and by October for the following winter/spring/summer terms. Each student is required to attend an informational meeting at the assigned time in the semester their field application is due. The field placement coordinator will arrange all field placements. Students may not recruit their own field placement sites.
6. Students must take field placement in consecutive semesters (i.e. fall and winter or winter and spring/summer terms). Students enrolling for the first semester of field placement (SWRK408 Field Experience I) must take SWRK408 Social Work Practice II concurrently. Students enrolling for the second term of field placement (SWRK408 Field Experience II) must take SWRK409 Social Work Practice III concurrently (see number 11).
7. Transportation: Agencies are located within a 60-mile radius of EMU. Students will need their own transportation. In a few cases, car pools can be arranged with participants sharing expenses. Students must have appropriate automobile insurance coverage.
8. Students must receive a grade of C or better in their first semester field placement and practice classes (SWRK408 Social Work Practice II and SWRK408 Field Experience I) to be eligible to continue in the second semester (SWRK409 Social Work Practice III and SWRK408 Field Experience II). Students who receive a grade of F in either semester of field placement (SWRK408/409 Field Experience I and II) must obtain special departmental permission to repeat the course.
9. Academic credit for life experience and previous work experience will not be granted in lieu of field placement.
10. Students in field placement must adhere to professional standards as set forth in the Code of Ethics of the National Association of Social Workers.
11. With permission of a social work advisor, students may take senior-level social work practice courses prior to field placement enabling part-time students to complete their degree.

Accreditation

Accreditation is by the Council on Social Work Education, the accrediting body for the baccalaureate and the master's degree social work curricula. Accreditation reflects a standard of high quality that the program meets. Students who graduate from an accredited undergraduate program may obtain advanced standing in some graduate schools of social work. Accredited programs may not substitute life experience or social work courses from non-accredited programs.

Honors Program in Social Work

Students with excellent academic records who are majoring in social work may apply to pursue the honors program in social work. Before pursuing the Social Work Honors Program, students must be admitted to and in good standing in the University Honors Program. The Social Work Honors Program consists of taking 12 credits of honors course work in social work. For more information, contact either the Social Work Honors Program advisor or the University Honors Program.

**SOCIAL WORK CURRICULUM (SWRK)**

The social work curriculum leads to a bachelor of science degree in social work and requires the following courses to complete the 124 hours needed for graduation. No outside minors is required. Curriculum revisions may result in changes in social work courses listed below as well as prerequisite courses. Potential social work students should consult with the School of Social Work for the most accurate information.

The Social Work Program requires that students take two cross-cultural courses and a course related to women. Therefore, in addition to the University's Cross-Cultural/International Studies requirement, social work majors must take an additional cross-cultural course as well as a course related to women (which may be chosen from the list of General Education Cross-Cultural/International Studies courses or be another course on diversity approved by the Department of Social Work). If the General Education Cross-Cultural/International Studies requirement is met with a course related to women, then the social work program requires two additional cross-cultural courses (not related to women).

An active articulation agreement exists between this program and a community college. For further details, see the Articulation Agreements section, page 13.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Area</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Area I - Symbolic and Communicative</td>
<td>48 hours</td>
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<td>1. See page 23</td>
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SOCIAL WORK MINOR (SWRK)

This minor is compatible with disciplines where the college graduate will be in a helping role with people.

Required Courses
- SWRK120 Introduction to Social Work Services and Professional Roles (3 hrs)
- SWRK222 Social Welfare Policies and Services (3 hrs)

Elective Courses
- 14-15 hours
- Fourteen to fifteen hours selected in consultation with a social work adviser from social work elective courses.

Minor Total
- 20-21 hours

GERONTOLOGY

See page 293 for course descriptions.

The gerontology minor is administered by the School of Social Work in the College of Health and Human Services through an interdisciplinary coordinating committee composed of faculty who are actively involved in the gerontology field. The 21-semester-hour interdisciplinary minor is available to students who are majors in any department or college of the University. It may serve as a core of study for undergraduate students who wish to supplement their studies with a detailed knowledge of gerontology or who contemplate entering master's or doctoral programs in gerontology. The minor should be of particular interest to students preparing for work in the physical and mental health service careers, those working in continuing care centers, for community organization and social service workers, and for educators.

GERONTOLOGY MINOR (GERT)

Required Courses
- 14-15 hours
- GERT212 Introduction to Careers in Gerontology (1 hr)
- BIO1290 Biology of Aging (2 hrs)
- SOCL111 Social Gerontology (3 hrs)
- PSY323 Psychology of Human Aging (3 hrs)
- SWRK420 Working with Aging People (3 hrs)
- GERT488/489 Gerontology Practicum/Seminar (2-3 hrs)

Elective Courses
- 6-7 hours
- Students are required to complete elective requirements by choosing courses from the following three content areas.

I. Psychosocial and environmental aspects of aging
- IHHS260 Aging to Infancy: A Life Course Retrospective (3 hrs)
- EDPS402 Learning in the Later Years (3 hrs)
- PSY551 Psychology of Death and Dying (2 hrs)

II. Biological and health aspects of aging
- IDE111 Human Factors and Special Needs (2 hrs)
- DTC101 Fundamentals of Personal Nutrition (3 hrs)
- DTC202 Principles of Human Nutrition (3 hrs)
- DTC203 Nutrition for Health Professionals (3 hrs)
- DTC204 Sports Nutrition (3 hrs)
- IDE260 Housing for Consumers (3 hrs)
- RECR310 Leisure and the Older Adult (3 hrs)
- NURS360 Gerontological Nursing (2 hrs)
- DTC372 Life Cycle Nutrition (3 hrs)
PHED479 Special Topics (3 hrs)
IDE503 Physical Environments and Aging (2 hrs)

III. Policies and services for the aging
HLAD500 Health Care Issues (2 hrs)
HLAD510 Administration of Health Care Organizations (3 hrs)
ECON527 Economics of Poverty, Inequality and Discrimination (3 hrs)
SWRK413 Women and Aging (3 hrs)
SWRK424 Social Work with Physically and Mentally Handicapped (3 hrs)
SWRK457 Separation, Loss, and Grief (1 hr)
GERT417 Work and Retirement (2 hrs)
GERT419 Older Adults and Chemical Dependency (1 hr)
GERT511 Elders and Their Families (2 hrs)
GERT513 Intergenerational Programs and Services (2 hrs)
GERT515 Sexuality and Aging (1 hr)
GERT516 The Elderly and the Law (1 hr)
GERT517 Developing Funding Proposals for Aging Programs (2 hrs)
GERT518 Innovations in Alzheimer's Care (2 hrs)
GERT523 Designing Programs for People with Dementia (2 hrs)
GERT524 Families and Dementia (2 hrs)
GERT528 Advanced Issues in Dementia Care (2 hrs)
GERT530 Assessment of Individuals with Dementia (2 hrs)
GERT532 Aging Through the Eyes of the Old (2 hrs)
COUN573 Counseling the Older Adult (3 hrs)

Minor Total ................................................................................................................. 21 hours

Note:
1. Students who are required to complete a practicum in a setting serving older people as a part of their major may request that this experience fulfill the practicum component of GER6048/489. However, these students are required to attend the seminar portion of the practicum (GER6048).
2. Seniors with 85 credit hours and a 2.5 GPA can take 500-level courses with approval. Other elective courses may be selected in consultation with the gerontology program director.
DEPARTMENT OF TECHNOLOGY

Dean:
John C. Dugger
150 Sill Hall
734.487.0354

Associate Dean:
Kornit G. Kastron
150 Sill Hall
734.487.0354

Administrative Associate:
Nancy Harris
150 Sill Hall
734.487.0354

Schools and Departments:
- Engineering Technology
- Technology Studies
- Military Science and Leadership
MISSION STATEMENT

The College of Technology's mission is to cultivate a learning community dedicated to learning, research and public engagement while committed to excellence in technology programs. More specifically, the College of Technology meets the need for well-prepared individuals for a variety of business and industrial positions, teachers of business and industrial education and commissioned officers for the United States Army. In addition to the bachelor of science degree, the college offers a bachelor of business education for those students satisfying the requirements for programs in business services technology education, marketing education and a bachelor of applied science. Bachelor’s and graduate programs provide a solid foundation in mathematics, science, technology management and human relations in order to effectively serve the educational aspirations of their students. Students learn to apply sound theory to practical problems and have opportunities for laboratory and cooperative work experiences. Graduates are prepared for engineering technology and technology management positions in design, production, research and marketing for business and industry. Also included within the college is the University's long-standing military science program, which promotes leadership qualities for and entry into the active Army, Army Reserve or National Guard as a commissioned officer. The college currently is composed of the Schools of Engineering Technology and Technology Studies and the Department of Military Science. Inherent in the interdisciplinary program is the use of existing courses and personnel throughout the University. Students in the pre-architecture and pre-engineering professional programs are advised by faculty in SET. Specific programs have been designed as collaborative efforts with other colleges including Arts and Sciences and Business.

The college also is the home for several centers and institutes including the Center for Regional and National Security, the Coatings Research Institute, the Center for Product Research and Development, and the Textiles, Research and Training Institute. The college also supports three units from grant funding through the state of Michigan: Business Professionals of America, DECA and FCLAA.

The College of Technology emphasizes relevant, real-life, hands-on learning activities, a solid interdisciplinary foundation, close relationships with business and industry, teamwork and individual professional competence. Students are encouraged to become tomorrow's leaders by refining the knowledge and skills necessary to understand, adapt to and influence change.

See page 265 for College of Technology interdisciplinary courses.

SCHOOLS AND DEPARTMENTS

School of Engineering Technology
- Applied Technology
- Computer Aided Design
- Computer Engineering Technology
- Construction Management
- Electronics Engineering Technology
- Interior Design
- Manufacturing Engineering Technology
- Manufacturing Technology
- Mechanical Engineering Technology
- Polyurethanes and Coatings

School of Technology Studies
- Administrative Management
- Apparel, Textiles and Merchandising
- Aviation Flight Technology
- Aviation Management Technology
- Business Services and Technology Education
- Communication Technology
- Hotel and Restaurant Management
- Industrial Distribution
- Legal Assistant (Paralegal) Studies
- Marketing Education
- Network and Information Technology Administration
- Technology and Design Education
- Technology Management
- Vocational Education

CENTERS AND INSTITUTES

The College of Technology has four centers and institutes which interface with business, industry and governmental agencies to provide applied research and continuing education. These centers and institutes are:

The Center for Product Research and Development

The Center for Product Research and Development (CPRD) is dedicated to helping manufacturing and construction businesses grow. The CPRD assists innovators to develop concepts into products. The professional services, prototyping, manufacturing facilities and entrepreneurial ideas can add to success in the highly competitive market.

The mission of CPRD is to provide a vital link between University activities and manufacturing and construction industries through applied research and education.

Through collaboration with the Michigan Small Business Development Center, the Center for Product Research and Development can assist companies and inventors in the development of a product as well as the assistance in establishing a business and bringing the product to market.

The CPRD's goals are to serve the workforce, product, innovations and manufacturing and construction industries.

- Create new processes, develop new business through product design, prototype and testing; expand sponsor and research programs integrate technological innovations into economic development efforts; offer training and educational programs provide parent process assistance

The Center for Regional and National Security

The mission of the Center for Regional and National Security is to support citizenship security through excellence and innovation in teaching and research. The center was founded in 2003 with three service components, Information Assurance, Law Enforcement/School Safety and Homeland Security. While traditionally we have served the law enforcement and fire communities we have initiated new initiatives directed at business and industry.

Information Assurance combines the very successful graduate program in Information Security, Computer Forensics and Cyber Crime Investigation. These concentrations combine a cohesive unit where individuals can study and research the problems of our country in areas of information warfare, cyber security, digital analysis and the emerging science of computer forensics. Business continuity is critical for today's economic and sustainability.

Law Enforcement and School Safety unites the very successful School of Police Staff and Command, which has been delivered across the state to more than 1,500 law enforcement executive officers. The School of First Line Supervision addresses issues of leadership and communications for the first line supervisor. The component School Safety builds upon successes in intervention strategies for School Violence and the Team 8 Consortium where eight communities formed a coalition to address gang violence, substance abuse and juvenile crime.

Homeland Security integrates the School of Fire Staff and Command with programs in Incident Command, First Response to Terrorism, Bombing, GIS, Weapons of Mass Destrucrion, Emergency Management, Hazardous Materials; joining this platform is the Applied Health Care concentration in Biological Terrorism.

The Center for Regional and National Security is dedicated to providing solutions to some of the tough problems facing our nation in the Information Security, Law Enforcement, Fire Management, and our regional and national response to Homeland Security.

The Coatings Research Institute (CRI)

The CRI's two-fold mission is to be a leading academic organization that develops relevant scientific knowledge for understanding and expanding the science and technology of paints, coatings, inks, adhesives and related materials. Two consequences of the mission statement will be to (a) enlarge the pool of scientists and technologists proficient in coatings and allied industry personnel. Our research activities, our support
of undergraduate, graduate and post-doctoral candidate students, and our collaborations with government, industry and other educational institutions are consistent with the mission of the College of Technology and the mission of the University.

CRI is dedicated to providing solutions to some of the tough problems facing the coatings industry such as reducing VOCs in paints and coatings. The institute's competencies include the following:

- Synthesize new types of polymers and emulsions of potential value to coatings research,
- Improve and advance polymer and coatings characterization, analysis and test methods,
- Expand the knowledge base of coatings and technology through research on chemical and physical phenomena involved in paints and coatings,
- Provide and increased pool of well-trained coatings professionals to the coatings industry and provide continuing education opportunities to coatings industry personnel through relevant polymer and coatings technology short courses.

The Textile Research and Training Institute
The Textile Research and Training Institute (TRTI) mission is to be a leading research and academic organization that provides relevant and creative research in the areas of and "applied textiles" that match across multi-disciplines and industries. The TRTI will provide a variety of educational training programs for industries that use textiles for various applications.

Laboratories
Our computer labs are housed in Roosevelt Hall on the main campus of Eastern Michigan University in Ypsilanti, Mich. All software is state-of-the-art and currently being utilized in the active furniture and apparel industries.

Software includes: 2-D pattern design software, pattern grading, marking, cutting systems for optimal fabric utilization, CNC industrial cutters, CutWorks Software, product data management software for cutting and manufacturing specialty sheets, in-house CAD, and computer-aided design and manufacturing software.

The Dyeing and Weaving lab is located in Sherzer Hall on the main campus of Eastern Michigan University. The lab includes:

- Looms, dyeing and finishing, physical testing laboratory, tensile testing of yarns and fabrics, abrasion test, wrinkle recovery, fabric flammability, color fastness to cracking and near infrared analysis.

Typical Research and Training Projects
Some of our recent projects include the following:

- Anti-bacterial/Protective fabrics, "Smart Fabric" involving sensors within the fabric
- Environmentally friendly polymer textiles "Green Textiles"
- Protective garments for security purposes i.e. bullet-proof vests, contract digitizing
- 2-D digitizing via the Gerber AccuMark system for over work or pattern development
- Industrial cutting services, high speed, single-ply cutting on a DCS2500 Cutter with CutWorks software

Pattern development, prototyping services are offered, training on Gerber platform software is also offered.

The School of Engineering Technology offers the following majors: applied technology, computer aided design, computer engineering technology, construction management, electronics engineering technology, interior design, mechanical engineering technology, manufacturing engineering technology, manufacturing technology, and polymers and coatings. In addition, a pre-architectural program is offered.

The construction management program has been accredited by the American Council for Construction Education, the Interior Design Program is accredited by the Foundation for Interior Design Education Research (FIDER), and the Computer-Aided Design and Manufacturing Technology programs are accredited by the National Association of Industrial Technology.

The advising procedure is posted in the school offices in Roosevelt and Sill halls. Majors are responsible for meeting the requirements for graduation. It is strongly recommended that students see their adviser each semester to review their program of study. Students not assigned to an adviser should call the office for an appointment with an adviser.

Applied Technology Major — Transfer (ATTF)

The applied technology major is designed to serve those individuals who wish to continue their technology-related community college education. The program offers the flexibility of accepting a block of up to 34 credits of technical courses as transfer credit. Articulation agreements have been established with several community colleges to ensure the maximum transfer of credits. Students transferring from other four-year higher education institutions with a technical major may also find this major suitable.

An active articulation agreement exists between this program and a community college. For further details, see the Articulation Agreements section, page 13.

General Education Requirements .................................................. 48 hours

Area I: Symbolic and Communication
1. See page 23
2. See page 23
3. ENGL124 Principles of Technical Communication (3 hrs)
4. MATH170 Elementary Statistics (3 hrs)
5. CADM105 Computer Applications for Industry (3 hrs)

Area II: Science and Technology
1. CHEM117/118 Fundamentals of Chemistry with lab (4 hrs)
2. PSY101 General Psychology (3 hrs)
3. PHY221 Mechanics, Sound and Heat (4 hrs)

Area III: Social Science
1. See page 24
2. See page 24
3. ECON201 Principles of Microeconomics (3 hrs)
4. ECON202 Principles of Macroeconomics (3 hrs)

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

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**Computer-Aided Design Major (CAD)**

Students majoring in CAD are prepared for a wide range of CAD-related job opportunities. The applications of CAD are becoming more diverse, and are found in many areas, such as architecture, medicine, geographic information systems, facilities management, product presentation and computer animation.

In the CAD courses, you will gain knowledge and hands-on experience in the following four technical areas:

1. CAD applications involving an extensive knowledge of all major CAD applications;
2. Interactive 2-D and 3-D wire frame drawing, geometric dimensioning and tolerancing, solid modeling and surface modeling;
3. Interactive 2-D and 3-D graphics programming for business graphics, animation and CAD drawings involving menu and icon development along with software customization;
4. Applied mechanics, kinematics and design and finite element analysis;
5. Product design and manufacturing.

Graduates from our CAD program are employed in industry as CAD engineers, product designers, application programmers, technical support engineers, CAD/CAM systems managers, training consultants and entry-level designers, as well as in equipment sales and support.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Area</th>
<th>Symbolic and Communication</th>
<th>Science and Technology</th>
<th>Social Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. See page 23</td>
<td>1. CHEM17/118 Fundamentals of Chemistry with lab (4 hrs)</td>
<td>1. See page 26</td>
</tr>
<tr>
<td></td>
<td>2. CTAS121 Fundamentals of Speech (2 hrs)</td>
<td>2. PSY101 General Psychology (3 hrs)</td>
<td>2. See page 24</td>
</tr>
<tr>
<td></td>
<td>3. ENGL324 Principles of Technical Communication (3 hrs)</td>
<td>3. PHY221 Mechanics, Sound, and Heat (4 hrs)</td>
<td>3. ECON201 Principles of Macroeconomics (3 hrs)</td>
</tr>
<tr>
<td></td>
<td>4. MATH170 Elementary Statistics (3 hrs)</td>
<td></td>
<td>4. ECON202 Principles of Microeconomics (3 hrs)</td>
</tr>
</tbody>
</table>

**Area IV: Arts and Humanities**

1. See page 25
2. See page 25
3. See page 25
4. See page 25

**Construction Management Major (CNST)**

The construction major includes course work in general education with specified science and mathematics courses, recommended business courses electives (list of recommended course electives that require the prior approval of a construction or facility management advisor) and technical courses. A minor is not required. A C- or better is required for all major courses.

The construction management major is designed to prepare men and women for middle- and upper-level management in construction contracting. The major has been developed in cooperation with experts from the construction industry; guidelines established by major construction associations and feedback from employers and graduates. The construction management major reflects the current needs and trends in the construction industry.

As an active articulation agreement exists between this program and a community college. For further details, see the Articulation Agreements section, page 13.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Area</th>
<th>Symbolic and Communication</th>
<th>Science and Technology</th>
<th>Social Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. See page 22</td>
<td>1. CHEM17/118 Fundamentals of Chemistry with lab (4 hrs)</td>
<td>1. See page 26</td>
</tr>
<tr>
<td></td>
<td>2. CTAS121 Fundamentals of Speech (3 hrs)</td>
<td>2. PSY101 General Psychology (3 hrs)</td>
<td>2. See page 24</td>
</tr>
<tr>
<td></td>
<td>3. ENGL324 Principles of Technical Communication (3 hrs)</td>
<td>3. PHY221 Mechanics, Sound, and Heat (4 hrs)</td>
<td>3. ECON201 Principles of Macroeconomics (3 hrs)</td>
</tr>
<tr>
<td></td>
<td>4. MATH170 Elementary Statistics (3 hrs)</td>
<td></td>
<td>4. ECON202 Principles of Microeconomics (3 hrs)</td>
</tr>
<tr>
<td></td>
<td>5. CADM105 Computer Applications for Industry (3 hrs)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Area II Science and Technology**
1. CHEM117/118 Fundamentals of Chemistry with lab (4 hrs)
2. PSY101 General Psychology (3 hrs)
3. PHY221 Mechanics, Sound, and Heat (4 hrs)

**Area III Social Sciences**
1. See page 24
2. See page 24
3. ECON201 Principles of Macroeconomics (3 hrs)
4. ECON202 Principles of Microeconomics (3 hrs)

**Area IV Art and Humanities**
1. See page 25
2. See page 25
3. One course from the following:
   - PHIL220 Ethics (3 hrs)
   - PHIL221 Business Ethics (3 hrs)
4. See page 25

**Additional Requirements**
- MATH105 College Algebra (3 hrs)
- MATH107 Plane Trigonometry (2 hrs)

**Physical Education/Graduation Requirement**
- 2 hours

**Major Requirements**
- 67 hours

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>58 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNST125 Introduction to Construction (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>CNST201 Construction Systems (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>CNST202 Construction Materials (3 hrs)</td>
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<tr>
<td>CNST206 Surveying (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>CNST213 Construction Safety (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>CNST228 Construction Graphics (3 hrs)</td>
<td></td>
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<tr>
<td>CNST229 Analysis of Commercial Prints (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>CNST302 Contract Documents, Specifications, and Estimating (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>CNST307 Electrical, Mechanical, and Equipment Systems (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>CNST304 Construction Estimating and Bidding (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>CNST361 Planning and Scheduling (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>CNST387 Cooperative Education in Construction Management (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>CNST403 Production Control (2 hrs)</td>
<td></td>
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<tr>
<td>CNST406 Construction Law (2 hrs)</td>
<td></td>
</tr>
<tr>
<td>CNST412 Fundamentals of Structural Design (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>TOTE50 Fundamentals of Construction Project Management (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>EESC110 Introduction to Physics (4 hrs)</td>
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<tr>
<td>ACC130 Accounting for Nonbusiness Majors (3 hrs)</td>
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</tr>
<tr>
<td>LAW293 Legal Environment of Business (3 hrs)</td>
<td></td>
</tr>
<tr>
<td>MGMT384 Human Resource Management (3 hrs)</td>
<td></td>
</tr>
</tbody>
</table>

**Math/Science Restricted Elective**
- 3 hours

**Business Restricted Elective**
- 6 hours

<table>
<thead>
<tr>
<th>Business courses selected in consultation with the advisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN350 Principles of Finance (3 hrs)</td>
</tr>
<tr>
<td>FIN352 Financial Management for Entrepreneurs (3 hrs)</td>
</tr>
<tr>
<td>FIN358 Analysis of Financial Statements (3 hrs)</td>
</tr>
<tr>
<td>LAW293 Law of Business Enterprises (3 hrs)</td>
</tr>
<tr>
<td>LAW403 Employment Law (3 hrs)</td>
</tr>
<tr>
<td>MGMT202 Business Communication (3 hrs)</td>
</tr>
<tr>
<td>MGMT386 Organizational Behavior and Theory (3 hrs)</td>
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<tr>
<td>MGMT400 Management Skills (3 hrs)</td>
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<tr>
<td>MGMT480 Management/Union Relations (3 hrs)</td>
</tr>
<tr>
<td>MGTG350 Principles of Marketing (3 hrs)</td>
</tr>
<tr>
<td>IS215 End-User Computing (3 hrs)</td>
</tr>
<tr>
<td>IS261 Business Statistics (3 hrs)</td>
</tr>
</tbody>
</table>

**Minor Requirements**
- 0 hours

**University Elective Courses**
- 1 hour

**Program Total**
- 124 hours

---

**Engineering Technology Programs**

The engineering technology programs are based on engineering theory with emphasis on application and implementation skills. The curriculum includes University general education, the engineering technology core, and majors in computer engineering technology (CET), electronic engineering technology (EET), and manufacturing engineering technology (MET). With a common general education and engineering technology core, students may investigate career options and personal preferences at the beginning of their studies and change majors without loss of credits toward program completion.

---

**Computer Engineering Technology Major (CET)**

The computer engineering technology program applies scientific, computer, and engineering knowledge, combined with technical skills, in support of computerized activities. The computing field is one of the fastest growing segments of industry, and the program is designed to include many application aspects of computer engineering technology. The graduates generally apply the theories and principles to design, analyze, produce, operate, program, and maintain computer and digital control systems. In addition, the curriculum includes the study of engineering database management and engineering information technology. Graduates are employed in industry as computer engineers, computer architecture designers, software engineers, and engineering information technologists.

**General Education Requirements**
- 50 hours

<table>
<thead>
<tr>
<th>Area I Symbolic and Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. See page 23</td>
</tr>
<tr>
<td>2. ITAS121 Fundamentals of Speech (2 hrs)</td>
</tr>
<tr>
<td>3. ENGL134 Principles of Technical Communication (3 hrs)</td>
</tr>
<tr>
<td>4. MATH120 Calculus I (4 hrs)</td>
</tr>
<tr>
<td>5. COSC266 Programming in C++ (3 hrs)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Area II Science and Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CHEM111/112 General Chemistry I with lab (4 hrs)</td>
</tr>
<tr>
<td>2. PSY101 General Psychology (3 hrs)</td>
</tr>
<tr>
<td>3. PHY223 Mechanics and Sound (5 hrs)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area III Social Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. See page 24</td>
</tr>
<tr>
<td>2. See page 24</td>
</tr>
<tr>
<td>3. ECON201 Principles of Macroeconomics (3 hrs)</td>
</tr>
<tr>
<td>4. ECON202 Principles of Microeconomics (3 hrs)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area IV Art and Humanities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. See page 25</td>
</tr>
<tr>
<td>2. See page 25</td>
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<tr>
<td>3. See page 25</td>
</tr>
<tr>
<td>4. See page 25</td>
</tr>
</tbody>
</table>

**Physical Education/Graduation Requirement**
- 2 hours

**Major Requirements**
- 66 hours

<table>
<thead>
<tr>
<th>Required Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET100 Introduction to Engineering Technology (3 hrs)</td>
</tr>
<tr>
<td>CADM122 Engineering Graphics I (3 hrs)</td>
</tr>
<tr>
<td>MATH211 Calculus II (4 hrs)</td>
</tr>
<tr>
<td>PHY224 Electricity and Magnetism (5 hrs)</td>
</tr>
<tr>
<td>COSC211 Programming Data Structures (3 hrs)</td>
</tr>
<tr>
<td>COSC311 Algorithms and Data Structures (3 hrs)</td>
</tr>
<tr>
<td>ELEC200 Circuit Analysis I (3 hrs)</td>
</tr>
<tr>
<td>ELEC214 Digital Circuit Analysis (3 hrs)</td>
</tr>
<tr>
<td>ELEC215 Computer-Aided Electronics (3 hrs)</td>
</tr>
<tr>
<td>ELEC218 Motion and Control (3 hrs)</td>
</tr>
<tr>
<td>ELEC300 Analog Circuit Analysis (3 hrs)</td>
</tr>
<tr>
<td>ELEC320 Microcomputer Circuits (3 hrs)</td>
</tr>
<tr>
<td>CET251 Engineering Software and Applications (3 hrs)</td>
</tr>
</tbody>
</table>
Electronic Engineering Technology Major (EET)

The electronic engineering technology major is designed to prepare students for interesting and challenging positions in the diverse field of electronics. The curriculum provides for a strong foundation in electronics to support future changes in technology or the career roles of the individual. The graduate may find employment on engineering teams in product design and development, in production and automation, in instrumentation and communications or in technical sales and operations.

General Education Requirements ........................................... 50 hours

Area I - Symbolics and Communication
1. See page 23
2. CTAS1121 Fundamentals of Speech (2 hrs)
3. ENGL324 Principles of Technical Communication (3 hrs)
4. MATH120 Calculus I (4 hrs)
5. COSC246 Programming in C++ (3 hrs)
Area II - Science and Technology
1. CHEM112/1122 General Chemistry I with lab (4 hrs)
2. PSY101 General Psychology (3 hrs)
3. PHY223 Mechanics and Sound (5 hrs)
Area III - Social Science
1. See page 24
2. See page 24
3. ECON201 Principles of Macroeconomics (3 hrs)
4. ECON202 Principles of Microeconomics (3 hrs)

MANUFACTURING ENGINEERING TECHNOLOGY MAJOR (MFGT)

The Manufacturing Engineering Technology program prepares the student for the development, design, analysis, planning, supervision, and construction of methods and equipment for the production of industrial and consumer goods. Students receive a unique blend of knowledge which directly corresponds to modern applications used in manufacturing. Graduates can become certified as manufacturing engineers by the Society of Manufacturing Engineers.

General Education Requirements ........................................... 50 hours

Area I - Symbolics and Communication
1. See page 23
2. CTAS1121 Fundamentals of Speech (2 hrs)
3. ENGL324 Principles of Technical Communication (3 hrs)
4. MATH120 Calculus I (4 hrs)
5. COSC246 Programming in C++ (3 hrs)
Area II - Science and Technology
1. CHEM112/1122 General Chemistry I with lab (4 hrs)
2. PSY101 General Psychology (3 hrs)
3. PHY223 Mechanics and Sound (5 hrs)
Area III - Social Science
1. See page 24
2. See page 24
3. ECON201 Principles of Macroeconomics (3 hrs)
4. ECON202 Principles of Microeconomics (3 hrs)
Area IV - Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

CET355 Web Development for Engineering Applications (3 hrs)
CET3587 Cooperative Education in Computer Engineering Technology (3 hrs)
CET427 Programmable Logic Controllers (3 hrs)
CET4515 Engineering Database Development (3 hrs)
CET453 Engineering Programming (3 hrs)
CET491 Senior Design Capstone (3 hrs)
POM374 Introduction to Product/Operation Management (3 hrs)
IS380 Introduction to Databases (3 hrs)

Restricted Electives .............................................................. 6 hours

See hours from the following selected in consultation with the adviser:

- CET427 Engineering Product Information (3 hrs)
- ELEC214 Digital Circuit Analysis II (3 hrs)
- ELEC420 Advanced Microprocessors (3 hrs)
- ELEC425 Engineering Graphics II (3 hrs)
- MATH120 Calculus I (4 hrs)
- MATT212 Elementary Linear Algebra (3 hrs)
- MATT255 Differential Equations (3 hrs)
- MATT255 Differential Equations (3 hrs)
- COSC221 Computer Organization I (3 hrs)
- COSC221 Computer Organization I (3 hrs)
- IS315 Applied Data Structures (3 hrs)

No minor is required.

University Elective Courses ................................................... 0 hours

Program Total ................................................................. 124 hours

Major Requirements ............................................................. 72 hours

Engineering Technology Core Courses ...................................... 18 hours
- CADM122 Engineering Graphics (3 hrs)
- ELEC200 Circuit Analysis I (3 hrs)
- MATH121 Calculus II (4 hrs)
- PH1220 Electricity and Magnetism (5 hrs)
- MET312 Applied Dynamics Principles (3 hrs)

EET Major Courses ............................................................... 54 hours
- ET100 Introduction to Engineering Technology (3 hrs)
- CADM426 Manufacturing Communication Systems (3 hrs)
- ELEC227 Programmable Logic Controllers (3 hrs)
- COSC238 Computer Science II (3 hrs)
- ELEC210 Circuit Analysis II (3 hrs)
- ELEC214 Digital Circuit Analysis I (3 hrs)
- ELEC215 Computer-Aided Electronics (3 hrs)
- ELEC218 Motion and Controls (3 hrs)
- ELEC220 Analog Circuit Analysis I (3 hrs)
- ELEC210 Analog Circuit Analysis II (3 hrs)
- ELEC214 Digital Circuit Analysis II (3 hrs)
- ELEC218 Microcomputer Circuits (3 hrs)
- ELEC320 Cooperative Education in Electronic Technology (3 hrs)
- ELEC415 Communication Circuits (3 hrs)
- ELEC420 Advanced Microprocessors (3 hrs)
- ELEC420 Senior Design Project (3 hrs)
- MATH122 Elementary Linear Algebra (3 hrs)
- QUAL330 Industrial Quality Control (3 hrs)

No minor is required.

University Elective Courses ................................................... 0 hours

Program Total ................................................................. 124 hours

Minor Requirements ............................................................. 0 hours

No minor is required.

University Elective Courses ................................................... 0 hours

Program Total ................................................................. 124 hours

Physical Education/Graduation Requirement ................................ 2 hours
CoI of Technology  School of Engineering Technology 12 hours
MATH121 Calculus II (4 hrs)
MATH170 Elementary Statistics (3 hrs)
PHY224 Electricity and Light (5 hrs)

Physical Education/Graduation Requirement 2 hours

Major Requirements 63 hours
ET100 Introduction to Engineering Technology (3 hrs)
MFG111 Materials (3 hrs)
CADM122 Engineering Graphics I (3 hrs)
MFG123 Manufacturing Processes and Methods I (3 hrs)
MFG124 Manufacturing Processes and Methods II (3 hrs)
ELEC200 Circuit Analysis (3 hrs)
MFG205 Industrial Operations (3 hrs)
MET211 Statics (3 hrs)
MET313 Applied Mechanics of Materials (3 hrs)
MET319 Fluid Mechanics (3 hrs)
ELEC218 Motors and Controls (3 hrs)
CADM223 Engineering Graphics II (3 hrs)
MFG290 GD&T and Metrology (3 hrs)
MFG306 Plastics Processing (3 hrs)
MFG316 Design for Manufacturing and Tooling (3 hrs)
QUAL320 Industrial Quality Control (3 hrs)
MFG361 Computer Numerical Control (5 hrs)
MFG387 Cooperative Education (3 hrs)
MFG421 Manufacturing Engineering and Analysis (3 hrs)
MFG470 Integrated Product and Process Design (3 hrs)
MFG490 Manufacturing Enterprise Capstone (3 hrs)

Minor Requirements 0 hours

Program Total 127 hours

MECHANICAL ENGINEERING TECHNOLOGY MAJOR (MET)

The mechanical engineering technology major offers the opportunity to prepare for rewarding and responsible careers in support of technical and engineering activities. The program is designed to provide graduates with a strong technical foundation that integrates the methods, materials, machinery and power resources found in modern industry. Students receive both lecture and hands-on laboratory training in manufacturing processes, engineering mechanics, thermo-fluid sciences and machine design, culminating in a senior design capstone project.

General Education Requirements 50 hours

Area I Symbolic and Communication
1. See page 23
2. CTAS121 Fundamentals of Speech (2 hrs)
3. ENGL134 Principles of Technical Communication (3 hrs)
4. MATH120 Calculus 1 (4 hrs)
5. COSC146 Programming in C++ (3 hrs)

Area II Science and Technology
1. CHEM121/122 General Chemistry I with lab (4 hrs)
2. PSY101 General Psychology (3 hrs)
3. PH223 Mechanics and Sound (3 hrs)

Area III Social Sciences
1. See page 24
2. See page 24
3. ECON201 Principles of Macroeconomics (3 hrs)
4. ECON202 Principles of Microeconomics (3 hrs)

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirement 2 hours

Major Requirements 72 hours
ET100 Introduction to Engineering Technology (3 hrs)
MFG111 Materials (3 hrs)
MATH121 Calculus II (4 hrs)
CADM122 Engineering Graphics I (3 hrs)
MFG123 Manufacturing Processes and Methods I (3 hrs)
MFG124 Manufacturing Processes and Methods II (3 hrs)
MET211 Statics (3 hrs)
CADM223 Engineering Graphics II (3 hrs)
ELEC200 Circuit Analysis (3 hrs)
PHYS204 Electricity and Light (5 hrs)
MET312 Applied Dynamics (3 hrs)
MET313 Applied Mechanics of Materials (3 hrs)
MET316 Applied Thermodynamics and Heat Transfer (3 hrs)
MFG316 Design for Manufacturing and Tooling (3 hrs)
MET319 Fluid Mechanics (3 hrs)
MET387 Cooperative Education (3 hrs)
MET411 Mechanical/Design (3 hrs)
ELEC218 Motors and Controls (3 hrs)
MET454 Finite Element Analysis for Engineering Applications (3 hrs)
MET457 Kinematics of Machines (3 hrs)
MET470 Mechanical Vibrations (3 hrs)
MET492 Senior Design Project I (3 hrs)
MET493 Senior Design Project II (3 hrs)

Minor Requirements 0 hours

No minor is required.

Program Total 124 hours

Note: This course satisfies both a general education and a major requirement.

INTERIOR DESIGN PROGRAM (IDE)

The interior design program offers a Foundation for Interior Design Education Research (FIDER) accredited, four-year studio based curriculum, culminating in a bachelor of science degree. The program mission is to academically prepare students to creatively solve problems related to the function and quality of interior environments.

The program promotes critical thinking by requiring a balance between broad liberal arts courses, specific courses in fine arts, management, marketing, construction, textiles, and an intense curriculum of interior design courses.

The interior design curriculum provides educational opportunities to investigate the interaction of humans and environments through the integration of theory, knowledge and technical skills, preparing students to achieve in the challenging profession of interior design.

Central to our mission of preparing students to achieve as professional interior design professionals is our goal to impart to our students a holistic view of people and their environments in multi-cultural, multi-racial and multicultural settings; a sensitivity to environmentally conscious design issues; a consideration of the needs of all people, regardless of age, status or ability; and the ability to creatively analyze design problems to create interior environments that meet human needs and fulfill human aspirations.

Before students may enter courses at the 300- or 400-level, the following standards must be met:

1. The student must receive a C or better in a) identified courses in the major and b) identified general education courses.
2. The student must achieve a GPA of 2.7 or above calculated from the grades in a) identified courses in the major and b) identified general education courses and
3. The student must successfully complete a portfolio review by a minimum of two interior design faculty members and one interior design practitioner who has not taught courses in the interior design program in the previous two years.
**General Education Requirements** .......................... 48 hours

**Area I: Symbolics and Communication**
1. ENGL110 Composition I: Researching the Public (3 hrs)
2. See page 23
3. **Optional courses from the following:**
   - ENGL124 Principles of Technical Communication (3 hrs)
   - CTAC224 Public Speaking (3 hrs)
   - CTAC225 Listening Behavior (3 hrs)
   - CTAC226 Non-Verbal Communication (3 hrs)
   - CTAC227 Interpersonal Communication (3 hrs)
   - CTAC374 Intercultural Communication (3 hrs)
   - CTAC375 Intercultural/Interracial Communication (3 hrs)
4. CADM105 Computer Applications for Industrial (3 hrs)
5. See page 22

**Area II: Science and Technology**
1. See page 24
2. PSY101 General Psychology (3 hrs)
3. See page 24

**Area III: Social Sciences**
1. See page 24
2. See page 24
3. **Choose one of the following:**
   - SOCL105 Introductory Sociology (3 hrs)
   - ANTH115 Introduction to Cultural Anthropology (3 hrs)
4. See page 24

**Area IV: Arts and Humanities**
1. See page 25
2. See page 25
3. ART120 Drawing I (3 hrs)

**Additional Requirements** .................................. 3 hours
ART122 Two-Dimensional Design (3 hrs)

**Physical Education/Graduation Requirement** ............ 2 hours

**Major Requirements** ....................................... 73 hours

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>70 hours</th>
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</thead>
<tbody>
<tr>
<td>IDE110 Interior Design Studio 1 (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>IDE111 Human Factors and Special Needs (2 hrs)</td>
<td></td>
</tr>
<tr>
<td>IDE120 Interior Design Studio II (4 hrs)</td>
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<tr>
<td>IDE121 Interior Design Materials and Components (2 hrs)</td>
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<tr>
<td>IDE122 Design Theory II (2 hrs)</td>
<td></td>
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<tr>
<td>IDE131 Design Theory I (2 hrs)</td>
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<tr>
<td>IDE210 Interior Design Studio III (4 hrs)</td>
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<tr>
<td>IDE213 Computers for Interior Design (2 hrs)</td>
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<tr>
<td>IDE217 History of Interiors Antiquity - 1800 (2 hrs)</td>
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<tr>
<td>IDE220 Interior Design Studio IV (4 hrs)</td>
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<tr>
<td>IDE224 Interior Building Codes and ADA (2 hrs)</td>
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<tr>
<td>IDE228 History of Interiors 1800 - Present (2 hrs)</td>
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</tr>
<tr>
<td>IDE310 Interior Design Studio V: Residential (4 hrs)</td>
<td></td>
</tr>
<tr>
<td>IDE314 Computers for Interior Design II (2 hrs)</td>
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<tr>
<td>IDE317 Lighting for Interiors (2 hrs)</td>
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<tr>
<td>IDE380 Interior Design Studio VII: Contract (4 hrs)</td>
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<tr>
<td>IDE392 Interior Design Studio IX: Commercial (2 hrs)</td>
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<tr>
<td>IDE394 Lighting for Interiors (2 hrs)</td>
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<tr>
<td>IDE400 Interior Design Studio VIII: Contract (4 hrs)</td>
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</tr>
<tr>
<td>IDE411 Internship in Interior Design (1 hr)</td>
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<tr>
<td>IDE420 Interior Design Studio IX: Contract (4 hrs)</td>
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<tr>
<td>IDE422 Professional Practice in Interior Design (2 hrs)</td>
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<tr>
<td>ATM208 Interior Design (2 hrs)</td>
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<tr>
<td>IT/Network 201 Construction Systems (3 hrs)</td>
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<tr>
<td>MGMT180 Organizational Behavior and Theory (3 hrs)</td>
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<tr>
<td>MGT3560 Principles of Marketing (3 hrs)</td>
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</tr>
</tbody>
</table>

**Restrictive Elective Courses** .............................. 3 hours
Any one hour IDE 100- or 200-level course not taken above and any two hour IDE 300- or 400-level course not taken above. Selected in consultation with the interior design advisor.

**Minor Requirements** ...................................... 0 hours
No minor is required.

**University Elective Courses** .............................. 0 hours

**Program Total** ........................................... 126 hours

*Note: This course satisfies both a general education and a major requirement. Course must be completed with a grade of C or better prior to completion of second year review process.

**MANUFACTURING TECHNOLOGY MAJOR (MFG)**

The rapid increase in complexity of manufacturing technology and operations has caused the education of most engineers to become increasingly theoretical. This has produced a demand for manufacturing professionals who have applied technical skills. Our graduates, who are educated in applied technologies, help to meet that demand. Students majoring in manufacturing are prepared for a wide range of professional positions in industry. Graduates are employed as manufacturing engineers, manufacturing operations managers, computer applications integrators, project managers, and many other technical and managerial positions. The manufacturing technology major includes a core of fundamental manufacturing courses designed to produce a well-rounded graduate with hands-on experience. In advanced courses, students gain knowledge and skills in mechanical and tool design, fluid power systems, quality control, robotics and control technologies for machines, processes, and manufacturing operations management. A number of our graduates have become certified as manufacturing technologists or manufacturing engineers by the Society of Manufacturing Engineers.

**General Education Requirements** .................. 48 hours

**Area I: Symbolics and Communication**
1. See page 23
2. See page 23
3. ENGL124 Principles of Technical Communication (3 hrs)
4. MATH170 Elementary Statistics (3 hrs)
5. CADM105 Computer Applications for Industry (3 hrs)

**Area II: Science and Technology**
1. CHEM177/178 Fundamentals of Chemistry with lab (4 hrs)
2. PSY101 General Psychology (3 hrs)
3. PHY121 Mechanics, Sound, and Heat (4 hrs)

**Area III: Social Sciences**
1. See page 24
2. See page 24
3. ECON101 Principles of Macroeconomics (3 hrs)
4. ECON203 Principles of Microeconomics (3 hrs)

**Area IV: Arts and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. See page 25

**Additional Requirements** ............................ 9 hours
MATH105 College Algebra (3 hrs)
MATH107 Plane Trigonometry (2 hrs)
PHY122 Electricity and Light (4 hrs)

**Physical Education/Graduation Requirement** ........ 2 hours

**Major Requirements** .................................. 60 hours
MFG111 Materials (3 hrs)
CADM122 Engineering Graphics I (3 hrs)
CADM223 Engineering Graphics II (3 hrs)
CADM325 Applied Mechanics, Kinematics, and Design (3 hrs)
MFG261 Computer Numerical Control (3 hrs)

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228
MFG425 Advanced Manufacturing Methods (3 hrs)
ELEC200 Circuit Analysis I (3 hrs)
ELEC218 Motors and Controls (3 hrs)
MFG123 Manufacturing Processes and Methods I (3 hrs)
MFG124 Manufacturing Processes and Methods II (3 hrs)
MFG203 Industrial Operation (3 hrs)
MFG200 GD&T and Metrology (3 hrs)
MFG306 Plastic Processing (3 hrs)
MFG116 Design for Manufacturing and Tooling (3 hrs)
MFG387 Cooperative Education in Manufacturing Technology (3 hrs)
MFG421 Manufacturing Engineering Analysis (3 hrs)
MFG470 Integrated Product and Process Design (3 hrs)
MFG390 Manufacturing Enterprise Capstone (3 hrs)
QUAL320 Industrial Quality Control (3 hrs)

One course from the following:

ACC134 Accounting for Nonbusiness Majors (3 hrs)
ACC240 Principles of Financial Accounting (3 hrs)

Minor Requirements ........................................... 0 hours

Physical Education/Graduation Requirements ......... 2 hours

Major Requirements ........................................ 54 hours

Required Courses ........................................ 42 hours

CHEM281 Quantitative Analysis (4 hrs)
INDT310 Polymers for Engineers and Technologists (3 hrs)
CHEM361 Fundamentals of Physical Chemistry (3 hrs)
CHEM371 Organic Chemistry I (3 hrs)
CHEM372 Organic Chemistry II (3 hrs)
CHEM373 Organic Chemistry Laboratory (2 hrs)
INDT387 Cooperative Education in Interdisciplinary Technology (3 hrs)
INDT400 Polymers and Coatings Technology I (3 hrs)
INDT401 Polymers and Coatings Technology II Laboratory (3 hrs)
INDT402 Polymers and Coatings Technology II (3 hrs)
INDT403 Polymers and Coatings Technology II Laboratory (3 hrs)
INDT405 Coating Processes I (3 hrs)
INDT460 Advanced Coatings Topics (3 hrs)
INDT479 Special Topics Introduction to Coating Raw Materials (3 hrs)

Elective Courses ............................................ 12 hours

Twelve hours from the following:

CHEM241 Materials Science (3 hrs)
CHEM340 Introduction to Industrial Chemistry (3 hrs)
CHEM415 Environmental Chemistry (3 hrs)
CHEM478 Special Topics (2 hrs)
INDT377/378/379 Special Topics (3 hrs)
INDT416 Water-Based Coatings (3 hrs)
INDT477/478/479 Special Topics (3 hrs)
INDT487 Cooperative Education in Interdisciplinary Technology (1 hr)

Minor Requirements ........................................... 0 hours

No minor is required.

University Elective Courses ................................ 3 hours

Program Total ............................................... 124 hours

POLYMERS AND COATINGS
TECHNOLOGY CURRICULUM (PLCT)

The polymers and coatings curriculum is designed to provide the background necessary for graduates to find employment in companies that manufacture and use paints, coatings, rubber, plastics, polymers, adhesives, and inks, or in companies that manufacture raw materials for these industries. Students completing the curriculum have met the major and minor requirements for graduation. No outside minor is needed.

An active articulation agreement exists between this program and a community college. For further details, see the Articulation Agreement section, page 13.

General Education Requirements ....................... 50 hours

Area I Symbolics and Communication
1. See page 23
2. See page 23
3. ENGL124 Principles of Technical Communication (3 hrs)
4. MATH120 Calculus I (4 hrs)
5. INDT201 Microcomputer Applications in Technology (3 hrs)

Area II Science and Technology
1. CHEM121/122 General Chemistry I with Lab (4 hrs)
2. BIOL105 Introductory Biology for Non-Majors (4 hrs)
3. PHYS221 Mechanics, Sound, and Heat (4 hrs)

Area III Social Sciences
1. See page 24
2. See page 24
3. ECON201 Principles of Macroeconomics (3 hrs)
4. ECON202 Principles of Microeconomics (3 hrs)

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Additional Requirements ................................ 15 hours

CHEM123/124 General Chemistry II (4 hrs with lab)
CHEM381 Instrumentation of Chemical Technology (2 hrs)
MATH105 College Algebra (3 hrs)
MATH107 Plane Trigonometry (2 hrs)
PHYS222 Electricity and Light (4 hrs)

CONSTRUCTION MANAGEMENT MINOR (CNST)

This minor is designed to provide a background in fundamental technical applications for students with majors outside the department who expect to work in industry. Employment opportunities are enhanced for persons with technical coursework.

University elective courses in the minor are selected to relate to the student's major subject area. Academic advising to determine elective course choices is provided by the School of Engineering Technology. A maximum of six hours may be transferred from outside the department.

Required Courses ........................................ 23 hours

CNST125 Introduction to Construction (2 hrs)
CNST201 Construction Systems (3 hrs)
CNST202 Construction Materials (3 hrs)
CNST228 Construction Graphics (3 hrs)
CNST229 Analysis of Commercial Prints (3 hrs)
CNST361 Planning and Scheduling (3 hrs)
CNST302 Contract Documents, Regulations, and Specifications (3 hrs)
CNST304 Construction Estimating and Bidding (3 hrs)

Minor Total ............................................... 23 hours
HUMAN ENVIRONMENTS MINOR (HENV)

Required Courses .................................................. 6 hours
IDE111 Human Factors and Special Needs (2 hrs)
IDE113 Orientation to Interior Design (2 hrs)
IDE122 Interior Design Theory (2 hrs)

Restricted Elective Courses ....................................... 14 hours
Fourteen hours from the following:
IDE110 Interior Design Studio I (4 hrs)
IDE130 Interior Design Studio II: Sketching (2 hrs)
IDE112 Interior Design Materials and Components (2 hrs)
IDE190 Interior Design II: Perspectives and Rendering (2 hrs)
IDE224 Interior Build Codes/ADA (2 hrs)
IDE213 Computers in Interior Design I (2 hrs)
IDE222 History of Interiors (2 hrs)
IDE317 Lighting for Interiors (2 hrs)
IDE310 Interior Design Studio III (4 hrs)
IDE314 Computers in Interior Design II (2 hrs)
IDE332 Interior Design Space Planning (2 hrs)

Minor Total .......................................................... 20 hours

MANUFACTURING MINOR (MFG)

The manufacturing minor is designed to provide majors in business and science with an introduction to manufacturing engineering. Employment opportunities typically increase for persons with this minor.

University elective courses in the minor are selected to relate to the student's major. Academic advising to determine elective course choices is provided by a manufacturing advisor in the School of Engineering Technology.

Required Courses .................................................. 12 hours
MFG111 Materials (3 hrs)
MFG123 Manufacturing Processes and Methods I (3 hrs)
MFG124 Manufacturing Processes and Methods II (3 hrs)
MFG203 Industrial Operation (3 hrs)

Restricted Electives .................................................. 9 hours
MFG112 Plastics (3 hrs)
CADM122 Engineering Graphics I (3 hrs)
CADM221 Engineering Graphics II (3 hrs)
MFG316 Design for Manufacturing and Tooling (3 hrs)
QUAL320 Industrial Quality Control (3 hrs)
MFG290 GD&T and Metrology (3 hrs)
MFG360 Plastic Processing (3 hrs)
MFG361 Computer Numerical Control (3 hrs)
MFG621 Manufacturing Engineering Analysis (3 hrs)
MFG625 Advanced Manufacturing Methods (3 hrs)
MFG470 Integrated Product and Process Design (3 hrs)
MFG490 Manufacturing Enterprise Capstone (3 hrs)

Minor Total .......................................................... 21 hours

PRE-ARCHITECTURE PROGRAM (PARC)

This program is designed for students who wish to transfer to an architecture program at another university. Students are strongly advised to consult with the school to which they plan to transfer for specific requirements. Courses taken may apply to other majors at the University if the student chooses to remain on this campus to complete a bachelor's degree.

Department advisors in these areas maintain contact with universities that offer related four-year programs in order to maximize the value of the transfer program of study at the University to other universities. Students planning to transfer to four-year programs should not complete RMU's general education requirements.

Required Courses .................................................. 57 hours
ENGL121 Composition II: Researching the Public Experience (3 hrs)
CTAS112 Fundamentals of Speech (3 hrs)
MATH120 Calculus I (4 hrs)
MATH121 Calculus II (4 hrs)
COSC111 Introduction to Programming (3 hrs)
CHEM117/118 Fundamentals of Chemistry with lab (4 hrs)
PHY233 Mechanics and Sound (5 hrs)
PHY221 Electricity and Light (5 hrs)
PLSCI121/123 American Government (3 hrs)
HIST123 The United States to 1877 (3 hrs)
ECON201 Principles of Macroeconomics (3 hrs)
ECON202 Principles of Microeconomics (3 hrs)
PHIL130 Introduction to Logic (or approved alternative) (3 hrs)
ART122 Drawing I (3 hrs)
ART231 Three-Dimensional Design (3 hrs)
Two literature courses (6 hrs)

Recommended Course (course may not transfer) .................. 2 hours
CNST125 Introduction to Construction (2 hrs)

SCHOOL OF TECHNOLOGY STUDIES

Campus Address: 122 Sill Hall
Internet wmv.unionu.edu
Telephone: 734/887.1161
FAX: 734/887.5990
E-mail: morell.boone@emich.edu

See pages 250, 251, 301, 304, 312 and 357 for course descriptions.

The School of Technology Studies, newly formed from the Departments of Business and Technology Education, and Interdisciplinary Studies, with two programs from human, environmental and consumer sciences offers undergraduate and graduate programs. The undergraduate programs lead to a bachelors science degree in administrative management, apparel, textiles and merchandising, aviation flight technology, aviation management technology, business services and technology education, communication technology, hotel and restaurant management, industrial distribution, legal assistant (paralegal) studies, marketing education, network and information technology administration, technology education and design, technology management and vocational education. Individuals who complete these professional curriculums should find many career opportunities open to them.

Professional Programs

Students majoring in one of the professional programs listed above should follow the general education guidelines in the catalog under which they entered the University. Students must include a course in cross cultural or international studies within the general education. Please see the College of Technology undergraduate advisor In Sill Hall (105 C) for advice regarding the general education requirements and guidelines for these College of Technology programs and for prerequisite course requirements. Specific program requirements are noted below.

Students without appropriate background or course prerequisites that are identified for courses in the majors are responsible to take those prerequisites. Transfer students should see the program advisor in their major to determine whether transfer credit will be used on the major.
ADMINISTRATIVE MANAGEMENT MAJOR (ADMG)

The administrative management major focuses on the technical and management skills, concepts and principles needed to assume responsibility for executive office administration. Administrative managers are vital members of executive teams and assume supervisory, organizational and communicative roles in the coordination of administrative services.

An active articulation agreement exists between this program and a community college. For further details, see the Articulation Agreements section, page 13.

This program is under review. Contact the department for current program requirements.

General Education Requirements ........................................... 47 hours

**Area I: Arabic and Communication**
1. See page 23
2. See page 23
3. See page 23
4. MATH 121 Linear Models and Probability (3 hrs)
5. BEDI 201 Microcomputers for Business Applications (3 hrs)

**Area II Science and Technology**
1. See page 24
2. See page 24
3. See page 24

**Area III Social Sciences**
1. See page 24
2. See page 24
3. ECON 201 Principles of Macroeconomics (3 hrs)
4. ECON 202 Principles of Microeconomics (3 hrs)

**Area IV Arts and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirements ................................ 2 hours

Major Requirements ........................................................................ 50 hours

**Administrative and Information Management Concepts** 21 hours
BEDI 195 Administering Workplace Systems and Technology (3 hrs)
BEDI 196 Information and Media Administration (3 hrs)
BEDI 495 End-User Systems Implementation and Evaluation (3 hrs)
BEDI 496 Records Administration Using database (3 hrs)
MGMT 384 Human Resource Management (3 hrs)
MGMT 487 Human Resource Development (3 hrs)

One course from the following:

- MKTG 374 Business to Business Marketing (3 hrs)
- BEDI 387 Cooperative Education in Business Education (3 hrs)

**Business Foundations** ......................................................... 21 hours
BEDI 100 Contemporary Business (3 hrs)
ACCC 240 Principles of Financial Accounting (3 hrs)
ACCC 41 Principles of Managerial Accounting (3 hrs)
ACCS 43 Managerial Cost Accounting (3 hrs)
LAW 293 Legal Environment of Business (3 hrs)
MKTG 340 Principles of Marketing (3 hrs)
DS 245 Business Statistics I (3 hrs)

**Information Processing** ....................................................... 8 hours
BEDI 2123 Word Processing/Keyboarding Application (2 hrs)
BEDI 210 Concepts of Network and Business Technology (3 hrs)
BEDI 224 Computer-based Business Mathematics (3 hrs)

Minor Requirements ........................................................................ 9 hours

No minor is required.

University Elective Courses ...................................................... 26 hours

Program Total ................................................................................ 124 hours

APPAREL, TEXTILES AND MERCHANDISING MAJOR (ATM)

The apparel, textiles and merchandising curriculum offers practical career-oriented knowledge and skills as well as theoretical foundations of marketing fashion apparel and accessories. A minor in art, communication, service, journalism, management, marketing or theatre is required.

**General Education Requirements** ............................................ 47 hours

**Area I: Arabic and Communication**
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. See page 23

**Area II Science and Technology**
1. See page 24
2. See page 24
3. See page 24

**Area III Social Sciences**
1. See page 24
2. See page 24
3. See page 24
4. See page 24

**Area IV Arts and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. See page 25

**Physical Education/Graduation Requirement** ............................ 2 hours

Major Requirements ........................................................................ 45 hours

**Required Courses** ..................................................................... 21 hours
ATM 145 Introduction to Apparel and Textile Merchandising (3 hrs)
ATM 220 Introductory Textiles (3 hrs)
ATM 255 Apparel Analysis (3 hrs)
ATM 354 Merchandise Planning and Control (3 hrs)
ATM 355 Application of Merchandising Practices (3 hrs)
ATM 437 Professional Seminar (3 hrs)
ATM 447 Field Experience (3 hrs)

**Elective Courses** ................................................................. 24 hours

- Twenty-four hours from the following:
  - ATM 103 Integrate Arts (3 hrs)
  - ATM 118 Apparel Studies (3 hrs)
  - ATM 119 Early American Textiles (3 hrs)
  - ATM 135 Cultural Study of Dress (3 hrs)
  - ATM 210 Display Techniques (3 hrs)
  - ATM 265 Merchandising of Interior Furnishings (3 hrs)
  - ATM 302 Fashion Manufacturing Techniques (3 hrs)
  - ATM 380 Fashion of the Haute Couture (3 hrs)
  - ATM 390 Visual Merchandising (3 hrs)
  - ATM 392 Pattern Design (3 hrs)
  - ATM 404 Advanced Textiles (3 hrs)
  - ATM 439 Fashion Markets (3 hrs)
  - ATM 460 Tailoring (3 hrs)

Minor Requirements ......................................................................... 21 hours

Select a minor from the following:

- Art
- Communication
- Journalism
- Management
- Marketing
- Theatre
- Physical Science
AVIATION FLIGHT TECHNOLOGY CURRICULUM (AVFT)

This program is designed to prepare individuals for positions as entry-level professional pilots in the aviation industry. Based upon the needs of the aviation industry, the program encompasses a program of study that takes an individual from student pilot to certified flight instructor. It also includes a number of specialized courses that incorporate aviation business and management skills, human factors, aerodynamics, aviation law and regulations, and crew resource management. The program includes a general education curriculum designed to provide a well-rounded knowledge foundation.

The Aviation Flight Technology program has amendments to the basic aviation program designed to accommodate ROTC students planning on applying for military pilot training. The accommodations include the Eastern Michigan University U.S. Army ROTC program and the Air Force or Naval ROTC programs located at the University of Michigan which may be attended by Eastern Michigan University students. Please contact the Aviation Flight Technology program coordinator for further information.

**General Education Requirements**

- Area I Symbolic and Communication (48-49 hours)
  - See page 23
  - See page 23
  - See page 23
  - Choose one option from the following: MATH 107 Plane Trigonometry (2 hrs) and MATH 119 Applied Calculus (3 hrs)
  - MATH 110 Calculus I (4 hrs)
  - IND T201 Microcomputer Applications in Technology (3 hrs)

- Area II Science and Technology
  - PHY 221 Mechanics, Sound, and Heat (4 hrs)

- Area III Social Science
  - PSCI 111 American Government (3 hrs)

- Area IV Arts and Humanities
  - See page 25
  - See page 25
  - See page 25
  - See page 25

**Physical Education/Graduation Requirement**

- PEGN 210 Lifetime Wellness and Fitness (2 hrs)

**Major Requirements**

- INDT 100 Introduction to Air Transportation (3 hrs)
- INDT 110 Aircraft Maintenance I (3 hrs)
- INDT 120 Flight Operations I (3 hrs)
- INDT 170 Aviation Ground Instruction (3 hrs)
- INDT 1208 Aviation Human Factors (3 hrs)
- INDT 263 Aircraft Systems (3 hrs)
- INDT 220 Flight Operations II (3 hrs)
- INDT 265 Aviation Law and Insurance (3 hrs)
- INDT 313 Aircraft Industry Regulations (3 hrs)
- INDT 320 Aviation Safety (3 hrs)
- INDT 321 Cockpit and Crew Resource Management (3 hrs)
- ESSCA 324 Weather (3 hrs)

**Minor Requirements** 0 hours

**University Elective Courses** 6-7 hours

**Program Total** 124 hours

**AVIATION MANAGEMENT TECHNOLOGY CURRICULUM (AVMG)**

The aviation management technology curriculum is designed to prepare individuals for entry-level management and supervisory positions in the field of aviation technology. The program has a foundation of aviation-related and basic business course work.

**General Education Requirements**

- Area I Symbolic and Communication
  - See page 23
  - See page 23
  - See page 23
  - Choose one course from the following: "MATH 118 Linear Models and Probability" or "MATH 119 Applied Calculus"

- Area II Science and Technology
  - See page 24
  - See page 24
  - See page 24

- Area III Social Science
  - See page 24
  - See page 24
  - See page 24
  - See page 24

- Area IV Arts and Humanities
  - See page 25
  - See page 25
  - See page 25
  - See page 25

**Physical Education/Graduation Requirement**

- PEGN 210 Lifetime Wellness and Fitness (2 hrs)

**Major Requirements**

- INDT 100 Introduction to Air Transportation (3 hrs)
- INDT 110 Aircraft Maintenance I (3 hrs)
- INDT 120 Flight Operations I (3 hrs)
- INDT 170 Aviation Ground Instruction (3 hrs)
- INDT 210 Aircraft Maintenance II (3 hrs)
- INDT 220 Flight Operations II (3 hrs)
- INDT 303 Aviation Law and Insurance (3 hrs)
BUSINESS SERVICES AND TECHNOLOGY EDUCATION (BSTE)
Secondary Teacher Certification

At the writing the BSTE program is being reviewed. Students will be admitted to this program until the end of 2004-2005 academic year. The new BMT program should be in place by the 2005-2006 academic year.

The business services and technology education major leads to a Michigan Department of Education Secondary Provisional Certificate and, upon meeting the requirements according to the current Michigan State Plan, a vocational endorsement. The program prepares prospective teachers in the areas of information processing and management, administrative services, accounting and computing, and basic business such as economics, consumer economics, business law, business management, computer literacy and introduction to business.

This major can be completed only in conjunction with the bachelor of business education curriculum. Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification with the Michigan Department of Education Secondary Provisional Certificate endorsed in business education, certification code GX, and, with appropriate work experience, certification code VB. The Michigan Test for Teacher Certification (MTTC) covering this field is #32, "Business Education."

General Education Requirements ........................................... 37 hours

Area I Symbolic and Communication

1. See page 25
2. See page 25
3. See page 25
4. MATH 118 Linear Models and Probability (3 hrs)
5. BEDU 201 Microcomputers for Business Applications*

Area II Science and Technology

1. See page 24
2. PSY 101 General Psychology (3 hrs)
3. See page 24

Area III Social Sciences

1. See page 24
2. See page 24
3. ECON 201 Principles of Macroeconomics*
4. ECON 202 Principles of Microeconomics*

Minor Requirements .......................................................... 0 hours

No minor is required.

University Elective Courses .................................................. 13 hours

Program Total ................................................................. 124 hours

Note:
*This course satisfies both a general education and a major requirement.
MARKETING EDUCATION (MKTE)
Secondary Teacher Certification

The bachelor of business education may be also be earned by pursuing the marketing education program. This program leads to a Michigan Department of Education Secondary Provisional Certificate (GM and GX) and vocational marketing education endorsement (VD) qualifying the prospective teacher in such areas as sales, retailing, marketing and advertising. Both the Michigan Department of Education Secondary Provisional Certificate (GM) and the vocational endorsement (VD) are required to earn the BBT with a major in marketing education.

This major can be completed only in conjunction with the Bachelor of Business Education curriculum, included in the marketing education program listed below. Successful completion of this course of study, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate (GM) and, with appropriate work experience, the vocational marketing endorsement (VD). The Michigan Test for Teacher Certification (MTTC) covering this field is #36, "Marketing (Distribution Education)."

This program is in review. Please contact the department for current program requirements.

General Education Requirements ........................................ 41 hours
Area I: Symbols and Communication
1. See page 23
2. See page 23
3. See page 23
4. MATH 118 Linear Models and Probability (3 hrs)
5. BEDU 201 Microcomputer for Business Applications (3 hrs)
Area II: Science and Technology
1. See page 24
2. PSY 101 General Psychology (3 hrs)
3. See page 24
Area III: Social Sciences
1. See page 24
2. See page 24
3. ECON 201 Principles of Macroeconomics* (3 hrs)
4. ECON 202 Principles of Microeconomics*
Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirements ......................... 2 hours

Major Requirements ...................................................... 50 hours

ACC 240 Principles of Financial Accounting (3 hrs)
ACC 241 Principles of Managerial Accounting (3 hrs)
BEDU 100 Contemporary Business (3 hrs)
*ECON 201 Principles of Macroeconomics (3 hrs)
*ECON 202 Principles of Microeconomics (3 hrs)
LAW 239 Legal Environment of Business (3 hrs)
MGMT 386 Organizational Behavior and Theory (3 hrs)
MKTG 360 Principles of Marketing (3 hrs)
MKTG 261 Contemporary Selling (3 hrs)
MKTG 363 Retailing (3 hrs)
MKTG 365 Consumer Behavior (3 hrs)

Six hours from the following:
LAW 239 Law of Business Enterprises (3 hrs)
MGMT 384 Human Resource Management (3 hrs)
MGMT 388 Introduction to Entrepreneurship (3 hrs)
MGMT 493 Human Resource Development (3 hrs)
MKTG 368 Marketing Strategy (3 hrs)
MKTG 369 Advertising (3 hrs)
MKTG 374 Business to Business Marketing (3 hrs)
MKTG 461 Sales Management (3 hrs)

Eleven hours from the following:
BEDU 123 Word Processing/Keyboarding Applications (2 hrs)
BEDU 224 Computer-based Business Mathematics (3 hrs)
BEDU 250 Personal Finance (3 hrs)
BEDU 387 Cooperative Education in Business Education (3 hrs)
BEDU 487 Cooperative Education in Business Education (3 hrs)
BEDU 493/498/499 Independent Study (1/2/3 hrs)
ATM 145 Introduction to Apparel and Textile Merchandising (3 hrs)
ATM 235 Introductory Textiles (3 hrs)
ATM 255 Apparel Analysis (3 hrs)
ATM 439 Fabric Properties (3 hrs)
BEDU 452 Principles of Vocational Education (3 hrs)
BEDU 468/469/478/498/499 Professional Development (1/2/3/4/5 hrs)

Professional Studies ..................................................... 45 hours
Pre-Admission Phase: The Learner and the Community: 15 hours
Courses that may be taken before formal admission to the teacher education program:
100 clock hours of approved pre-student teaching field experiences
SPED 322 Human Development and Learning (4 hrs)
FETE 401 Field Experience (1 hr)
SPED 231 Education of Students with Exceptionalities (3 hrs)
BEDU 100 Principles of Marketing and Office Education (3 hrs)
BEDU 368 Management of Marketing Education Programs (2 hrs)
BEDU 461 Projects and Simulations in Marketing Education (2 hrs)

Courses that require formal admission to the teacher education program:
Phase I: Curriculum, Assessment and the Social Context: 6 hours
EDUC 328 School in a Multicultural Society (3 hrs)
EDPS 110 Introduction to Assessment and Evaluation (3 hrs)
Phase II: Content Methods, Literacy and Technology: 12 hours
EDPS 211 Teaching Reading in the Secondary School (3 hrs)
FETE 402 Field Experience: Secondary School (1 hr)
EDMT 330 Instructional Applications of Media and Technology (2 hrs)
BEDU 360 Methods of Teaching General Business Subjects (2 hrs)
BEDU 366 Methods of Teaching Marketing Education (2 hrs)
BEDU 368 Curriculum in Marketing Education (2 hrs)

Phase III: Capstone Experience: 12 hours
EDUC 422 Student Teaching (12 hrs)

Minor Requirements ...................................................... 0 hours
No minor is required.

University Elective Courses ........................................... 0 hours

Program Total .......................................................... 138 hours

Note: *This course satisfies both a general education and a major requirement.

COMMUNICATION TECHNOLOGY CURRICULUM (CMTC)

Communication technology is a joint program offered by the Department of Interdisciplinary Technology and the Department of Communication and Theatre Arts. This curriculum is designed to provide the background necessary for graduates to find employment as managers in communication-based industries. The program emphasizes on having the student acquire those business, manufacturing, media, computer and communication skills necessary for employment in today’s communication technology industries and business organizations.

An active articulation agreement exists between this program and a community college. For further details, see the Articulation Agreements section, page 13.
General Education Requirements ........................................ 44 hours

Area I: Symbolism and Communication
1.  See page 23
2.  See page 23
3.  One course from the following:
   ENGL324 Principles of Technical Communication (3 hrs)
   CTAC227 Interpersonal Communication (3 hrs)
   CTAC254 Organizational Communication (3 hrs)
4.  MATH118 Linear Models and Probability (3 hrs)
5.  One course from the following:
   INDT201 Microcomputer Applications in Technology (3 hrs)
   IS215 End-User Computing (3 hrs)

Area II: Science and Technology
1.  See page 24
2.  See page 24
3.  PSY101 General Psychology (3 hrs)
4.  INDT50 Understanding Technology (3 hrs)

Area III: Social Sciences
1.  See page 24
2.  See page 24
3.  ECON201 Principles of Macroeconomics (3 hrs)
4.  ECON202 Principles of Microeconomics (3 hrs)

Area IV: Arts and Humanities
1.  See page 24
2.  See page 24
3.  One course from the following:
   PHIL220 Ethics (3 hrs)
   PHIL221 Business Ethics (3 hrs)
4.  See page 24

Physical Education/Graduation Requirements ....................... 2 hours

Major Requirements .............................................. 62 hours

Media Production ............................................. 9 hours
   CTAT130 Introduction to Telecommunications and Film (3 hrs)
   CTAT144 Introduction to Radio-TV-Film Production (3 hrs)
   One course from the following:
      CTAT231 Fundamentals of Radio Production and Direction (3 hrs)
      CTAT232 Fundamentals of Television Production and Direction (3 hrs)

Transmission Systems ........................................ 6 hours
   ELEC200 Circuit Analysis I (3 hrs)
   INDT305 Communication Transmission Systems (3 hrs)

Computer Technology ........................................ 12 hours
   Choose one option from the following:
   Option I: Computer Programming
      COSC138 Computer Science I (3 hrs)
      COSC238 Computer Science II (3 hrs)
      COSC239 Assembly and Machine Language (3 hrs)
      COSC255 Introduction to Computer Hardware and Software Systems (3 hrs)
   Option II: Information Management
      IS219 File Processing and COBOL Programming (3 hrs)
      IS380 Database Concepts (3 hrs)
      IS421 Business Data Communications & Computer Networks (3 hrs)
   One course from the following:
      IS442 Information Resource Management (3 hrs)
      IS417 Systems Analysis and Design (3 hrs)
   Option III: Graphic Applications
      INDT205 Photo Technology (3 hrs)
      INDT301 Multimedia Authoring (3 hrs)
      INDT421 Web Publishing Technology (3 hrs)
      INDT456 Electronic Publishing Technology (3 hrs)

Communication Theory and Practice ................................ 6 hours
   CTAC227 Interpersonal Communication (3 hrs)
   CTAC354 Organizational Communication (3 hrs)

Business and Investment Skills .................................. 6 hours
   MKTG360 Principles of Marketing (3 hrs)
   PSY205 Quantitative Methods in Psychology (3 hrs)

Management Skills ............................................ 6 hours
   ACC130 Accounting for Non-Business Majors (3 hrs)
   MGMT202 Business Communication (3 hrs)

Interdisciplinary Technology .................................... 17 hours
   INDT121 Graphic Communication (3 hrs)
   INDT231 Introduction to Computer Graphics Systems (3 hrs)
   INDT387 Cooperative Education in Interdisciplinary Technology (3 hrs)
   INDT409 Emerging Technologies in Storage and Retrieval (3 hrs)
   INDT425 Communication Technology and Social Change (3 hrs)
   INDT479 Senior Seminar in Communication Technology (2 hrs)

No minor is required.

University Elective Courses ...................................... 16 hours

Program Total ................................................... 124 hours

Note:
*This course satisfies both a general education and a major requirement.

Hotel and Restaurant Management Major (HRM)

The Hotel and Restaurant Management major is a comprehensive program that integrates principles of hotel and restaurant management with club and resort management. The Hotel and Restaurant Management program provides opportunities for shared educational experiences in a variety of hospitality organizations through co-op or internships. A wide variety of minors are available to meet the diverse needs of our students in meeting their career objectives. The program offers a bachelor of science degree. An active articulation agreement exists between this program and a community college. For further details, see the Articulation Agreements section, page 13.

General Education Requirements .................................. 47 hours

Area I: Symbolism and Communication
1.  ENGL121 Composition II: Researching the Public Experience (3 hrs)
2.  See page 23
3.  See page 23
4.  MATH118 Linear Models and Probability (3 hrs)
5.  BEDU201 Microcomputer for Business Applications (3 hrs)

Area II: Science and Technology
1.  See page 24
2.  See page 24
3.  One course from the following:
   ECON201 Principles of Macroeconomics (3 hrs)
   SOCI105 Introductory Sociology (3 hrs)
4.  See page 24

Area IV: Arts and Humanities
1.  See page 25
2.  See page 25
3.  See page 25
4.  See page 25

Physical Education/Graduation Requirement ....................... 2 hours
## Major Requirements

### Specialization Courses
- HRM100 Introduction to the Hospitality Industry (3 hrs)
- HRM150 Sanitation in the Hospitality Industry (2 hrs)
- HRM180 Foundations of Food Preparation (3 hrs)
- HRM241 Meal Service Management (3 hrs)
- HRM289 Caspary Education in Hotel and Restaurant Management (3 hrs)
- HRM361 Hotel Information Systems (3 hrs)
- HRM376 Legal Aspects of the Hospitality Industry (3 hrs)
- HRM389 Caspary Education in Hotel and Restaurant Management (3 hrs)
- HRM410 Human Resource Issues in the Hospitality Industry (3 hrs)
- HRM430 Seminar in Hospitality Management (3 hrs)
- HRE440 Cost Controls in the Hospitality Industry (3 hrs)
- HRE441 Commercial Purchasing (3 hrs)
- HRE470 Hospitality Industry Marketing (3 hrs)
- HRE456 Strategies in Hospitality Management (5 hrs)

### Elective Courses
- Twelve hours from the following:
  - HRM177/178/179 Special Topics (1-2-3 hrs)
  - HRE279 People Skills for the Hospitality Industry (3 hrs)
  - HRE287/288/289 Special Topics (1-2-3 hrs)
  - HRE380 Lodging Facilities Management (3 hrs)
  - HRE377/378/379 Special Topics (1-2-3 hrs)
  - HRE396 Club and Resort Management (3 hrs)
  - HRM400 Franchising and Contract Management (3 hrs)
  - HRM420 Quality Service Management (3 hrs)
  - HRE430 Conference in Catering Management (3 hrs)
  - HRE495 International Hospitality Management (9 hrs)
  - HRE529/540/561 Special Topics (1-2-3 hrs)
  - HRE480 Gaming and Casino Management (3 hrs)
  - HRE480/488/499 Independent Study (1-2-3 hrs)

### Minor Requirements

- 21 hours

### University Elective Courses

- 1 hour

### Program Total

- 124 hours

## INDUSTRIAL DISTRIBUTION (INDS)

The industrial distribution program is designed to provide graduates with the theoretical as well as practical applications today’s industry is seeking. It develops graduates for career opportunities in industrial and technical sales, sales management, materials planning, quality assurance, purchasing, inventory control and branch/operations management. This program has been accredited by the National Association of Industrial Technology. Advising or additional information is available within the school.

This program is under review. Contact the department for current program requirements.

## General Education Requirements

### Area I: Symbolic and Communication
1. See page 23
2. See page 23
3. See page 23
4. See page 23
5. IND121 Microcomputer Applications in Technology (3 hrs)

### Area II: Science and Technology
1. See page 23
2. See page 24
3. IND150 Understanding Technology (3 hrs)

### Area III: Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

### Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

## Physical Education/Graduation Requirements

- 2 hours

## Major Requirements

- 45 hours

### Required Courses

- 18 hours
  - IND120 Profit Strategies in Distribution (3 hrs)
  - IND130 Relationships in Wholesaling (3 hrs)
  - IND137 Cooperative Education in Industrial Technology (3 hrs)
  - IND139 Wholesale Account Development (3 hrs)
  - IND140 Inventory Strategies in Distribution (3 hrs)
  - IND144 Quality Planning in Distribution (3 hrs)

### Concentrations

- 27 hours

Students may select concentrations from many subject areas, with advisor approval. However, no more than 30 hours in the College of Business may be taken by non-business majors.

## Minor Requirements

- 20 hours

## University Elective Courses

- 10 hours

## Program Total

- 124 hours

## LEGAL ASSISTANT (PARALEGAL) MAJOR (LEGL)

The legal assistant major focuses on the skills necessary for an individual to assist the attorney, under the supervision and direction of the attorney, and with the understanding that the practice of law by lay persons is strictly prohibited. Skills include proficiency in legal research and analysis, drafting legal instruments and pleadings, interviewing clients and witnesses, discovery, preparing for trial and using computer-based research tools. Employment opportunities are excellent in law firms, corporations, banks, human resources offices, hospitals, state and federal governments and court systems. This major offers professional training and lays a foundation for a career in the legal field. It also qualifies as a paralegal major. This program is approved by the American Bar Association.

For students who have earned a prior degree, the legal assistant major can be pursued through a second bachelor’s degree.

Active articulation agreements exist between this program and several community colleges. For further details, see the Articulation Agreement section, page 13.

## Secondary Admission and Retention Policy

Students who wish to be legal assistant (paralegal) studies program majors must apply for admission to the program. Students may be admitted to the program in the fall or winter terms. Applications for a winter term will be due by Dec. 1 of the preceding fall term. Applications for a fall term will be due by April 1 of the preceding winter term. Admission to the program is competitive. A limited number of admissions is available.

### Program Admission Requirements

Program admission criteria are:

1. Admission to the University as an undergraduate or second bachelor’s degree candidate
2. Completion of ENGL121 with a grade of B or higher
3. Completion of LEGL111 Introduction to Paralegalism and Legal Terminology, with a grade of B- or higher
4. Completion of LEGL304 Legal Writing, Research and Analysis I with a grade of C+ or higher.
5. A cumulative GPA of at least 2.5 on a 4.0 scale.

Students satisfaying these criteria are eligible to apply for admission to the program, but admission is not guaranteed.

Program Retention Policy

In addition to secondary admission requirements, program majors will be required to:

1. Complete each program core course (e.g., all courses having an LEGL prefix except LEGL211 and LEGL304 — see above), with a minimum grade of C.
2. Maintain a cumulative GPA of at least 2.5 on a 4.0 scale.
3. Maintain a GPA within the major of at least 2.5 on a 4.0 scale.

*Students applying for admission to the program as second bachelor's degree candidates must present evidence of having completed an acceptable college-level English composition course with a grade of B or higher. A remedial English composition or writing course is not an acceptable college-level English composition course.

†A student whose cumulative GPA or cumulative major GPA falls below 2.5 will be placed on program probation for the next succeeding term. If the student fails to raise his or her cumulative GPA or cumulative major GPA, or both, as the case may be, to 2.5 or higher with the grades earned during the probationary term, the student will be dismissed from the program. For purposes of this policy, a student who is placed on program probation as the result of a deficient GPA at the close of a winter term will have until the close of the next fall term to raise his or her GPA to 2.5 or higher. If a student earns a lower C in any program core course (except LEGL211 and LEGL304 — see above), the student will be allowed to repeat the course twice. If the student fails to earn a C or better in the repeated courses, the student will be dismissed from the program.

General Education Requirements .................................................. 44 hours

Area I: Symbolic and Communication
1. See page 23
2. See page 23
3. LEGL304 Legal Writing, Research and Analysis †
4. See page 23
5. BEDU201 Microcomputers for Business Applications (3 hrs)

Area II: Science and Technology
1. See page 24
2. See page 24
3. See page 24

Area III: Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

5. One course from the following:
   ECON201 Principles of Macroeconomics (3 hrs)
   SOCL205 introductory Sociology (3 hrs)

4. One course from the following:
   ECON202 Principles of Microeconomics (3 hrs)
   SOCL202 Social Problems (3 hrs)

Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physcial Education/Graduation Requirements ................................... 2 hours

Major Requirements ............................................................... 59 hours

Required Courses ....................................................................... 33 hours

LEGL211 Introduction to Paralegallan and Legal Terminology (3 hrs)
LEGL212 Law Office Administration and Technology (3 hrs)
*LEGL304 Legal Writing, Research and Analysis I (3 hrs)

Scores ECON201 Principles of Macroeconomics (3 hrs)
3. ECON202 Principles of Microeconomics (3 hrs)
4. ECON202 Principles of Microeconomics (3 hrs)
### Area IV: Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

**Physical Education/Graduation Requirements**.............. 2 hours

**Major Requirements**.................................................. 51 hours

**Systems and Automation Concepts**.............................. 24 hours
- BEDU210 Concepts of Network and Business Technology (3 hrs)
- BEDU344 Administration of Computer Systems (3 hrs)
- BEDU422 End-User Systems Planning and Design (3 hrs)
- BEDU493 End-User Systems Implementation and Evaluation (3 hrs)
- BEDU496 Record Administration Using Database Systems (3 hrs)
- IND112 Communication/Transmission Systems (3 hrs)
- IS420 Business Data Communication and Computer Networks (3 hrs)

**One course from the following:**
- BEDU387 Cooperative Education in Business Education (3 hrs)
- BEDU479 Capstone Seminar (3 hrs)

**Business and Technology Education**.............................. 18 hours

- ACC240 Principles of Financial Accounting (3 hrs)
- BEDU224 Computer-Based Business Mathematics (3 hrs)
- BEDU396 Information and Media Administration (3 hrs)
- COSC111 Introduction to Programming (3 hrs)
- LAW203 Legal Environment of Business (3 hrs)
- MKTG360 Principles of Marketing (3 hrs)

**Restricted Elective Courses**........................................... 9 hours

Select restricted electives in consultation with Network and Technology Administration program advisors:
- COSC211 Programming Data Structures (3 hrs)
- COSC295 Managing Computer Hardware & Software (3 hrs)
- BEDU379/479 Special Topics (3 hrs)
- BEDU485 Cooperative Education in Business Education (3 hrs)
- BEDU497/498/499 Independent Study (1/2/3 hrs)

**Minor Requirements**.................................................. 0 hours

No minor is required.

**University Elective Courses**...................................... 24 hours

**Program Total**...................................................... 124 hours

### TECHNOLOGY MANAGEMENT MAJOR (TCMG)

The technology management program is designed for transfer students with an associate of applied science degree. The interdisciplinary curriculum provides the necessary foundation to meet the changing needs of management in a variety of fields, ranging from business and health, to criminal justice, environmental sciences, automotive technology, and computer service technology.

An active articulation agreement exists between this program and a community college. For further details, see the Articulation Agreements section, page 19.

**General Education Requirement**................................. 47 hours

**Area I: Symbolics and Communication**.......................... 15 hours
1. See page 24
2. See page 24
3. ENGL124 Principles of Technical Communication (3 hrs)
4. MATH118 Linear Models and Probability (3 hrs)
5. INDT201 Microcomputer Applications in Technology (3 hrs)

**Area II: Science and Technology**................................. 15 hours
1. See page 24
2. See page 24
3. ECON201 Principles of Macroeconomics (3 hrs)
4. ECON202 Principles of Microeconomics (3 hrs)

**Area III: Social Sciences**........................................... 20 hours
1. See page 24
2. See page 24
3. ECON201 Principles of Macroeconomics (3 hrs)
4. ECON202 Principles of Microeconomics (3 hrs)

**Area IV: Arts and Humanities**..................................... 20 hours
1. See page 25
2. See page 25
3. See page 25
4. See page 25

**Physical Education/Graduation Requirements**.............. 2 hours

**Major Requirements**.................................................. 70 hours

**Core Courses**...................................................... 15 hours
- INDT150 Introduction to Technology Management (3 hrs)
- INDT212 The Management of Technological Change (3 hrs)
- INDT311 Information Technology Management and Organizations (3 hrs)
- INDT314 A Socio-Technical Systems Approach to Process Improvement (3 hrs)
- INDT415 Senior Seminar in Technology Management (3 hrs)

**Technology Management Elective Courses**..................... 12-15 hours

12 to 15 hours from the following:
- ACC130 Accounting for Non-Business Majors (3 hrs)
- ACC240 Principles of Financial Accounting (3 hrs)
- ACC294 Principles of Managerial Accounting (3 hrs)
- LAW203 Legal Environment of Business (3 hrs)
- MKTG360 Principles of Marketing (3 hrs)
- MKTG389 Advertising (3 hrs)
- MKTG473 Marketing and Product Innovation (3 hrs)
- MGMT384 Human Resource Management (3 hrs)
- MGMT386 Organizational Behavior and Theory (3 hrs)
- MGMT480 Management Responsibility and Ethics (3 hrs)
- INDT382 Cooperative Education (3 hrs)

**Technical Concentration**........................................... Up to 46 hours

The following technical specializations from two-year institutions may be transferable into this concentration. These technical specializations will include, but are not limited to, the following areas:

- Automotive service technology
- Biomedical engineering technology
- Computer service technology
- Correctional science
- Criminology
- Emergency medical technician
- Environmental technology
- Fire technology
- Fluid power technology
- Graphic design technology
- Health information technology
- Laser-electric optics
- Photographic technology
- Public safety technology
- Refrigeration and air conditioning technology
- Telecommunication technology

**Minor Requirements**.................................................. 0 hours

No minor is required.

**University Elective Courses**..................................... 5 hours

**Program Total**...................................................... 124 hours
TECHNOLOGY AND DESIGN EDUCATION (TCDE)
K-12 Teacher Certification

The technology and design major prepares teachers of technology education for grades K-12. All graduates with this major qualify for a Michigan Department of Education Secondary Provisional Certificate with an endorsement in technology and design. Graduates may also qualify for a vocational endorsement by completing 36 hours of directly related technical course work and have two years of occupational experience in employment related to the area of study. Options for cooperative work experience are available to students as partial credit toward that occupational requirement.

This major must be completed in conjunction with the technology education curriculum. Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in technology and design, certification code TX. The Michigan Test for Teacher Certification (MTTC) covering this field is #85 Technology and Design.

An articulation agreement exists between this program and a community college. For further details, see the Articulation Agreements section, page 13.

General Education Requirements .......................... 49 hours

Area I Symbolics and Communication
1. ENGL121 Composition II: Researching the Public Experience (3 hrs)
2. See page 23
3. One course from the following:
   ENGL324 Principles of Technical Communication (3 hrs)
   ENGL326 Research Writing (3 hrs)
4. One course from the following:
   MATH110 Mathematical Reasoning (3 hrs)
   MATH118 Linear Models and Probability (3 hrs)
   MATH120 Calculus I (4 hrs)
5. One course from the following:
   BEDU201 Microcomputers for Business Applications (3 hrs)
   INTD201 Microcomputer Applications in Technology (3 hrs)
   CDM105 Computer Applications for Industry (3 hrs)

Area II Science and Technology
1. See page 24
2. PSY101 General Psychology (3 hrs)
3. One course from the following:
   PHY221 Mechanics, Sound, and Heat (4 hrs)
   PHY223 Mechanics and Sound (5 hrs)

Area III Social Sciences
1. See page 24
2. See page 24
3. See page 24
4. See page 24

Area IV Arts and Humanities
1. See page 25
2. See page 25
3. See page 25
4. See page 25

Physical Education/Graduation Requirements .................. 2 hours

Major Requirements .................................. 36 hours

TEDU103 Structures and Design in Technology (3 hrs)
TEDU106 Processing Technology (3 hrs)
TEDU114 Information and Control Technology (3 hrs)
TEDU118 Energy and Transportation Technology (3 hrs)
INTD121 Graphic Communication (3 hrs)
MFG123 Manufacturing Processes and Methods I (3 hrs)
CNST201 Construction Systems (3 hrs)
ELEC200 Circuit Analysis I (3 hrs)
TEDU246 Safety in Technology and Vocational Education (2 hrs)
TEDU250 Foundations of Technology and Industrial Vocational Education (3 hrs)
TEDU350 Curriculum in Technology and Industrial Vocational Education (3 hrs)
TEDU450 Solving Technological Problems (3 hrs)
Elective in technology (requires advisor permission) (1 hr)

Minor Requirements .................................. 15-25 hours

Select a minor from the approved list of minors for secondary, K-12 and special education secondary programs.

Professional Studies .................................. 33 hours

Pre-Admission Phase: The Learner and the Community-8 hours
Courses that may be taken before formal admission to the teacher education program:
   One hundred clock hours of approved pre-student teaching field experiences
   EDPS322 Human Development and Learning (4 hrs)
   FETE201 Field Experience I (1 hr)
   SPGN251 Education of Students with Exceptionalities (3 hrs)

Courses that require formal admission to the teacher education program:
   Phase I: Curriculum, Assessment and the Social Contexts-6 hours
   SOED328 Schools in a Multicultural Society (3 hrs)
   EDPS340 Introduction to Assessment and Evaluation (3 hrs)
   Phase II: Content Methods, Literacy and Technology-7 hours
   RDNG311 Teaching Reading in the Secondary School (3 hrs)
   FETE402 Field Experience II: Secondary (3 hrs)
   TEDU460 Methods of Teaching Technology and Vocational Education (3 hrs)

Phase III: Capstone Experience .................................. 12 hours
   EDUC492 Student Teaching (12 hrs)

University Elective Courses .................................. 0 hours

Program Total ........................................... 135 hours

VOCATIONAL EDUCATION (IVCE)
Secondary Teacher Certification

The vocational major is designed to prepare teachers of vocational subjects for senior high school and community college vocational education programs. Graduates who complete this major and have a minimum of two years work experience in a certifiable occupational area will qualify for the Temporary Vocational Authorization to teach in a specific occupational area. Options for cooperative work experience studies are available to the student as partial credit toward the occupational requirement.

This major must be completed in conjunction with the technology education curriculum. This major qualifies individuals to teach only in select occupational areas. The temporary vocational authorization is valid for six years. By that time, individuals must have completed additional requirements to qualify for the occupational education certificate.

This major provides favorable opportunities for community college transfer students who have completed a technical major at the community college and who wish to teach in a specific occupational subject area in the senior high school or community college. Individuals currently teaching in an occupational subject area under the annual vocational authorization would also find this major to be a desirable option.

Successful completion of this course of studies, in the context of other program requirements, qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in vocational trades, certification code VT. There is currently no certification test for this area.

An articulation agreement exists between this program and a community college. For further details, see the Articulation Agreements section, page 13.

General Education Requirements .......................... 49 hours

Area I Symbolics and Communication
1. ENGL121 Composition II: Researching the Public Experience (3 hrs)
2. See page 23
3. One course from the following:
   ENGL326 Principles of Technical Communication (3 hr)
   ENGL306 Research Writing (3 hr)
4. One course from the following:
   MATH110 Mathematical Reasoning (3 hr)
   MATH218 Linear Models and Probability (3 hr)
   MATH120 Calculus I (4 hr)
5. One course from the following:
   BEDU201 Microcomputers for Business Applications (3 hr)
   INDT201 Microcomputers Applications in Technology (3 hr)
   CADM101 Computer Applications for Industry (3 hr)

**Area II: Science and Technology**
1. See page 24
2. PSY101 General Psychology (3 hr)
3. One course from the following:
   PHY221 Mechanics, Sound, and Heat (4 hr)
   PHY222 Mechanics and Sound (5 hr)

**Area III: Social Sciences**
1. See page 24
2. See page 24
3. See page 24
4. See page 24

**Area IV: Arts and Humanities**
1. See page 25
2. See page 25
3. See page 25
4. See page 25

**Physical Education/Graduation Requirements** ...................................... 2 hours

**Major Requirements** ........................................................................ 50 hours

**Required Courses** ......................................................................... 14 hours
   INDT150 Understanding Technology (3 hr)
   TEDU206 Safety in Technology and Vocational Education (2 hr)
   TEDU250 Foundations of Technology and Industrial Vocational Education (3 hr)
   TEDU350 Curriculum in Technology and Industrial Vocational Education (3 hr)
   TEOU452 Principles of Vocational Education (3 hr)

**Concentration** ............................................................................... 36 hours
The occupational specialization in which the student will seek vocational authorization. Approval may be sought for community college, other technical school course work as transfer credit, or a technical/occupational certification test if it properly represents a certifiable occupational area. Recent, paid work experience of 4,000 hours in the occupational specialization is also required.

**Professional Studies** ................................................................. 35 hours

**Pre-Admission Phase: The Learner and the Community** 8 hours
Course that may be taken before formal admission to the teacher education program
One hundred clock hours of approved pre-service teaching field experiences
EDPS322 Human Development and Learning (4 hr)
FETE101 Field Experience I (1 hr)
SPCN251 Education of Students with Exceptionalities (5 hr)
Course that require formal admission to the teacher education program

**Phase I: Curriculum, Assessment and the Social Context** 6 hours
SOFD228 Schools in a Multicultural Society (3 hr)
EDPS410 Introduction to Assessment and Evaluation (3 hr)

**Phase II: Content Methods, Literacy and Technology** 7 hours
NDNS311 Teaching Reading in the Secondary School (3 hr)
FETE402 Field Experience III: Secondary (1 hr)
TEDU450 Methods of Teaching Technology and Vocational Education (3 hr)

**Phase III: Capstone Experience** ......................................................... 12 hours
EDUC492 Student Teaching (12 hr)

**Minor Requirements** ................................................................... 0 hours
   No minor is required.

**University Elective Courses** ...................................................... 0 hours

**Program Total** ............................................................................ 134 hours

**Administrative Management Minor (AD)**

**Required Courses** ........................................................................ 12 hours
   BEDU395 Administering Workplace Systems and Technology (3 hr)
   BEDU396 Information and Media Management (3 hr)
   BEDU310 Word Information Processing Administration (3 hr)
   BEDU387 Cooperative Education (3 hr)

**Restrictive Elective Courses** ....................................................... 9 hours

**Nine hours from the following:**
   BEDU210 Concepts of Network and Business Technology (3 hr)
   TEOU220 Word Information Processing Administration (3 hr)
   LEGL111 Introduction to Paralegal and Legal Terminology (3 hr)
   LEGL222 Law Office Administration and Technology (3 hr)
   MGMT388 Field Studies in Entrepreneurship (3 hr)
   HAD305 The U.S. Health Care System (3 hr)
   HAD406 Administration of Health Care Organizations (3 hr)
   HAD745 Decision Making for Health Administrators (3 hr)
   BEDU416 Records Administration Using Database (3 hr)
   MKTG214 Supply Chain Management (3 hr)
   LAW231 Legal Environment of Business (3 hr)

**Minor Total** ............................................................................... 21 hours

**Apparel, Textiles and Merchandising Minor (ATM)**

**Required Courses** ........................................................................ 12 hours
   ATM118 Apparel Studio (3 hr)
   ATM145 Introduction to Apparel and Textile Merchandising (3 hr)
   ATM235 Introductory Textiles (3 hr)
   ATM255 Apparel Analysis (5 hr)

**Restricted Elective Courses** ....................................................... 12 hours

**One course from each of the following areas:**

1. **Construction Skills**
   ATM302 Fashion Manufacturing Techniques (3 hr)
   ATM392 Pattern Design (3 hr)
   ATM460 Tailoring (3 hr)

2. **Methodology**
   ATM399 Visual Merchandising (3 hr)
   HECR499 Directed Study (3 hr)

3. **Social-Psychological-Historical**
   ATM35 Cultural Study of Dress (3 hr)
   ATM380 Fashion of the House Costume (3 hr)

4. **Textiles Application**
   ATM19 Early American Textiles (3 hr)
   ATM404 Advanced Textiles (3 hr)
   ATM265 Merchandising of Interior Furnishings (3 hr)

**Minor Total** ............................................................................... 24 hours
AVIATION FLIGHT TECHNOLOGY MINOR (AVFT)

The aviation flight technology minor is designed to develop flight skills as a pilot for various fields of aviation. Students who complete the minor will have earned their private pilot certificate and their commercial pilot certificate with an instrument rating, will be certified for flying for personal and business interests.

Required Courses ...................................................... 26 hours

INDT170 Aviation Ground Instruction (3 hrs)
INDT231 Basic Flight I (2 hrs)
INDT261 Basic Flight II (2 hrs)
INDT271 Basic Flight III (2 hrs)
INDT341 Instrument Ground Instruction (2 hrs)
INDT342 Commercial Ground Instruction (2 hrs)
INDT351 Advanced Flight I (2 hrs)
INDT361 Advanced Flight II (2 hrs)
INDT110 Aircraft Maintenance I (3 hrs)
INDT208 Aviation Human Factors (3 hrs)
INDT326 Aviation Safety (3 hrs)

Minor Total ............................................................. 26 hours

GRAPHIC COMMUNICATION MINOR (GRCM)

This minor is designed to provide technical communication skills to majors in fields such as graphic design and journalism. The electives in the minor are diverse and extensive enough to allow for individual flexibility.

Required Courses ...................................................... 11 hours

INDT104 Introduction to Communication Technology (2 hrs)
INDT121 Graphic Communication (3 hrs)
INDT294 Photographic Communication (3 hrs)
INDT207 Photographic Reproduction (3 hrs)

Elective Courses ...................................................... 12 hours

Twelve hours from the following:

INDT201 Microcomputer Applications in Technology (3 hrs)
INDT304 Advanced Photographic Communication (3 hrs)
INDT318 Graphic Arts Workshop (3 hrs)
INDT404 Photo Communication Workshop (3 hrs)
CADM231 Computer Graphics Programming for Industry (3 hrs)
ART165 Graphic Design for Non-majors (3 hrs)
or courses from journalism, marketing or management selected in consultation with an advisor.

Minor Total ............................................................. 23 hours

NETWORK AND INFORMATION TECHNOLOGY ADMINISTRATION MINOR (NITA)

Required Courses ...................................................... 18 hours

BEDU210 Concepts of Network and Business Technology (3 hrs)
BEDU224 Computer-based Business Mathematics (3 hrs)
BEDU344 Administration of Computer Systems (3 hrs)
BEDU395 Administering Workplace Systems and Technology (3 hrs)
BEDU396 Information and Media Administration (3 hrs)
BEDU496 Records Administration Using Database (3 hrs)

Restricted Elective Course ............................................. 3 hours

One business education (BEDU) course selected in consultation with the program advisor.

Minor Total ............................................................. 21 hours

Note:
Students must complete BEDU201 Microcomputer for Business Applications to meet course prerequisites in the minor (BEDU210, BEDU224, and BEDU396). Students who have met the general education requirement for computer literacy through some other course should consult the program advisor about whether the requirement for BEDU201 can be satisfied.

TECHNOLOGY AND DESIGN EDUCATION MINOR (TCDE)

Elementary and Special Education-Elementary Teacher Certification

Successful completion of this 24 credit-hour minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in technology and design. Certification code TX. The Michigan Test for Teacher Certification (MTTC) covering this field is #88 "Technology and Design."

Required Courses ...................................................... 24 hours

BEDU250 Foundations of Technology and Vocational Education (3 hrs)
BEDU253 Technology Education for Children (3 hrs)
BEDU354 Experiences in Technology for Children (2 hrs)
BEDU355 Seminar in Technology for the Elementary School (2 hrs)

Twelve hours from the following:

INDT121 Graphic Communication (3 hrs)
BEDU103 Structures and Design in Technology (3 hrs)
BEDU106 Processing Technology (3 hrs)
BEDU114 Information and Control Technology (3 hrs)
BEDU118 Energy and Transportation Technology (3 hrs)

Select a minimum of two hours from the following:

INDT204 Photographic Communication (3 hrs)
BEDU152 Arts and Crafts (3 hrs)
BEDU350 Curriculum in Technology and Vocational Education (3 hrs)
BEDU452 Principles of Vocational Education (3 hrs)
BEDU497 Directed Study — Technology Education (1 hr)

Minor Total ............................................................. 24 hours

Note:
Satisfied in professional studies in elementary program

TECHNOLOGY AND SOCIETY MINOR (TCSO)

This minor is interdisciplinary in nature and provides students majoring in science or technology with an understanding of the societal impact of existing and emerging technologies. While housed in the Department of Interdisciplinary Technology, the minor utilizes contributions from several departments including biology, chemistry, computer science, economics and history.

Required Courses ...................................................... 15 hours

One course from the following:

COSC101 Computer Science Concepts and Practical Applications (3 hrs)
COSC145 Introduction to FORTRAN Programming (3 hrs)
HIST290 Introduction to the History of Technology (3 hrs)
INDT150 Understanding Technology (3 hrs)
INDT308 Seminar in Technological Impacts (3 hrs)
INDT495 Technology, Values, and the Future (3 hrs)

Restricted Elective Courses .......................................... 9 hours

Three courses from the following, with at least one course from each subgroup, A and B:

Minor Total ............................................................. 24 hours
Subgroup A:
- BIOL224 Principles of Conservation (3 hrs)
- CHEM415 Environmental Chemistry (3 hrs)
- ECON337 Energy Economics and Policies (3 hrs)
- GREN215 Introduction to Urban and Regional Planning (3 hrs)
- GEOG311 Energy Awareness (3 hrs)
- GEOG400 World Food Systems (3 hrs)
- SOCL334 Population (3 hrs)

Subgroup B:
- CTAT446 Contemporary Problems in Telecommunications (3 hrs)
- ECON386 Technology and Economic Growth (3 hrs)
- GEOG100 Future Worlds (3 hrs)
- GEOG253 Economic Geography (3 hrs)
- ESSC495/GREN495 Environmental Assessment and Planning (3 hrs)
- INDT420 Women and Technology (3 hrs)
- INDT201 Microcomputer Applications in Technology (3 hrs)
- PHIL380 Philosophy of Science (3 hrs)
- PLSC381 Public Policy Analysis (3 hrs)
- PLSC382 Politics and the 21st Century (3 hrs)
- PSY350 Environmental Psychology (3 hrs)
- PSY351 Industrial Psychology (3 hrs)
- SOCL396ANTH356 Social and Cultural Change (3 hrs)
- ANTH379 Special Topics: Contemporary Issues in Developing and Modern Technological Societies (3 hrs)
- SOCL307 Sociology of the Workplace (3 hrs)

Minor Total: 24 hours

DEPARTMENT OF MILITARY SCIENCE AND LEADERSHIP

Campus Address: 18 Roosevelt Hall
Internet: cot.emich.edu/ms
Telephone: 734.487.1020

Set page 324 for course descriptions.

The Department of Military Science and Leadership offers a four-year and two-year program that prepares students for commissioning as second lieutenants in the United States Army, Army Reserve or National Guard. Emphasis is given to the development of the student as a leader and as a manager, capable of organizing and motivating others.

The program is pursued as a complement to the student's academic major. If the program is successfully completed, the student may be commissioned as an officer upon graduation.

Students must complete all of the military science and leadership courses unless granted advanced placement for the 100- and 200-level courses.

ROTC scholarships are available and awarded on a "best qualified" basis. Scholarships cover payment of tuition, fees, texts, and supply costs related to the student's curriculum for the period of award. Also, a monthly subsistence allowance up to $400 is paid for each school month during the period of the scholarship. Application can be made by contacting the Department of Military Science and Leadership.

The two-year program is designed for students transferring from community colleges and other students who were not enrolled in military science and leadership courses during their first two years of college. Applicants complete a five-week training program during the summer months, which takes the place of the on-campus MSL100- and 200-level courses. While in summer training, the student remains a civilian but earns Army pay and travel allowances. Upon completing the program, the student may be granted eight credit hours upon the recommendation of the Department of Military Science and Leadership and may apply for entry into the MSL300-level courses. Students may compete for two-year ROTC scholarships while at summer training. Applications for the two-year program are accepted from December through May.

The Simultaneous Membership Program (SMP) is a co-op work experience program where advanced ROTC students are assigned to local Army Reserve or National Guard units. One weekend a month students learn leadership and management skills by drilling with the unit. For this experience, students earn an additional $250 per month. SMP is an excellent opportunity to learn applied management skills.

Veterans can qualify for advanced placement credit directly into MSL301. Applicants should contact the department for acceptance. In addition to SMP, veterans can qualify for Management GI Bill benefits adding anywhere from $300-$670 per school month.

All uniforms are provided to the student without cost. Additionally, MSL300 and 400 participants receive $350 to $400 per month during the school year and are paid at one-half the rate of a second lieutenant while attending the Leadership Development and Assessment course at Fort Lewis, Wash. Armed forces veterans may receive the $350 to $400 per month pay in addition to any other veterans benefits they may be receiving.

Special Requirements
Admission into the advanced program (MSL301, MSL302, MSL401 and MSL402) requires that all students undergo a complete physical examination and have completed the basic course or its equivalent.

The criteria for continuance is that all students maintain a 2.5 GPA or better and pass the Army Physical Fitness Test.

The fieldwork criteria is that members of the advanced program participate in a field training exercise (FTX) each semester.

In the summer, between the third and fourth academic years, students attend the Leadership Development and Assessment course at Ft. Lewis, Wash., in which their leadership skills are evaluated against the skills of other cadets across the state.

Nursing students within the University nursing program will attend the Nurse Summer Training Program (NSTP) in addition to the advanced camp between the third and fourth years.

Credit Toward Graduation
The 12 hours of credit earned in the advanced program may be used as free elective credit. Requirements in certain majors and curricula will cause the ROTC student to take more than the minimum 72 credit hours for graduation. When finalizing their undergraduate program, students should consult an academic advisor within the department of their declared major.

MILITARY SCIENCE AND LEADERSHIP
MINOR (MILT)

Required Courses:
- MSL101 Foundations of Officership (2 hrs)
- MSL102 Basic Leadership (2 hrs)
- MSL201 Individual Leadership Studies (2 hrs)
- MSL202 Leadership and Teamwork (2 hrs)
- MSL301 Leadership and Problem Solving (3 hrs)
- MSL302 Leadership and Ethics (3 hrs)
- MSL401 Leadership and Management (3 hrs)
- MSL402 Officership (3 hrs)

Students must take all of the above courses unless granted advanced placement. Students electing a minor in military science may use this minor to fulfill the state secondary provisional certificate requirement of a teaching minor.

Minor Total: 20 hours
African American Studies Courses

AAS310 Introduction to African American Studies 3 hrs
An introductory examination of the African American experience. Acquaints students with the trends, issues, and forces that have shaped that experience; considers the concepts of cultural adaptation, institutional development, and group self-definition; and surveys the contemporary status and condition of African Americans.

AAS311 Introduction to African Civilization 3 hrs
This course is designed to provide the student with an introductory knowledge of centers of African civilization from antiquity to the 1960s. Those centers include ancient Egypt, Songhai, Kiva, and Monomotapa.

AAS771/778/779 Special Topics 1/2/3 hrs
Each time offered, this course will explore a topic on an experimental basis, based on student interests and needs. This course can be used in completing requirements for the major or minor in African American studies.

AAS201 Foundations of Knowledge in African American Studies 3 hrs
Examines the empirical and theoretical foundations of African American studies, the evolution of the field, and the role of key scholars in its development.

AAS221 African American Social Movements 3 hrs
Explores the collective efforts undertaken by African Americans to elevate their group status in American society. Analyzes the struggle for human freedom through an examination of resistance to chattel slavery, the quest for civil rights, and the response to structural inequality.

AAS311 Urbanization and the African American Community 3 hrs

AAS322 Politics in the African American Experience 3 hrs
This course is designed to provide the student with a knowledge of Black political behavior in the United States in its evolution from protest to contemporary institutional politics.

AAS323 Public Policy and African Americans 3 hrs
This course examines the implications of major and evolving national public policies and policy alternatives for economically vulnerable and/or historically disadvantaged segments of the population, particularly African Americans. Such policies include those related to social welfare, education, campus climate, employment, mass communication, housing, affirmative action, and drug and crime control.

AAS324/PLSC243 Black Women: Politics and Race 3 hrs
This course examines American politics as it relates to African American women. The course analyzes ways in which political issues affect black women differently than African American men, white men and white women. Considerable attention is given to the definition of the political realm as opposed to the non-political realm when discussing groups traditionally marginalized or excluded from political life.

AAS377/278/279 Special Topics 1/2/3 hrs
Each time offered, this course will explore a topic on an experimental basis, based on student interests and needs. This course can be used in completing requirements for the major or minor in African American studies.

AAS397/398/399 Independent Study 1/2/3 hrs
Independent study of a select topic under staff supervision. Possible approaches include library research, field research, and participant-observer experiences.

AAS301 Writing for African American Studies 3 hrs
This course will help students produce research papers, construct analytical reviews, and perform documentary research needed to better explore the literature, culture, and institutional and social processes that define the field of African American Studies.

AAS311 The African Diaspora 3 hrs
Examines the African diaspora—the dispersion of persons of African descent throughout the world. It studies the process of dispersion, examines select diaspora communities, and considers the impact of the African presence on world development.

AAS312 African Civilization 3 hrs
This course is designed to provide the student with an interdisciplinary knowledge of centers of African civilization from antiquity to the 1960s. Those centers include ancient Egypt, Songhai, Kiva and Monomotapa.

AAS313 Contemporary African Struggle and Prospects for Development 3 hrs
This course serves as a survey of Africa's contemporary political economy. In examining postcolonial developments, the course focuses on regional and national strategies for social transformation.

AAS314 The Social Context of African American Health 3 hrs
Examines the health status of African Americans. Explores the interplay between environ-

AAS361 The African American Family 3 hrs
Examines the historical and contemporary forces shaping the African American family. Analyzes urbanization, economic transformations, and institutional racism. Studies the role of the family in human survival and progress.

AAS361/PLSC361/WMST361 Black Women: Religion and Sexism 3 hrs
An introduction to the social and political role of Black women in African American religious institutions. Particular attention will be placed on how African American religion has limited the power of women. Additionally, the course will examine the historical evolution of the various major black denominations in America and their political and social roles in African American communities.

AAS370 Films of the African American Experience 3 hrs
This course examines African American literature that has been adapted to film. Film history about African American involvement in the industry, including filmmakers is studied. The course involves developing techniques of analyzing fiction and drama as well as film adaptations of the African American experience.

AAS377/378/379 Special Topics 1/2/3 hrs
Each time offered, this course will explore a topic on an experimental basis, based on student interests and needs. This course can be used in completing requirements for the major or minor in African American studies.

AAS391 African American Studies Research Seminar 3 hrs
Provides intensive exposure to research methods in African American studies, and offers an opportunity for primary research in the field.

AAS392 African American Studies Internship Seminar 3 hrs
The African American Studies Internship Seminar is designed as a practicum in which majors and minors in African American Studies can acquire a practical experience of an African American organization.

AAS341 Law in the African American Experience 3 hrs
Examines the African American legal experience from the Atlantic slave trade to the present. Reviews the formation of the Constitution, the law of slavery, Reconstruction-era developments, Jim Crow segregation, and recent legal trends in areas such as education, voting and employment. Emphasizes laws as a social process.

AAS477/478/479 Special Topics 1/2/3 hrs
Each time offered, this course will explore a topic on an experimental basis, based on student interests and needs. This course can be...
**ACC 456 Financial Management and Controllership** 3 HRS
This course is a capstone experience for the accounting major who wants to manage the information needs of an organisation from the perspective of the controller, chief financial officer, or financial manager. Topics include: accountability for performance, budgeting and costs, managing cash and the treasury functions; and enterprise and information systems. Open to Accounting-BA majors only.
Prereq/Cross: ACC 256, ACC 340, ACC 434, ACC 556, ACC 444/544 and senior standing.

**ACC 457/498/499 Directed Studies** 1/1/3 HRS
Directed study of a problem or group of problems in accounting not otherwise treated in departmental courses.
Prereq: department permission

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**School of Health Sciences Courses**

**ANTHR 477/478/479 Special Topics** 1/1/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

**ANTHR 496 Introduction to Health Careers** 2 HRS
An introductory course designed to familiarize the student with careers in the health sciences. Various careers such as medical technology, nursing, dietetics, health administration, occupational therapy, medicine, clinical psychology, physical therapy and others will be presented by individuals in the respective disciplines. Education requirements, career opportunities, and clinical experience requirements will be highlighted.

**ANTHR 499 Medical Terminology** 1 HR
A detailed study of medical terminology, through which students will achieve a working medical vocabulary. Anatomical terms and terminology relating to diseases and disease processes will be presented. This course is designed for students entering a health-related education program, and is a prerequisite for admission to the occupational therapy program. Offered on a credit/no-credit basis.

**ANTHR 598 Ethical Dimensions in Health Care Delivery** 3 HRS
This course presents information that students interested in the health professions may use to identify ethical situations and to resolve dilemmas they may face in their professional lives.

**ANTHR 577/578/579 Special Topics** 1/1/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

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**Anthropology Courses**

**ANTHR 415 Introduction to Cultural Anthropology** 3 HRS
The study of human adaptations to natural and cultural environments focusing upon a variety of societies. The basic institutions of human society such as kinship, religion, law, politics, and economics will be examined.

**ANTHR 414 Introduction to Physical Anthropology** 3 HRS
A survey of the evolution of primates and hominids and a general introduction to physical anthropological themes relating to prehistoric and living humans.
Prereq: ANTHR 135

**ANTHR 410 Introductory Archaeology** 3 HRS
A general survey of the field of archaeology: the methodologies and analyses employed in the study of prehistoric cultures.
Prereq: ANTHR 135

**ANTHR 477/478/479 Special Topics** 1/1/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

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**ANTHR 412 Writing for Anthropology** 3 HRS
This course will teach students the necessary writing and research skills for anthropology. Students will also learn how to use library resources for anthropological research.
Prereq: Anthropology major or junior standing.

**ANTHR 415 Sociology of Minority Women in the United States** 3 HRS
This course surveys the situation and the conditions that affect the lives of four groups of minority women in the United States who are from diverse cross-cultural backgrounds: Black, Asian-American, Latin-American, and Native American. It focuses on the contemporary situation of these women and compares the four groups in terms of demographic, economic, and occupational situations, education, family lives and relationship to the feminist movement.
Prereq: SOCL 105 or ANTHR 135

**ANTHR 416 History of Anthropological Theory** 3 HRS
A survey of various theoretical approaches within the field of cultural anthropology. The course will span the period from the mid-19th century to the present, covering theoretical perspectives that have dominated European and American schools of anthropology.
Prereq: ANTHR 135

**ANTHR 414 Racial and Cultural Minorities** 3 HRS
Racial and cultural minorities in the modern world with particular reference to the black and Hispanic, and European and Asian immigrants in the United States; racial myths, stereotypes, and movements; conflict and accommodation of majority and minority peoples; and proposed solutions of ethnic problems.
Prereq: SOCL 105 or ANTHR 135

**ANTHR 415 Peoples and Cultures of Mexico** 3 HRS
A regional, historical and topical survey of Mexican culture.
Prereq: ANTHR 135

**ANTHR 416 Peoples and Cultures of Africa** 3 HRS
A regional, historical and topical survey of African cultures.
Prereq: ANTHR 135

**ANTHR 417 Indians of North America** 3 HRS
A regional, historical and topical survey of aboriginal North American cultures.
Prereq: ANTHR 135

**ANTHR 418 Peoples and Cultures of the Pacific** 3 HRS
A regional, historical and topical survey of indigenous Pacific cultures.
Prereq: ANTHR 135

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**ANTHR 577/578/579 Special Topics** 1/1/3 HRS
An examination of topics in anthropology not normally covered in the curriculum. Students
ANTH135 Culture of Japan 3 HRS
An analysis of Japanese culture from a comparative perspective. The course presents the anthropological approach to cross-cultural understanding as applied to the study of Japanese culture. By contrasting and comparing insider and outsider analyses of Japanese behavior, the dynamics of cross-cultural research are documented and discussed.
Prereq: ANTH135 or department permission.

ANTH136 Cooperative Education in Anthropology 3 HRS
Practical experience in industrial, business or government settings that provides job skills. Offered on a credit/no credit basis.
Prereq: 12 hours of anthropology, six of which must be at the 300-level or above.

ANTH137 Kinship and Social Structure 3 HRS
The comparative study of kinship and social structure in various societies.
Prereq: ANTH135, ANTH210 and one additional ANTH course at the 300-level.

ANTH138 Seminar in Anthropological Theory 3 HRS
An intensive examination of theoretical approaches to the study of cultural phenomena. Emphasis will be placed upon the critical reading of primary source materials seminal to the development of various theoretical stances within the discipline of anthropology. This course will be organized around written and oral presentations by students.
Prereq: four courses in anthropology including ANTH140, ANTH200, ANTH210 and anthropology standing.

ANTH141 Senior Seminar in Anthropology 3 HRS
An intensive study of specific subdisciplinary issues in the context of current anthropological theory and ethnographic practice.
Prereq: ANTH135, one additional ANTH course at the 300-level and either ANTH345 or ANTH437; senior standing; anthropology major only.

ANTH142 Cultural History 1/2/3 HRS
An examination of topics in anthropology not normally covered in the curriculum in which the distinctive perspective and methodology of anthropology are emphasized. Students may elect this course several times, provided different topics are studied.
Prereq: ANTH135

ANTH144 Special Topics 1/2/3 HRS
An examination of topics in anthropology not normally covered in the curriculum in which the distinctive perspective and methodology of anthropology are emphasized. Students may elect this course several times, provided different topics are studied.
Prereq: ANTH135

ANTH147 Cooperative Education in Anthropology 3 HRS
Practical experience in industrial, business or government settings that provides job skills. Offered on a credit/no credit basis.
Prereq: department permission.

ANTH149/498/499 Individualized Reading and Research in Anthropology 1/2/3 HRS
Directed reading and research on problems within the field of anthropology.
Prereq: ANTH135 and department permission.

ART Courses

ART100 Art Appreciation 3 HRS
The aim is to acquaint students with art philosophy, its elements, principles and values. Non-art majors only.

ART110 Introduction to Art 3 HRS
Students attend lecture courses designed to developing and understanding of the formal and cultural aspects of the visual arts. Guided attendance at selected exhibitions on an optional basis may be provided. Non-art majors only.

ART115 Art History Survey I 3 HRS
A survey of the development of the visual arts from cave art through the Gothic period.

ART116 Art History Survey II 3 HRS
A continuation of Art History Survey I from the Renaissance through modern times.

ART120 Two-Dimensional Design 3 HRS
A foundation course dealing with an analytical approach to the study of the elements of design: color, line, shape, value and texture.

ART125 Drawing I 3 HRS
A beginning drawing course for students who plan to specialize in art. A variety of media and approaches help the student to achieve the control necessary in drawing. Individual problems are assigned and group criticism is frequent.
Prereq: art major or minor only.

ART126 Drawing II 3 HRS
Emphasis is on study of composition as an extension of the principles explored in Drawing I. Imaginative organization is stressed. Extensive experimentation with various media. Subjects such as the human figure are introduced as drawing problems.
Prereq: ART125

ART130 Reason and Revolution 3 HRS
An examination of the transition in political history, philosophy, art, literature and music from feudalism in France to the French and American Revolutions. Taught by members of the Art and History departments. This course satisfies one art or one history requirement. See honors humanities courses.

ART135 Graphic Design for Non-Majors 3 HRS
Problems will explore fundamental design and basic production considerations and the development of a professional design thought process.

ART136 Ceramics for Non-Majors 3 HRS
A hands-on approach to provide students with the opportunity to develop skills and aesthetic understanding in forming, glazing and kiln stacking. The emphasis in this beginning course is on handbuilding forms however, use of the potter's wheel will be introduced the latter part of the semester.

ART137 Jewelry for Non-Majors 3 HRS
A hands-on approach to provide students with the opportunity to develop artistic and technical skills with metal and other jewelry materials.
ART 107 History of 19th Century Art 3 HRS
Beginning with a survey of European art in the late 19th century and concludes with Post-Impressionism at the end of the 19th century. Prereq: ART 107 and ART 108

ART 116 History of 20th Century Art 3 HRS
A survey of the visual arts of the 20th century, from Post-Impressionism through the latest contemporary developments. Prereq: ART 215 or department permission

ART 221 Three-Dimensional Design 3 HRS
Basic study of three-dimensional structures and systems.

ART 225 Representational Drawing 3 HRS
A course in analytical drawing emphasizing the use of volume, light and structure in the construction of a variety of representational illusionistic objects and environments. Prereq: ART 124

ART 235 Introduction to Textiles 3 HRS
An introductory textiles class dealing with concepts of design as they relate to fiber structures and fabric processes. Prereq: ART 122 and ART 123

ART 277/278/279 Special Topics 1-2-3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. Prereq: department permission

ART 290 Art Integration for the Elementary Teacher 4 HRS
Understanding, appreciation and awareness of art in its varied contemporary and multicultural contexts. Emphasis on two main areas: a) appreciation and understanding of the subject; b) art concepts and processes, aesthetic education, and their relationship to general education; and c) integration of art into the general classroom procedures to enhance learning. Non-art majors only.

ART 301 Intermediate Graphic Design 1 3 HRS
Deals intensively with conceptual and technical issues; explores topics relevant to audience demographics, present day theories, philosophies, aesthetics, and techniques related to mass-audience communication. Introduces appropriate methodologies. Prereq: ART 203

ART 303 Intermediate Graphic Design II 3 HRS
Course analyzes symbol codes as learned and interpreted messages. Projects explore context, sequence and theories, philosophies, aesthetics, techniques and cultural references in symbol language message building. Introduces proper methodologies. Prereq: ART 205

ART 304 Beginning Photographic Imagery 3 HRS
Introduction to photography as an art form. Basic camera and darkroom techniques demonstrated; emphasis on exhibition printing. Student must furnish own camera equipment. Prereq: ART 222 and ART 223

ART 305 Printmaking 3 HRS
Acquaintance with graphic techniques; woodcut and silkscreen. Prereq: ART 210; art majors only

ART 306 Printmaking 3 HRS
Advanced graphic techniques with emphasis on development of individual style through experimentation with etching and processes. Prereq: ART 305; art majors only

ART 307 Ceramics 3 HRS
Basic ceramics, including wheel throwing and handbuilding techniques, compounding earthware and stoneware clay bodies, forming glazes, firing electric and gas kilns. Prereq: ART 231 or department permission

ART 308 Ceramics 3 HRS
Advanced ceramic techniques, emphasis on personal expression, compounding of individual clay bodies and glazes, loading and firing of kilns. Prereq: ART 307; art majors only

ART 310 Sculpture 3 HRS
Exploratory experiences in volume and space; use of clay, stone, wood, metal, etc. Prereq: ART 231; art majors only

ART 311 Sculpture 3 HRS
Continuing experiences in volume and space; further development of skills with use of sculpture materials and concepts. Prereq: ART 310; art majors only

ART 312 Painting 3 HRS
Painting problems; development of technique and concepts through experimentation with painting media. Prereq: ART 212 and ART 214; art majors only

ART 313 Watercolor 1 3 HRS
Intensive exploration of watercolor techniques with emphasis on developing individuality and self-expression related to the medium. Prereq: ART 213 and ART 214; art majors only

ART 315 Life Drawing 3 HRS
Advanced study of form and subjects of composition and design; varied media. Prereq: ART 210; art majors only

ART 317 Teaching of Art 3 HRS
Focuses on a comprehensive approach to art education and will include library research, readings, writings and discussions of current events aided by presentations of guest speakers. Final requirement: the development of a written personal philosophy pertaining to the teaching of art and the formulation of a general curriculum. Not open to students on academic probation. Prereq: junior standing

ART 318 Jewellery 3 HRS
Design and creation of jewelry by fabricating, casting, lapidary, stone setting and combination of metal and wood. Emphasis on the aesthetic aspect of decorative art objects. Prereq: ART 231 or department permission; art majors only

ART 319 Jewellery 3 HRS
Processes and techniques applied toward a professional development in jewelry design. Advanced processes, casting and setting of precious stones. Prereq: ART 320 or equivalent

ART 321 Intermediate Photographic Imagery 3 HRS
Advanced black and white techniques and alternative processes are demonstrated. Development of personal vision is realized through individual projects and discussion. Prereq: ART 306; art majors or department permission

ART 324 Design and Development of Public Works of Art 3 HRS
An experimental studio course in which students and instructors design, plan and execute urban environmental murals, sculptures, parks and malls. Prereq: department permission

ART 325 Computer Imaging 3 HRS
A studio course in the use of computer as a tool for the creation of works of art. Students will learn basic computer skill with a range of imaging software. Emphasis is placed on the
applications of these skills to the production of digital art works. Not open to freshmen or graduate students.

**ART 231. TECHNOLOGY IN ART EDUCATION** 3 HRS
This course prepares pre-service art teachers for their applications in art education. These include artmaking, inquiry, classroom management, communication, assessment, professional development, and art advocacy. Students will learn hardware and software as well as critically and creatively apply educational concepts and principles in technological integration for meaningful art learning. General education computer course or equivalent is necessary to complete course requirements. Course available to Visual Arts Education majors only. Prereq: CURS 206, department permission and admission to the College of Education.

**ART 315 AMERICAN PAINTING AND SCULPTURE PRIOR TO WORLD WAR II** 3 HRS
A survey of American art, including European influences and the evolution of American characteristics. Prereq: ART 207 and ART 308 or department permission.

**ART 316 HISTORY OF CLASSICAL ART** 3 HRS
A study of the art and architecture of the classical civilization of Greece and Rome. Prereq: ART 207 or department permission.

**ART 317 HISTORY OF RENAISSANCE ART** 3 HRS
A study of Italian art from the Proto-Renaissance (about 1350 AD) through the period of maniera (1600). Prereq: ART 207 or ART 308.

**ART 318 IMAGE MAKING I** 3 HRS
Image making as it applies to the materials and processes of communicating specific visual concepts. Introduces a wide variety of materials and imaging methods. Prereq: ART 207.

**ART 319 INTERMEDIATE GRAPHIC DESIGN WORKSHOP** 3 HRS
Practical dealing with various aspects of visual communication. Prereq: ART 302 and ART 303.

**ART 319 INTERMEDIATE TEXTILES—WEAVING** 3 HRS
An intermediate textile class dealing with concepts and designs as they relate to fiber structures created on the loom. Prereq: ART 235 and department permission; art majors only.

**ART 320 INTERMEDIATE TEXTILES—SURFACE DESIGN** 3 HRS
An intermediate textile class dealing with concepts and designs as they relate to basic fabric processes of surface decoration and manipulation. Prereq: ART 235 and department permission; art majors only.

**ART 321 SPECIAL TOPICS—1/2/3 HRS**
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. Prereq: department permission.

**ART 322 COOPERATIVE EDUCATION IN ART** 3 HRS
Employment in a graphic design firm, studio, or agency with an opportunity for practical design experience. Placement approval required by graphic design area. Prereq: department permission.

**ART 323 PRINTMAKING** 3 HRS
An advanced laboratory course designed for art majors specializing in graphics. Individual assignments in creative use of the more fundamental techniques learned in previous courses. Prereq: ART 306; art majors only.

**ART 324 PRINTMAKING** 3 HRS
An advanced laboratory course for art majors taking their sequence in graphics. Projects could include lithography, etching, and screenprint processes, plus individual assignments. Prereq: ART 305; art majors only.

**ART 325 CERAMICS** 3 HRS
Intensive work for art majors specializing in ceramics with an emphasis on larger-scaled, increasingly complex techniques and forms. Historical and contemporary works examined. Prereq: ART 308; art majors only.

**ART 326 CERAMICS** 3 HRS
Summation of the undergraduate ceramics program emphasizing individual style, production techniques, studio management, and exhibition programs. Prereq: ART 307; art majors only.

**ART 327 ADVANCED PHOTOGRAPHIC IMAGERY** 3 HRS
The contextual development of personal vision is considered through discussion of the student's work in relation to established photographers' work. Prereq: ART 304 and ART 323.

**ART 328 METAL CASTING TECHNIQUES** 3 HRS
An advanced sculptural course covering all aspects of the lost-wax casting process. Includes information on other metal casting processes and on construction and operation of an incipient foundry. Prereq: ART 310 or department permission.

**ART 329 SCULPTURE** 3 HRS
Advanced sculpture problems, including steel and open-form construction; intensive study of contemporary methods and techniques of sculpture. Prereq: ART 311 or department permission; art majors only.

**ART 330 SCULPTURE** 3 HRS
Advanced sculpture problems; development of individual style in three-dimensional form. Prereq: ART 311; art majors only.

**ART 331 PAINTING** 3 HRS
Further development of painting skills and aesthetic understanding of two-dimensional surface complex. Emphasis on development of individual style. Prereq: ART 318; art majors only.

**ART 332 WATERCOLOR II** 3 HRS
Further development of watercolor skills and aesthetic understanding of the two-dimensional surface complex. Emphasis on development of individual style. Prereq: ART 318; art majors only.

**ART 333 ART METHODS AND MATERIALS** 3 HRS
Designed to prepare students for their role in the classroom from the inception of an idea to the development of a stage of study. Planning, sketching, and presenting units that are comprehensive and facilitate learning in art. Not open to students on academic probation. Prereq: ART 317 and junior standing.

**ART 334 LIFE DRAWING** 3 HRS
The study of the human form as part of the development of a personal style in art. Prereq: ART 319; art majors only.

**ART 335 HISTORY OF ORIENTAL ART** 3 HRS
A survey of the art of the Far East, with significant examples from China, Japan, and Korea; investigation of the influences forming their styles. Prereq: ART 325; senior standing.

**ART 336 CHINESE AND JAPANESE ART** 3 HRS
A detailed study of the major figure and landscape painters of China and Japan and the influence of Japanese and Chinese art on the West. Prereq: ART 307 or ART 308 or ART 421 or department permission.

**ART 337 WATERCOLOR III** 3 HRS
Further development of individual style in watercolor. Prereq: ART 318; art majors only.

**ART 338 WATERCOLOR IV** 3 HRS
Further development of individual style in watercolor. Prereq: ART 319; art majors only.

**ART 339 ART OF AFRICA** 3 HRS
Examines the visual arts of sub-Saharan Africa. Analyzes and investigates the content, materials, techniques, and aesthetics of traditional African art within its cultural context. Includes the integration of function and ritual, as evidenced in the tribal objects and artifacts. Prereq: junior or senior status or department permission.

**ART 340 MEDIEVAL ART HISTORY** 3 HRS
The development of medieval art from the Early Christian to the Gothic period. Prereq: ART 307, ART 308 or department permission.

**ART 341 BAROQUE ART** 3 HRS
Principal developments in Italian and northern art of the 17th century. Emphasis on major
ART 125 SEMINAR IN 20TH CENTURY ART 3 HRS
Readings, reports, and group discussions on 20th century art. Topics may vary.
Prep: ART 216 or art major

ART 129 HISTORY OF AMERICAN ARCHITECTURE 3 HRS
Exploration of styles and techniques in American architecture from the colonial period to the present, with special emphasis on the sources in foreign traditions. Major figures, including Thomas Jefferson, Louis Sullivan, Frank Lloyd Wright, Eero Saarinen, and major stylistic trends, such as Greek Revival and the International Style, will be traced through their origins and development.
Prep: ART 107 or ART 108 or department permission

ART 140 MESOAMERICAN ART 3 HRS
A survey of the art of Mesoamerica, the civilization that existed in Mexico and Central America from about 1500 B.C.E. until the coming of Cortés in 1519. The major emphasis of the course will be on urban planning architecture and monumental sculpture. Significant attention will also be devoted to painting, ceramics, small-scale sculpture, textiles and jewelry.
Prep: junior/senior standing and department permission

ART 143 DRAWING III 3 HRS
Drawing as expressive composition. Integration of the techniques of previous courses. Development of individual directions. Includes a variety of media and the study of master drawings.
Prep: ART 210; art majors only

ART 145 WOMEN IN ART 3 HRS
Survey of the contributions of female artists in the history of art. Discussions will include the history of women as patrons of the arts and the uses of the female image in art.
Prep: ART 106 or department permission

ART 149 LIFE DRAWING 3 HRS
The study of the human form as part of the development of a personal style of art.
Prep: ART 140; art majors only

ART 240 ART SINCE 1945 3 HRS
A study of contemporary art from 1945 to the present with an intensive concentration on recent developments. A continuation of ART 216.
Prep: ART 216

ART 245 PHOTOGRAPHY PORTFOLIO 3 HRS
Development of a unified body of work representing the undergraduate photographic experience.
Prep: ART 249

ART 250 NEW TOOLS FOR TEXTILES 3 HRS
An advanced textiles course investigating digital approaches to textile design as well as new developments in surface design and weaving.
Prep: department permission and ART 353/356

ART 345 ADVANCED TEXTILES 3 HRS
Prep: department permission and ART 353/356

ART 366 COLOR, DYE, AND FIBER 3 HRS
A study of systematic dye testing via lectures and lab work; emphasis on understanding color in the textile medium.
Prep: ART 235 or department permission

ART 422 IMAGE MAKING II 3 HRS
Image making as applied to advanced communication concepts. Students are exposed to theories, philosophies, aesthetics, techniques, and experiences used in complex visual communication environments. Course may be repeated twice for credit.
Prep: ART 302 or ART 303

ART 424 ADVANCED GRAPHIC DESIGN 3 HRS
Advanced work in visual communications; students are exposed to theories, philosophies, aesthetics, techniques, and experiences used in visual communication environments.
Prep: ART 346, ART 302 or ART 303

ART 454 ADVANCED GRAPHIC DESIGN WORKSHOP 3 HRS
Special problems with various aspects of visual communication of particular interest to advanced visual communication students.
Prep: ART 302 and ART 303

ART 479 SPECIAL TOPICS 3/4, 1 1/2, 2 1/2 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

ART 480 PAINTING 3 HRS
Further development of individual painting style.
Prep: ART 245; art majors only

ART 481 PAINTING 3 HRS
Further development of individual painting style.
Prep: ART 380; art majors only

ART 487 COOPERATIVE EDUCATION IN ART 3 HRS
Continuation of ART 387.
Prep: ART 387 or approval by graphic design area

ART 497/498/499 INDEPENDENT STUDY 1/2, 3 HRS
Advanced study on an individual basis in areas in which the department does not have regular course work.
Prep: department permission

ASTRONOMY COURSES

ASTR 277/278/279 SPECIAL TOPICS 1/2, 1 1/2, 3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

ASTR 282 EXPLORATION OF THE UNIVERSE 3 HRS
An introductory astronomy course for students of any curriculum. The solar system, stars, galaxies, cosmology and the history of astronomy. Observations with telescopes are scheduled a few evenings each semester. ASTR 282 may be taken concurrently with this course. Cannot be applied toward a physics major or minor.

ASTR 284 ASTRONOMICAL INVESTIGATIONS 1 HRS
A laboratory course for the beginning astronomy student. The techniques and concepts of astronomy. Two hours of laboratory per week.
Prep: or coreq: ASTR 203 or ASTR 205

ASTR 285 PRINCIPLES OF ASTRONOMY 4 HRS
An astronomy course for students desiring a comprehensive introduction to astronomy. Topics discussed in ASTR 285 are covered in more detail, and additional topics are introduced. Especially recommended for science students. ASTR 285 may be taken concurrently. Not open to students with credit in ASTR 282.

ASTR 277/278/279 SPECIAL TOPICS 1/2, 1 1/2, 3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

ASTR 277/278/299 INDEPENDENT STUDY-ASTRONOMY 1/2, 1 1/2, 3 HRS
An intensive study of a problem or group of problems under the direction of a department faculty member.
Prep: approval of the faculty member and department permission

ASTR 281 ASTRONOMY PROJECTS FOR ELEMENTARY TEACHERS 1 HRS
A hands-on course designed to provide elementary teachers with experience doing projects in the elementary classroom, to teach astronomy. The course will integrate grade-level appropriate mathematics and science to investigate and solve astronomical problems. Students also will study human endeavors in space exploration and their impact on societal and technological issues. Offered only to elementary education students.
Prep: ASTR 283 or ASTR 293

ASTR 291 OBSERVATIONAL ASTRONOMY 3 HRS
The practical aspects of astronomy emphasizing advanced amateur observational practices such as identification of astronomical objects using charts and reference, telescopes, imaging and darkroom techniques, and computer applications.
Prep: ASTR 283 or ASTR 285
ATHLETICS COURSES

ATHL/477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

ATHL147 Theory of Coaching Individual Sports for Women 2 HRS
Coordinates, coordinates and supplements skills and coaching techniques in women's basketball.

ATHL148 Theory of Coaching and
Teaching Women's Team Sports 2 HRS
Coordinates, coordinates and supplements skills and coaching techniques in women's basketball.

ATHL257 Theory of Football 2 HRS
A lecture course covering the basic fundamentals and styles of offensive and defensive football.

ATHL269 Theory of Baseball 2 HRS
The fundamental skills and strategy of baseball for the prospective teacher and coach.

ATHL277 Theory of Basketball 2 HRS
A lecture course covering the basic fundamentals and styles of offensive and defensive basketball.

ATHL288 Theory of Coaching Swimming 2 HRS
A lecture course for anyone who might coach swimming. The topics covered are stroke technique, applied physiology, strength and flexibility, training, rules, and how these components contribute to a daily, weekly, and seasonal training plan.

ATHL299 Theory of Track and Field 2 HRS
The fundamental techniques for coaching and supervising programs of track and field for the prospective teacher and coach.

ATHL477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

ATHL497/498/499 Directed Study 1/2/3 HRS
Directed study in areas not covered in other departmental offerings, or greater depth of study in areas in which the student has a continuing interest. Students will be assigned to select faculty members for direction, consultation, and evaluation of the completed study or project. Open only to department majors and minors who have attained junior standing, with a grade point average of 3.0 or above, and who have completed the appropriate background courses.
Prereq: department permission

APPAREL, TEXTILES AND MERCHANDISING COURSES

ATMI45 Integrated Arts 3 HRS
The application of design elements and principles to human and contemporary environmental needs. Laboratory required.

ATMI46 Apparel Studio 3 HRS
Apparel construction using a commercial pattern. Emphasis is placed on fabric selection, fit and technique.

ATMI47 Early American Textiles 3 HRS
Survey of textiles used in early history of North America. Experience allows students to develop skills in spinning wool and flax, traditional weaving, and natural dyeing.

ATMI48 Cultural Study of Dress 3 HRS
A study of the social, psychological and physical aspects of dress as related to culture, society and the individual.

ATMI49 Introduction to Apparel and Textile Merchandising 3 HRS
Analysis of the apparel and textile industry from the designer to distribution through major domestic and foreign markets. Emphasis is placed on fashion trends and cycles, history of merchandising and careers.

ATMI517/518/519 Special Topics 1/2/3 HRS
An experimental course designed to investigate specific topics of concern in specialisation areas.
Prereq: department permission

ATMI52 Display Techniques 3 HRS
Study and evaluation of visual presentations for store interiors and window displays in retailing, educational and trade exhibits. Basic principles of display, as applied to merchandising displays are examined. Provides a hands-on opportunity to create window display designs and work with students in campus buildings and the local community.
Prereq: ATMI05

ATMI53 Introductory Textiles 3 HRS
The analytical study of fibers, yarns, fabrics and finishes with emphasis on the performance of apparel and interlinings. Laboratory required.

ATMI55 Apparel Analysis 3 HRS
A study of the components of apparel at the various price and quality levels. Emphasis placed on standard terminology necessary to describe and evaluate apparel. Laboratory required.
Prereq: ATMI233

ATMI65 Merchandising of Interior Furnishings 3 HRS
Study of fashion marketing practices, buying techniques, and promotional activities as they relate to home furnishings industries. Field trips required.

250
ATM377/378/379 Special Topics 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialisation area.
Prereq: department permission

ATM382 Fashion Manufacturing Techniques 3 hrs
Experiences and analysis of apparel and textile product production. Includes selection of commercial equipment and textiles.
Prereq: ATM318 or equivalent

ATM393 Merchandise Planning and Control 3 hrs
Applications of merchandising mathematical concepts to buying functions and activities. Major focus on problem solving. Field trips required.
Prereq: ATM345

ATM396 Application of Merchandising Practices 3 hrs
Adaptation of apparel and textile merchandising concepts (ATM345) to computer systems. Development of processing tasks using specific merchandising information, utilizing the computer for simulation problem solving.
Prereq: COSC101 or HHS224

ATM477/478/479 Special Topics 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialisation area.
Prereq: department permission

ATM460 Tailoring 3 hrs
Fundamental construction processes and special techniques applied to the construction of tailored garments alterations and adaptations.
Prereq: ATM118 or equivalent

ATM477/478/479 Special Topics 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialisation area.
Prereq: department permission

ATM487 Field Experience 3 hrs
Supervised field experience working with family social agencies and/or businesses in the area of specialization, emphasizing professional competencies and self-evaluation. Sections of course offered for specialized areas as needed. International students need a work permit before registration.
Prereq: department permission - senior standing

ATM497/498/499 Independent Study 1/2/3 hrs
Advanced study on an individual basis in areas in which the department does not offer a formal course.
Prereq: department permission

ADMINISTRATIVE MANAGEMENT, BUSINESS EDUCATION AND NETWORK INFORMATION ADMINISTRATION COURSES

BEDU100 Principles of Marketing and Office Education 3 hrs
An introduction to marketing and office education. The scope and importance of various educational methods and strategies. Pre-requisites: Marketing and Office Education.

BEDU101 Microcomputers for Business Applications 3 hrs
Computer hardware and software for office use including both mainframe and microcomputer systems. Hands-on experience limited to microcomputers. Basic skills in using prepared software and developing programs for office applications using Microsoft BASIC. Requires no prior knowledge of computers or programming.

BEDU102/VMT 102 Women in Business 3 hrs
Social and business conditions that support the entry of women to executive positions in business. Career opportunities at the professional and executive levels of business.

BEDU103 Concepts of Network and Business Technology 3 hrs
The concepts and functions of networks and related business technology. The course emphasizes administration of personal computers, their applications and peripherals, and peer-to-peer networks. The course includes equipment, procedures, and career opportunities.
Prereq: BEDU101

BEDU104 Word/Information Processing Operations 3 hrs
Continued development of keyboarding, proofreading and referencing techniques. Emphasis on advanced word processing software, typewriting, graphics, and other desktop publishing applications. Advanced application development including merge and list processing, word processing, mail functions, and importing from other software programs. A minimum grade of "C" is required if taken towards the Legal Assistant (Paralegal) Program.
Prereq: BEDU123 and BEDU201

BEDU105 Computer-based Business Mathematics 3 hrs
Application of computer-based tools and procedures to the solution of mathematical problems encountered in the business office.
Prereq: BEDU201 or department permission

BEDU106 Notetaking Skills for Professionals 2 hrs
Designed to provide skills for successful notetaking for a variety of academic and professional activities, including lecture and library research, meetings, and other audi nual format. Develops skill in rapid setting and reading systems along with related study, listening and basic transcription skills.

BEDU108 Personal Finance 3 hrs
The management of financial resources to satisfy personal or family goals. Budgeting, consumer credit and debt, personal insurance, real estate,
will and trust, and income taxes. Students learn to make decisions within the context of a realistic consumer-oriented environment. Open to all students.

BEDU377/478/479 SPECIAL TOPICS 1/1.5 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

BEDU380 WORD PROCESSING/INFORMATION PROCESSING ADMINISTRATION 3 HRS
Techniques to utilize staff and equipment most effectively; record keeping, word flow, evaluating personnel, establishing policies and standards of operation as applied to word processing.
Prep: BEDU210 and BEDU220

BEDU344 ADMINISTRATION OF COMPUTER SYSTEMS 3 HRS
Principles and practices of computer operating systems for networks in educational or small to mid-sized organizations. The course will emphasize the tasks the administrator must perform frequently.
Prep: BEDU210 and sophomore, junior or senior standing

BEDU365 CURRICULUM FOR BUSINESS SERVICES AND TECHNOLOGY EDUCATION 2 HRS
Overviews content bases and other factors that affect business service and technology. Includes the relationship in philosophies of education and styles of teaching, classroom management in a variety of settings, including utilization of non-classroom curriculum delivery systems and the implementation of curriculum evaluation and revision procedures.
Prep: BEDU240; admission to the teacher education program

BEDU366 METHODS OF TEACHING MARKETING EDUCATION 2 HRS
Techniques and practices utilized in teaching marketing and cooperative education in secondary schools, community colleges and adult evening schools.
Prep: EDPS322; 2.5 GPA in all business education subjects taken at EMU; no academic probation; admission to the teacher education program

BEDU367 CURRICULUM IN MARKETING EDUCATION 2 HRS
Overviews content bases and other factors affecting marketing education curriculum. Includes development of comprehensive curriculum plans for a variety of marketing education settings, utilization of non-classroom curriculum delivery systems, and implementation of curriculum evaluation and revision procedures. Examine current trends in marketing education curriculum.

BEDU368 MANAGEMENT OF MARKETING EDUCATION PROGRAMS 2 HRS
Examines the marketing education roles of DECA advisor, public relations specialist, career counselor, program administrator/supervisor, and professional educator.

BEDU377/478/479 SPECIAL TOPICS 1/1.5 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

BEDU387 COOPERATIVE EDUCATION IN BUSINESS EDUCATION 3 HRS
Business education majors will be placed on a job that relates to their major area of study for one semester. During this period regular employees' benefits may be received. Offered on a credit/no-credit basis. Credit applicable to the major in business education only.
Prep: BEDU387

BEDU405 END-USER SYSTEMS IMPLEMENTATION AND EVALUATION 3 HRS
The course focuses on implementing and evaluating end-user systems that deliver information services and resources. Emphasis is on implementation based on current theories of innovation and change and on development of evaluation criteria. Teaching information security and service delivery is included. Students will evaluate an actual or hypothetical end-user system.
Prep: BEDU344

BEDU416 RECORDS ADMINISTRATION USING DATABASE 3 HRS
Database as a tool of automated search and retrieval, identifying information needs of users: design and development of records classification structures suitable for automated records systems; searching techniques; generation of reports such as records user listings, master record listings, and records retention schedules. Extend applications using database software.
Prep: BEDU320

BEDU435 INDEPENDENT STUDY 1/1.5 HRS
Students pursue some special area of study or experimentation under the direction of a designated faculty member from the department.
Prep: department permission
**BIOLOGY COURSES**

**BIO103 INTRODUCTORY BIOLOGY FOR NON-MAJORS** 4 HRS
A study of the basic concepts of modern biology common to all organisms with an emphasis on human systems and issues. Designed for students who are not majoring or minoring in biology. The course consists of two one-hour lectures, one one-hour recitation and three hours of laboratory each week. Not open to students with credit in BIOL 110 and/or BIOL 120. Does not count toward the major or minor.

**BIO104 INTRODUCTION TO ENVIRONMENTAL SCIENCE** 3 HRS
An introduction to the basic biological, physical and chemical processes that control today's environmental conditions. The global ecosystem is presented as a system that includes human society. The interaction of local and global environmental problems and discussion of potential solutions are emphasized. Does not count toward the major or minor.

**BIO105 INTRODUCTORY BIOLOGY I** 5 HRS
The basic concepts of biology upon which students can begin to develop a conceptual framework of the discipline will be developed in this course and reinforced in upper-level courses. Cell structure and function, molecular biology, Mendelian and population genetics, evolutionary theory, and ecology will be covered in this first semester of a two-semester sequence. Inquiry-oriented laboratory exercises and inquiry-oriented methods will be emphasized in lecture and discussion sections. BIOL 110 is required for students taking a major or minor in biology. Course meets for three hours of lecture, one hour of discussion and three hours of laboratory each week.
Prep: BIOL 105 or VTP.

**BIO106 INTRODUCTORY BIOLOGY II** 5 HRS
The basic concepts of biology upon which students can begin to develop a conceptual framework of the discipline will be developed in this course and reinforced in upper-level courses. Plant physiology, development, and animal physiology, development, diversity, and behavior will be covered in this second semester of a two-semester sequence. A continued emphasis on inquiry-oriented laboratory exercises and inquiry-oriented methods will be applied to lecture and discussion sections. BIOL 120 is required for students taking a major or minor in biology. Course meets for three hours of lecture, one hour of discussion and three hours of laboratory each week.
Prep: BIOL 110

**BIO177/178/179 SPECIAL TOPICS 1/2/3 HRS**
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

**BIO110 HUMAN GENETICS** 3 HRS
A lecture course emphasizing fundamental concepts of human genetics specifically designed to provide the non-biology major a framework to understand and assess recent advances and critical issues concerning medical genetics, molecular diagnostics and genetic engineering.
Prep: BIOL 105 or BIOL 110

**BIO104 THE BIOLOGY OF CANCER** 2 HRS
Introduces the types, characteristics, putative causes and current treatments of cancer.
Prep: BIOL 105 or BIOL 120

**BIO105 FIELD BIOLOGY** 4 HRS
A lecture, laboratory and field course in the behavior, ecology, and broad classification of plants and animals, giving training in recognition of common plants and animals of Michigan. Given background material to the non-specialist interested in outdoor life, and to the elementary school teacher. Not open to students having credit in BIOL 110 and/or BIOL 120 except by department permission. Does not count toward the biology major or biology minor.

**BIO107 ELEMENTS OF ECOLOGY** 4 HRS
The interactions of plants and animals with their physical and biological environment. Consideration is given to the way in which principles of ecology are applied in conservation practices. Lectures and readings are supplemented by field trips to locations of ecological interest in the area. Does not count toward the major.
Prep: BIOL 105

**BIO123 HUMAN EMBRYONIC DEVELOPMENT** 3 HRS
A study of the embryonic development of human from fertilization to birth, with emphasis on the development of the major organ systems and the birth defects that occur when development occurs abnormally.
Prep: BIOL 105, BIOL 110 or BIOL 201

**BIO124 PRINCIPLES OF CONSERVATION** 4 HRS
Introduces the basic principles of planning, protection and conservation of the earth's natural resources and the habitats in which they are found. Lecture and laboratory sections.
Prep: BIOL 105, BIOL 110 or BIOL 201

**BIO125 AQUATIC BIOLOGY** 3 HRS
An introductory course in the ecology of freshwater aquatic ecosystems (lakes, streams, rivers and wetlands). Emphasis will be placed on the physical, chemical and biological aspects of these aquatic systems. Human impacts on freshwater ecosystems will also be considered. Does not count toward the major or minor.
Prep: BIOL 105, BIOL 110

**BIO225 PRINCIPLES OF CONSERVATION** 4 HRS
Introduces the basic principles of planning, protection and conservation of the earth's natural resources and the habitats in which they are found. Lecture and laboratory sections.
Prep: BIOL 105, BIOL 110 or BIOL 201

**BIO226 AQUATIC BIOLOGY** 3 HRS
An introductory course in the ecology of freshwater aquatic ecosystems (lakes, streams, rivers and wetlands). Emphasis will be placed on the physical, chemical and biological aspects of these aquatic systems. Human impacts on freshwater ecosystems will also be considered. Does not count toward the major or minor.
Prep: BIOL 105, BIOL 110

**BIO228 GERMS, PLAGUES AND HUMAN INFECTIONS** 3 HRS
This course provides the non-scientist with a basic understanding of the biology of human infectious diseases. The course uses lecture, discussion and small group activities to examine the biology of microbes and of human defenses, the evolution of infectious disease, the history of epidemics and current issues in infectious diseases.
Prep: BIOL 105, BIOL 110 or BIOL 201

**BIO239 BIOLOGY OF AGING** 1 HRS
The study of the aging process at the molecular, cellular, tissue and systems level of organization. Theories of aging will be considered.
Prep: BIOL 105

**BIO247 ANIMAL BEHAVIOR** 3 HRS
An introduction to animal behavior and its scientific investigation. Animals use behavior to meet the challenges of their lives. Biologists study behavior using four sorts of questions. Lecture illustrates the variety of behaviors and investigation. During recitation, students carry out guided enquiries into the behaviors of readily found animals. Does not count toward the major or minor.
Prep: BIOL 105 or BIOL 110

**BIO277/278/279 SPECIAL TOPICS 1/2/3 HRS**
An examination of topics in biology not covered to other departmental offerings. Students may elect this course more than once, provided different topics are studied.
Prep: department permission

**BIO301 GENETICS** 3 HRS
A lecture course emphasizing the basic principles of inheritance with their application to plants and animals.
Prep: BIOL 120; or BOTN 130 and ZOO 140

**BIO302 LIFE SCIENCE FOR ELEMENTARY TEACHERS** 3 HRS
Major biological concepts and best practices for teaching science, including inquiry and the "discovery" approach, will be covered. Class configuration — one hour lecture, two hours laboratory or fieldwork and two hours web-based instruction involving inquiry, resource evaluation and research. Concluding course in the elementary science sequence.
Prep: CUR 304

**BIO305 CELL AND MOLECULAR BIOLOGY** 3 HRS
A lecture course that examines the basic unit of structure and function in life, the cell. The course uses concepts of molecular biology to survey aspects of cellular function, such as metabolism, intercellular communication, and cell division.
Prep: BIOL 301, CHEM 121/122 and CHEM 123/124

**BIO306 CELL AND MOLECULAR BIOLOGY AND GENETICS LABORATORY** 2 HRS
This laboratory course provides students with an opportunity to use molecular and cellular techniques to probe aspects of gene inheritance and expression. Students will develop critical reasoning and laboratory skills in preparation for advanced laboratory studies, independent research projects at the sub-organismal level, as well as for cooperative learning internships.
Prep: BIOL 301; PreReq Coreq: BIOL 305
B I O L  1 1 0  E C O L O G Y  3  H R S
A lecture course introducing the concepts involved in the study of terrestrial and aquatic communities, their physical environment, and their interaction into ecosystems. Emphasis will be on properties at the ecosystem, community, and population levels.
Prereq: BIOL 120, or BOTN 130 and ZOO 140

B I O L 1 1 1  L A B O R A T O R Y  I N  E C O L O G Y  2  H R S
A laboratory and field course with two main objectives: 1) to introduce students to the methods and concepts involved in the study of the distribution and abundance of organisms; and 2) to familiarize students with the structure and function of aquatic and terrestrial communities.
Prereq/Conreq: BIOL 110

B I O L 1 1 5  E V O L U T I O N  3  H R S
This lecture and discussion class examines basic concepts of evolutionary biology, emphasizing evolutionary theory, evolutionary processes and contemporary topics in evolutionary biology. An integrative approach at the cellular, molecular, organismal, population, and higher taxonomic level will be incorporated to understand the role of evolution as the organizing principle of all levels of biology and life. BIOL 315 is one of the three core courses. Students are required to take two of three core courses.
Prereq/Conreq: BIOL 301

This course is an introduction to basic ecological principles and their application to current global environmental issues and conservation practices. The effect of the human population explosion on the conservation and use of resources and biodiversity is emphasized. Does not count toward the major or minor.
Prereq: BIOL 120, ESS 107, BIOL 130, or BIOL 170

B I O L 1 6 6  M A R I N E  R E S O U R C E  C O N S E R V A T I O N  5  H R S
This lecture and laboratory course analyzes the relationship between marine ecology and resource management in an interdisciplinary examination of coastal conservation issues of the Caribbean. Course meets daily (spring/summer), for one hour of lecture, one hour of discussion and three hours of field laboratory as a Caribbean field station. Not open to students who have already taken BIOL 369.
Prereq: BIOL 120 or BOTN 130 and ZOO 140

A lecture course and field laboratory on the ecology of tropical marine ecosystems. Biological oceanography and systems ecology from the basic to complex and of community structure and productivity and disturbance. Course meets for three hours of lecture and six hours of field work each week at a Caribbean field station.
Prereq: BIOL 120 or BOTN 130 and ZOO 140

B I O L 1 7 7 / 1 7 8 / 1 7 9  S P E C I A L  T O P I C S  1 - 3  H R S
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

B I O L 1 8 7  C O O P E R A T I V E  E D U C A T I O N  I N  B I O L O G Y  3  H R S
Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educational experience in biology or technology. The program consists of two work experiences (BIO 378/487) alternating with full-time attendance at the University. Admission is to program by application only. Grades on a credit/no-credit basis.
Prereq: junior standing

B I O L 2 0 1  G E N O M E  A N A L Y S I S  4  H R S
An introductory course to the field of genomics. This involves the study of genome data and exploration of the organization, dynamics, and evolution of genes and genomics. The laboratory component involves analysis of genes, genetic variation/DNA fingerprinting, DNA sequencing and molecular evolution.
Prereq: BIOL 305, BIOL 306 or BIOL 351

B I O L 2 0 2  M E T H O D S  F O R  T E A C H I N G  S E C O N D A R Y  B I O L O G Y  3  H R S
A lecture-laboratory course providing knowledge, training and practice in the presentation of biological principles, analysis of text, selection of course content, effective classroom methods, and preparation of classroom materials used in the teaching of biology. Does not count toward major or minor.
Prereq: BIOL 120, BIOL 304, CURS 305 and EDPS 340

B I O L 2 0 6  T H E  N A T U R E  O F  S C I E N C E  1  H R S
This course examines the nature of scientific evidence, inquiry, hypothesis, models and laws. The development of science is put in the context of the structure and history of the scientific community. Interactions among scientists and between science and the rest of society are studied from an ethical perspective.
Prereq: BIOL 110, BIOL 120 and BOTN 130. Departmental permission required for science majors or minors from other programs.

B I O L 3 1 0  L I N N O L O G Y  3  H R S
A lecture, laboratory and field course dealing with physiological and biological interrelationships in standing waters.
Prereq: BIOL 120 or BOTN 130 and BIOL 311

B I O L 3 1 2  B I O G R A P H Y  3  H R S
A lecture course involving the descriptive and historical aspects of plant and animal distribution and the basic principles governing their natural distribution in both space and time.
Prereq: BIOL 120 or BOTN 130 and ZOO 140 and ESSC 108, ESSC 202, ESSC 210 or ESSC 211

B I O L 3 4 3  A N I M A L  A N D  P L A N T  P R E S E R V A T I O N  T E C H N I Q U E S  1  H R S
A laboratory, lecture and demonstration mini-techniques course in the preservation of biological specimens: bringing whole animal and plant techniques, such as freeze-drying, pressing, skeleton making, study skins and plastic embedding.
Prereq: two biology courses at the 100-, 200- or 300-level

B I O L 3 4 5  W E T L A N D  E C O S Y S T E M S  3  H R S
Advanced field ecology course in the theory and methods of study of wetland ecosystems.
Prereq: BIOL 420, or BIOL 310 and BIOL 311

B I O L 3 4 6  T E R R E S T R I A L  E C O S Y S T E M S  3  H R S
Advanced field ecology course in the theory and methods of study of the structure and dynamics of terrestrial ecosystems.
Prereq: BIOL 420, or BIOL 310 and BIOL 311

B I O L 3 6 1  O N C O L O G Y  3  H R S
A lecture course on physico-chemical biological agents and factors of nonhuman and human cancer etiology, pathogenesis of neoplastic transformation in vivo, and immunohistochemistry of causes, host-tumor relationship, and model systems in control.
Prereq: MECR 218

B I O L 4 7 7 / 4 7 8 / 4 7 9  S P E C I A L  T O P I C S  1 - 3  H R S
An examination of advanced topics in biology not covered in other department offerings.
Prereq: department permission

B I O L 4 8 7  C O O P E R A T I V E  E D U C A T I O N  I N  B I O L O G Y  3  H R S
Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educational experience in biology or technology. The program consists of two work experiences (BIO 378/487) alternating with full-time attendance at the University. Admission is to program by application only. Grades on a credit/no-credit basis.
Prereq: BIOL 377

B I O L 4 9 7 / 4 9 8 / 4 9 9  S P E C I A L  P R O B L E M S  1 / 2 / 3  H R S
Individual work in some area of biology under direction of a staff member. Preliminary draft of proposed study must be approved by the department prior to enrollment. May be elected more than once, after submission and approval.
Prereq: department permission

B O T N 1 3 0  B I O L O G Y  O F  P L A N T S  4  H R S
An introduction to the plant kingdom for non-biology majors. The biology of plants is explored from the cellular through whole-organism levels of organization, focusing on the roles of diverse plant groups in our environment. Three one-hour lectures plus three hours of laboratory experience. Does not count toward the major or minor.

B O T N 1 7 7 / 1 7 8 / 1 7 9  S P E C I A L  T O P I C S  1 - 3  H R S
An examination of topics in botany not covered in other department offerings. Students may
BOSHII5 Economic Botany 3 hrs
A study of plants useful to man, especially those that yield food, fibers, wood, rubber, drugs and other products of value. It is a lecture-demonstration course supplemented by reading. Open to all students without prerequisite, though previous training in biology, botany or agriculture is desirable.

BOTHII4 General Field Botany 1 hr
This course stresses field identification and ecological relationships of the higher plants. There is much opportunity for practice in the use of taxonomic keys.

BOTHII7 Special Topics I1/2 hrs
An examination of topics in botany not covered in other department offerings. Students may elect this course more than once, provided different topics are studied.

BOTHII Trees and Shrubs 3 hrs
A taxonomic field course on the identification of native trees and shrubs in winter and summer conditions. Count as a taxonomic field course.

BOTHIII Special Topics II hrs
An examination of topics in botany not covered in other department offerings. Students may elect this course more than once, provided different topics are studied.

BOTHII8 Cooperative Education in Botany 3 hrs
Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educational experience in botany or technology. The program consists of two work experiences (BOTH387/388) alternating with full-time attendance at the University. Admission to program by application only. Graded on a credit/no-credit basis.

BOTHII9 Mycology 3 hrs
A lecture-laboratory course on the study of molds, molds, molds, edible and poisonous mushrooms, and other fungi. Their life history, economic importance, method of identification, and preservation are considered.

BOTHII Plant Anatomy 3 hrs
A basic lecture-laboratory course in plant histology emphasizing recognition of primary and secondary tissues as well as their combination in root, stem, leaf and flower of a wide variety of representative seed plants.

BOTHII Plant Physiology 3 hrs
A detailed study of major plant functions with emphasis on growth and development presented by lecture, demonstration, and experimentation in laboratory and greenhouse.

BOTHII Plant Biotechnology 3 hrs
A hands-on exploration of the techniques used in plant biotechnology and their application to agricultural biotechnology and basic science. State-of-the-art molecular biology techniques are applied to genetic engineering of plants and plant products. Lecture and discussion provide the theoretical basis for the techniques used.

BOTHII Aquatic Plants 3 hrs
Analysis of aquatic and wetland plants and habitats. Lecture and discussion stress the identification of native aquatic and wetland species.

BOTHII Fireweed Algae 3 hrs
A survey of the freshwater algal divisions: their morphology, taxonomy, ecology, and economic importance. Lectures stress an evolutionary approach. Laboratory work stresses the identification of representative algal taxa. Class field collections are made. Course as a taxonomic field course.

BOTHII Systematic Botany 3 hrs
Course as a taxonomic field course.

BOTHII Special Topics II hrs
An examination of topics in botany not covered in other department offerings. Students may elect this course more than once, provided different topics are studied.

BOTHII Cooperative Education in Botany 3 hrs
Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educational experience in botany or technology. The program consists of two work experiences (BOTH387/388) alternating with full-time attendance at the University. Admission to program by application only. Graded on a credit/no-credit basis.

BOTHII Engineering Graphics 1 3 hrs
A mechanical drawing course emphasizing orthographic projection, pictorial representation, dimensioning, sectional and auxiliary views, computer-aided drafting, mechanical fasteners and working drawings. Lecture and laboratory course.

BOTHII Engineering Graphics II 3 hrs
A series of computer graphics programs illustrate graphics algorithms and terminology. Students

CAD Courses

CADMII4 Introduction to Industrial Drawing 3 hrs
An introductory mechanical drawing course emphasizing learning, measuring, geometric construction, sketching, equipment usage, pictorial, orthographic projection and dimensioning. This course is intended for students without previous drafting experience. Lecture and laboratory course. This course does not count toward a CAD/CAM major.

CADMII5 Computer Applications for Industry 3 hrs
Provides the theory, general applications, and specific applications of microcomputers. Students are exposed to software packages commonly used for general and specific applications in industry. Lecture and laboratory course.

CADMII6 Industrial Computer Applications for Manufacturing 3 hrs
This course presents advanced DOS commands and concepts appropriate for CAD/CAM and other similar industrial applications. Lecture and laboratory course.

CADMII7 Computer-Aided Print Reading 3 hrs
A manufacturing print reading course which includes an introduction to computer-aided drafting. This course is intended for manufacturing cost analysis majors with no previous engineering drawing experience.

CADMII8 Engineering Graphics I 1 3 hrs
A mechanical drawing course emphasizing orthographic projection, pictorial representation, dimensioning, sectional and auxiliary views, computer-aided drafting, mechanical fasteners and working drawings. Lecture and laboratory course.

CADMII8 Engineering Graphics II 3 hrs
An engineering design course designed as a continuation of Engineering Graphics I. Units of instruction include drafting, dimensioning, interference, interruption, and automated design. Lecture and laboratory course.

CADMII9 Computer Graphic Programming for Industry 3 hrs
A series of computer graphics programs illustrate graphics algorithms and terminology. Students
write similar computer programs using graphics functions. Topics include computer graphics, multi-view drawings, multi-axis rotations, CAD databases, animation and interactive programming. Lecture and laboratory course.

Precalculus MATH107 and a course in C programming.

CADM477/478/479 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than one, provided different topics are studied.

Precalculus department permission.

CADM424 3-D SOLID MODELLING 3 hrs
Examination and production of engineering designs/drawings using 3D solid and wireframe techniques. Software generation of drawings, models and assemblies, including exploration of file formats and transfer. Class is oriented to construct physical prototypes using rapid prototyping equipment at an in-house facility. Models can be used for testing and visualization.

Precalculus CADM23 and MFG121.

CADM425 APPLIED MECHANICS, KINEMATICS, AND DESIGN 3 hrs
The study of mechanical devices, the forces to which they are subjected, and systems design considerations. Topics include statics, dynamics, and modification of mechanisms. Lecture and laboratory course.

Precalculus PHY1221.

CADM431 PRODUCT DESIGN DATA MANAGEMENT 1 1 hr
Students develop an interactive CAD software package. Principles of software design, the use of computer hardware and the generating, modifying, and transforming of CAD entities and databases are included. Lecture and laboratory course.

Precalculus CADM251.

CADM434 3-D COMPUTER-AIDED DESIGN MODELING 3 hrs
This course provides the advanced CAD user with an in-depth understanding and skill of constructing and integrating 3-D solid modeling, 3-D modeling, and assembly techniques into 3-D CAD systems. Applications of CAD software.

Precalculus CADM22 and CADM23.

CADM460 CIM OPERATIONS 3 hrs
Concepts, components, and applications of computer-aided industrial automation. The integration and implications of CAD, CAM, and automation techniques into CIM are included.

Precalculus MFG203.

CADM477/478/479 SPECIAL TOPICS 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than one, provided different topics are studied.

Precalculus department permission.

CADM587 COOPERATIVE EDUCATION IN CAD/CAM TECHNOLOGY 3 hrs
Industrial technology majors will be placed on a job that relates to their primary area of study, for one semester. During this period regular-employee benefits may be received. Offered on a credit/grade basis. Credit applicable to the major in industrial technology or industrial teacher education only.

Precalculus department permission.

CADM417 INDUSTRIAL ROBOTICS 3 hrs
The nature and use of industrial robotics capabilities, equipment, and associations. Lecture, preparation, and installation, launching, and monitoring. Lecture and laboratory course.

Precalculus CADM106, MFG203, ELEC218 and MFG318.

CADM416 MANUFACTURING COMMUNICATION SYSTEMS 3 hrs
An overview of the computerization of information related to manufacturing production. Class will emphasize functional specification and installation of computerized-manufacturing communication systems. Lecture and laboratory course.

Precalculus MFG123, MFG124, MFG203 and ELEC218.

CADM447 ADVANCED INDUSTRIAL CONTROL 3 hrs
The application of electronics, telecommunications, programmable logic controllers, process control, and analysis techniques to the open-loop and closed-loop control of machines and processes. Emphasis will be given to the utilization of computers and programmable logic controllers for industrial control purposes. Lecture and laboratory course.

Precalculus ELEC218.

CADM412/3-D FEATURE-BASED MODELING AND SURFACING TECHNIQUES 3 hrs
Students learn and practice 3-D feature-based part modeling and architectural techniques on a high-performance 3-D CAD system. Advanced modeling techniques and assemblies will be presented. Lecture and laboratory course.

Precalculus CADM24.

CADM442 ADVANCED COMPUTER-AIDED DESIGN 5 hrs
Advanced computer-aided design course. Uses advanced design modeling techniques to develop 3-D models. Solid models are constructed using advanced design modeling strategies. Methods to be explored include geometric primitives, sketching, interactive freeform and surface bodies using b-spline control points. Emphasis on advanced complex assemblies and surface models.

Precalculus CADM22.

CADM445 FINITE ELEMENT ANALYSIS 3 hrs
Finite Element Analysis (FEA) is a powerful tool used by industries to solve many engineering problems. Basic concepts of this technique will be introduced and the students will have hands-on experience to analyze heat transfer, beam deflection, and stress and strains problems by using several different software packages. Lecture and laboratory course.

Precalculus CADM221 and CADM425, MFG229 or

CADM446 CAD/CAM NC PROGRAMMING 3 hrs
Study of conversion of part descriptions to numerical control programs for milling, lathes, and three-axis machining centers. Advanced AP and CAD/CAM NC programming for producing the instruction codes necessary to manufacture parts with NC machine tools are emphasized. Verification of the computer-assisted NC programs is accomplished by laboratory work.

Precalculus MFG203.

CADM477/478/479 SPECIAL TOPICS 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than one, provided different topics are studied.

Precalculus department permission.

CADM495 FLEXIBLE MANUFACTURING SYSTEMS 3 hrs
Design and implementation of a flexible manufacturing cell. Machining materials, material handling and storage, inspection, and inventory are emphasized. Part programming, numerical control, robotic automation, and development of a manufacturing database and hierarchy computer control. Lecture and laboratory course.

Precalculus MFG316, CADM24, MFG601, QAL120 and MFG425.

CADM492 COOPERATIVE EDUCATION IN CAD/CAM TECHNOLOGY 3 hrs
The second in a two-semester sequence for industrial technology majors. The students will be placed on a job that refers to their primary area of study for one semester. Regular employee benefits may be received. Graded on a credit/grade basis.

Precalculus CADM387 and department permission.

CADM493 DESIGN CAPSTONE 3 hrs
A synthesis of all previous academic coursework for the development of a fully defined new product in a team work environment, utilizing CAD/CAM system and integrated design methodology for the project design process. Technical reports and presentations are required.

Precalculus CADM424/433.

CADM494/495/496 INDUSTRY-BASED SPECIAL TOPICS 1/2/3 hrs
Course descriptions are formulated at the time of an industry's request and reflect the particular requirements of the client company. Offered on a credit/no-credit basis.

Precalculus CADM497/498/499 INDEPENDENT STUDY 1/2/3 hrs
Available to selected students who have demonstrated ability to profit from a directed study project. Intensive study of a problem appropriate
to the student's area of concentration. Enrollment and selection of a project proposal must be approved by the department advisor and chair. Prereq: department permission

**COLLEGE OF ARTS AND SCIENCES COURSES**

**CAS150 Lith's A Risk** 3 HRS
This interdisciplinary course is an introduction to risk assessment in modern society. Students will gain a breadth of knowledge in many science disciplines while studying the relative risks associated with everyday living and ways to minimize exposure to those risks. No prerequisites are required for this course.

**CAS177/178/179 Special Topics 1/2/3 HRS**
Study and exploration of topics not covered in other departmental offerings. Students may elect more than one, provided different topics are studied. Prereq: department permission

**CAS200 Culture and the Holocaust 3 HRS**
Culture and the Holocaust is an interdisciplinary examination of the Holocaust, the systematic murder of more than six million Jews, Slavs, Gypsies, homosexuals, and others judged physically and culturally undesirable by the Nazi regime of Adolf Hitler.

**CAS240 Real Women/Real Women 3 HRS**
This course examines issues confronting women and film from the interdisciplinary perspectives of communications, women's studies and philosophy. Different techniques for critical analysis will be used to study how film represents gender, race, class and culture.

**CAS377/378/379 Special Topics 1/2/3 HRS**
Study and exploration of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. Prereq: department permission

**CAS477/478/479 Special Topics 1/2/3 HRS**
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. Prereq: department permission

**CAS497/498/499 Independent Study 1/2/3 HRS**
Directed study in areas not provided in other course offerings, or advanced study in areas of special interest to the student. Prereq: department permission

**COMPUTER ENGINEERING TECHNOLOGY COURSES**

**CET131 Engineering Software and Applications 3 HRS**
This course introduces a variety of software tools and techniques used by engineers. It is intended for anyone involved in engineering design, analysis, and software development. Engineering software developments related to real life applications are included. Prereq: EET101, COSC111 and MATH120

**CET133 Web Development for Engineering Applications 3 HRS**
The application of web technology to engineering disciplines. Emphasis is given to designing, analyzing, and developing web applications for various engineering disciplines and enterprises. Projects integrate various web-based engineering software to be simultaneously used and managed for concurrent engineering and business activities in virtual environments. Prereq: CET251, COSC334 and IS380

**CET387 Cooperative Education in Computer Engineering Technology 3 HRS**
An industrial experience in business and industrial where primary work emphasis is related to computer engineering technology. During this period, employee benefits may be received. Prereq: department permission

**CET387 Programmed Logical Controller 3 HRS**
The application of electricity, electronics, programmable logic controller, data acquisition, and analysis techniques to the open-loop and closed-loop control of machines and processes. Emphasis will be given to utilization of computers and programmable logic controllers for industrial control purposes. Lecture and laboratory course. Prereq: ELEC218

**CET391 Engineering Database Development 3 HRS**
This course covers the essentials of developing and implementing database systems for engineering applications. The emphasis is given to the development of database applications for integrating product design, production analysis, manufacturing, process control, assembly, inventory control, and other engineering functions. Practical examples of C++ that integrate CAD systems, CAM systems, ERP systems, PLCs, and others are presented. Several popular products data management systems such as Parametric Technology's Windchill, Eds' PDM (Product Lifecycle Management), and IBM's PDM will be introduced. Prereq: IS380

**CET395 Engineering Programming 3 HRS**
Cover Java programming essentials with emphasis in the object-oriented programs for engineering applications. Emphasis will be given to the development of interface programs that allow popular engineering application software to be used in specific applications and the development of web-based programs for engineering applications. Prereq: CET353 and CET361

**CET491 Senior Design Capstone 3 HRS**
A synthesis of all previous academic course work for the capstone activity for the computer engineering technology student includes a proposal phase, development phase, and final project. This course focuses on the effective teamwork strategies and the application of computer software and hardware in engineering activities. Technical reports and presentations are required. Prereq: ETLE218, ENGI332, CET353 and senior standing

**CHEMISTRY COURSES**

**CHEM101 Chemistry for Elementary Teachers 3 HRS**
Designed for students who plan to teach in elementary school. Lectures deal with some basic principles of chemistry while the laboratory work emphasizes the discovery approach as it may be used in an elementary classroom. Simple equipment and easily obtained chemicals are used in the experiments. Does not count toward major or minor. Lecture: two hours per week. Laboratory: two hours per week.

**CHEM115 Chemistry and Society 3 HRS**
Examines the relevance of chemistry to the problem of how humans relate to the environment. It is designed for humanities and other non-science majors. No previous mathematics or chemistry is required. CHEM116 may be taken concurrently to satisfy the laboratory science requirement for general studies. Does not count toward major or minor. Lecture: three hours per week.

**CHEM116 Chemistry and Society Laboratory 1 HRS**
Laboratory experiments based on environmental problems such as waste and air pollution, drugs and pesticides. The laboratory may be taken concurrently with CHEM115 to satisfy the Area II physical science requirement. Does not count toward major or minor. Laboratory: two hours per week. Prereq or Coreq: CHEM115

**CHEM117 Fundamentals of Chemistry Lecture 3 HRS**
A rapidly moving introductory study of basic principles in general chemistry. Includes elements, compounds, periodic properties, atomic structure, gas laws and stoichiometry. Does not count toward major or minor. Can be used with CHEM118 to satisfy the chemistry prerequisite for CHEM211. Will satisfy Area II physical science requirement when taken concurrently with CHEM118. Lecture: three hours per week. Prereq: CHEM116. MATH105, MATH107, MATH112, MATH116, MATH119, MATH120 or Level 3 math placement. Coreq CHEM118
CHEM18 Fundamentals of Chemistry Laboratory 1 HR
Designed to accompany CHEM117 lecture. Will provide an introduction to scientific discovery through experimentation and observation. Experiments are drawn from topics presented in the chemistry lectures in CHEM117. Does not count toward major or minor. Laboratory: two hours per week.
Prep: CHEM117

CHEM20 Fundamentals of Organic and Biochemistry 4 HRS
A survey of organic chemistry and biochemistry; completes the study of chemistry begun in CHEM117/118 and is a terminal course. Does not count toward major or minor. Lecture: three hours per week. Laboratory: two hours per week.
Prep: high school chemistry

CHEM21 General Chemistry I 3 HRS
The first semester of a two-semester sequence covering the principles of chemistry for science majors and others with an interest and background in science. Lecture: three hours per week.
Prep: MATH104 or Level 3 math placement with concurrent registration in MATH104. High school chemistry, Coreq: CHEM122

CHEM22 General Chemistry I Laboratory 1 HR
The laboratory class to accompany CHEM121. Students learn basic techniques employed in a chemistry laboratory, including use of analytical balances, quantitative glassware, spectrophotometry, and computers for data acquisition and analysis. Laboratory: three hours per week.
Coreq: CHEM121

CHEM23 General Chemistry II 3 HRS
A continuation of the two-semester sequence covering the general principles of chemistry for science majors and others with an interest and background in science. Lecture: three hours per week. Restrictions: C- or better in CHEM121.
Prep: CHEM121 and CHEM122. Coreq: CHEM124

CHEM24 General Chemistry II Laboratory 1 HR
The techniques learned in CHEM124 are reemphasized and supplemented. Laboratory: three hours per week. Restrictions: C- or better in CHEM122.
Coreq: CHEM123

CHEM25 Honors General Chemistry II (Lecture) 3 HRS
A continuation of CHEM121 General Chemistry for students of superior ability. The sequence of CHEM121, 123, 125 and 126 can constitute the customary year of general chemistry. Lecture: three hours per week.
Prep: CHEM121 and CHEM122; and MATH105, MATH112, MATH119, MATH120 or Level 3 math placement; and consent of Honors Committee. Coreq: CHEM126

CHEM26 Honors General Chemistry II (Lab) 1 HR
The laboratory to accompany CHEM125. The techniques learned in CHEM124 are reemphasized and supplemented. Preparation of a laboratory notebook is required. The sequence of CHEM212, CHEM122, CHEM125 and CHEM126 can constitute the customary year of general chemistry. Laboratory: three hours per week.
Coreq: CHEM125

CHEM27 Survey of Organic Chemistry 4 HRS
A comprehensive one-semester survey course in organic chemistry. Includes aliphatic and aromatic compounds plus functional group chemistry. Chemistry majors and other students requiring a full-year sequence of organic chemistry should enroll in CHEM371 and CHEM372. Lecture: four hours per week.
Prep: CHEM121/122

CHEM271 Organic Chemistry Laboratory 1 HR
Instruction in the basic manipulative techniques of experimental organic chemistry and experience with organic chemicals. Laboratory: three hours per week.
Prep or Coreq: CHEM270

CHEM277/278/279 Special Topics 1/2/3 HRS
Covers specific chemistry topics not discussed in any regular introductory chemistry course.
Prep: department permission

CHEM279 Survey of Organic Chemistry 4 HRS
A comprehensive one-semester survey course in organic chemistry. Includes aliphatic and aromatic compounds plus functional group chemistry. Chemistry majors and other students requiring a full-year sequence of organic chemistry should enroll in CHEM371 and CHEM372. Lecture: four hours per week.
Prep: CHEM121/122

CHEM281 Quantitative Analysis 4 HRS
A lecture and laboratory course treating instrumental, gravimetric, and volumetric analysis and equilibration. Lecture: two hours per week. Laboratory: six hours per week.
Prep: CHEM123/124 or CHEM125/126

CHEM282 Honors Quantitative Analysis 4 HRS
A lecture and laboratory course treating instrumental, trace, separation and characterization techniques. Lecture: two hours per week. Laboratory: six hours per week.
Prep: CHEM125/126 or CHEM123/124 and consent of honors coordinator

CHEM287/288/289 Cooperative Education in Chemistry 1/2/3 HRS
Full- or part-time employment at an industrial, federal or state agency chemistry laboratory providing an applied experience in chemistry. Amount of credit granted determined by the nature of job responsibilities and/or duration of placement. Graded on a credit/no-credit basis. No credit granted toward chemistry degree programs, except with departmental permission.
Prep: CHEM123/124 or CHEM125/126. Admission by application only; sophomore standing

CHEM297 Undergraduate Research in Chemistry 1 HR
An independent, original endeavor involving laboratory and/or library study under the guidance of a chemistry faculty member. A formal written report is required at the end of the semester.
Prep: department permission

CHEM310 Inorganic Chemistry 3 HRS
This course will discuss the fundamental themes of bonding, structure, and reactivity, primarily in the context of inorganic chemistry. In addition, the course will give students an introduction to some of the newer and more exciting areas of interest to inorganic chemists, such as catalytic cycles and bioinorganic chemistry.
Prep: CHEM123/124 or CHEM125/126

CHEM340 Introduction to Industrial Chemistry 3 HRS
Discussion of the important aspects of the manufacture and chemistry of the major organic and inorganic chemicals and their use through commercially available products such as polymers. Includes environmental and economic aspects of industry. Lecture: three hours per week.
Prep: CHEM123/124 or CHEM125/126

CHEM341 Fundamentals of Material Science 3 HRS
A general overview of the fundamental principles of materials science. Addresses the relationship of atomic/molecular structure to physical properties for metals, ceramics, glasses, polymers, semiconductors, and composite materials. Lecture: three hours per week.
Prep: CHEM123/124 or CHEM125/126

CHEM350 Foundations of Biochemistry 4 HRS
Deals with biological structures and the interactions that control activity upon biological molecules. Metabolism and synthesis of biological molecules, and the controls that integrate the various processes at the molecular and cellular level are presented. Bioenergetics, including equilibria, catalysis, and the production/utilization of biological forms of energy are discussed. Not open to freshmen and graduate students.
Prep: CHEM120 or CHEM372

CHEM360 Fundamentals of Physical Chemistry 3 HRS
A calculus-based introduction to quantum mechanics, thermodynamics and kinetics. Serves as survey course for general curricula and major. Lecture: three hours per week.
Prep: MATH110, CHEM281 or CHEM282
Prep/Coreq: PHYS221 or PHYS224

CHEM371 Organic Chemistry I 3 HRS
The first semester of a two-semester sequence covering the general principles of organic chemistry for students specializing in science...
and those preparing for dentistry or medicine.
Lecture three hours per week. Credit cannot be earned in both CHEM270 and CHEM371.
Prereq: CHEM123/124 or CHEM125/126

CHEM372 Organic Chemistry II 3 HRS
A continuation of CHEM371, CHEM372 and CHEM572 constitute the customary year of
foundation/lecture work in organic chemistry.
Lecture three hours per week. Restriction: C-
or better in CHEM371.
Prereq: CHEM371

CHEM373 Organic Chemistry Laboratory 2 HRS
Covers the basic techniques involved in organic
chemistry. Laboratory: six hours per week.
Prereq or coreq: CHEM372

CHEM374 Honors Organic Chemistry Laboratory 2 HRS
Covers the basic techniques involved in organic
chemistry for students of superior ability. The
sequence of CHEM371, CHEM372, and
CHEM374 can constitute the customary year of
organic chemistry. Laboratory: six hours per week.
Prereq or coreq: CHEM372 and consent of Honors
Coordinator

CHEM375/376/377 Special Topics 1/2/3 HRS
Covers specific chemical topics not discussed in
any regular chemistry course at this level.
Prereq: department permission

CHEM381 Instrumentation for
Chemical Technology 2 HRS
A lecture and laboratory course that surveys
various types of analytical instrumentation and
their uses in chemical industry. Lecture: one
hour per week. Laboratory: three hours per week.
Prereq: CHEM281, CHEM270 or CHEM372;
and CHEM271 or CHEM373 or equivalent

CHEM385/388/389 Cooperative
Education in Chemistry 1/2/3 HRS
Full- or part-time employment at an industrial,
federal or state agency chemistry laboratory
providing an applied experience in chemistry.
Amount of credit granted determined by
the nature of job responsibilities and/or duration
of placement. Graded on a credit/uncredit basis.
For junior-level students. No credit granted toward
chemistry degree programs, except with department permission.
Prereq: junior standing

CHEM397 Undergraduate Research in
Chemistry 1 HRS
An independent, original endeavor involving laboratory and/or library study, under the guidance
of a chemistry faculty member. A formal written report is required at the end of the semester.
Prereq: department permission

CHEM406 The Nature of Science 1 HRS
This course examines the nature of scientific evidence, inquiry, hypothesis, models and laws.
The development of science is put in the context
of the structure and history of the scientific community. Interactions among scientists and
between scientists and the rest of society are studied from an ethical perspective. Available
only in secondary education majors in chemistry.
Biology, earth science and physics. Equivalent to
BIO1,406, ESSC1,08 and PHYS1,06.
Prereq: CHEM123 and CHEM124, department
permission for non-chemistry majors

CHEM411 Toxicology I 2 HRS
An introduction to the principles and methods of
Toxicology. Special cases of toxic response
including carcinogenesis, teratogenesis and
mutagenesis, and the effects of radiation are discussed. Lecture: two hours per week.
Prereq: CHEM270 or CHEM372

CHEM412 Toxicology II 2 HRS
Discussion of the metabolism of toxicants and
their effect on specific organ systems, specific
classes of toxicants and legal aspects of
toxicology. Lecture: two hours per week.
Prereq: CHEM411, biochemistry recommended

CHEM415 Toxicology Laboratory 2 HRS
A lecture and laboratory covering the techniques
employed in a toxicology laboratory including
methods of calculation, interpretation and
presentation of experimental data. The theory and
practical aspects of toxicological procedures will
be discussed. Lecture: one hour per week. Laboratory:
three hours per week.
Prereq: CHEM411; CHEM281 recommended

CHEM416 Regulatory Toxicology 2 HRS
This lecture course reviews the major environmental
laws, building a framework for understanding
their intent and application. Lecture: two hours per week.
Prereq: CHEM270 or CHEM572

CHEM417 Environmental Chemistry 3 HRS
A survey of environmental and energy-related problems and the ways in which chemistry may be applied to them. Important topics include air and water pollution, energy and other resources, solid wastes and recycling; and toxic chemicals.
Lecture: three hours per week.
Prereq: CHEM123/124 or CHEM125/126
CHEM270 or CHEM372 and CHEM281 recommended.

CHEM421 Advanced Inorganic
Chemistry 3 HRS
An advanced-level treatment of the newer inorganic
chemical developments, with emphasis on theoretical advances in the interpretation of
bonding and reactivity of inorganic compounds.
Lecture: three hours per week.
Prereq: CHEM465 or department permission; CHEM403 recommended

CHEM422 Inorganic-Organic Synthesis
Laboratory 2 HRS
Covers advanced preparative and analytical
techniques of inorganic and organic chemistry
including extensive use of IR, NMR, UV-visible
and other instruments. Laboratory: six hours per week.
Prereq: CHEM281 or CHEM282; and
CHEM375 or CHEM376

CHEM441 Biochemistry I 3 HRS
Chemistry of biologically significant compounds
such as proteins, nucleic acids, carbohydrates and lipids. Enzymes are introduced,
bioenergetics is discussed and the most central topics of metabolism are outlined.
This course is intended as an one-semester survey of biochemistry for health science students and as
the first semester of a two-semester sequence for chemistry, biology and biochemistry students.
Lecture: three hours per week.
Prereq: CHEM123/124 or CHEM125/126 and
CHEM270, CHEM372 or equivalent

CHEM442 Biochemistry II 3 HRS
Continue the survey of biochemistry begun in
CHEM441. Membranes and transport, enzyme
kinetics, further topics in metabolism, replication,
transcription, translation, and regulation of cell processes are discussed. Lecture: three
hours per week. Restriction: C- or better in
CHEM441.
Prereq: CHEM441

CHEM443 Biochemistry Laboratory 2 HRS
Theory and application of preparative and
analytical techniques in the investigation of the
biochemical and biophysical properties of
proteins and nucleic acids. Emphasis is placed on
communication of experimental results in the
form of scientific manuscripts. Laboratory:
six hours per week.
Prereq: CHEM451 or CHEM351; CHEM271;
CHEM373 or CHEM376; and CHEM281 strongly recommended

CHEM461 Chemical Thermodynamics
and Kinetics 3 HRS
The study of the principles of thermodynamics,
the equilibrium properties of systems, and the
rates of chemical reactions. Lecture three hours per week.
Prereq: PHYS224 and CHEM281 or CHEM282;
Prereq or Math 223

CHEM465 Physical Chemistry
Laboratory 2 HRS
Determination of the physical properties of
substances, rate studies and measurement of the
thermochromical properties. Emphasis on
scientific report writing and oral presentation of
work. Laboratory: six hours per week. Restriction:
C- or better in CHEM461.
Prereq: Math 221 and CHEM351 or CHEM451

CHEM466 Quantum and Statistical
Mechanics 3 HRS
The study of quantum mechanics and its
application to atomic structure, molecular bonding
and spectroscopy. An introduction to statistical
mechanics and modern theories of the rate constant.
Lecture: three hours per week.
Prereq: CHEM461.
CHEM474 INTRODUCTION TO POLYMER CHEMISTRY 3 HRS
An emphasis on the organic chemistry involved in the preparation of synthetic high polymers. Topics include chain-growth vinyl polymers, step-growth polymerization, copolymerization, cationic and anionic polymerization, and complex coordination catalysts. Lecture, three hours per week.
Prereq: CHEM270 or CHEM372

CHEM477/478/479 SPECIAL TOPICS 1/1/1 HRS
Covers specific chemistry topics not discussed in any regular chemistry courses at this level.
Prereq: department permission

CHEM481 INSTRUMENTAL ANALYSIS 4 HRS
Theory and practice of chemical analysis and measurements and data processing by instrumental methods. Lecture: two hours per week. Laboratory: six hours per week.
Prereq: CHEM281 or CHEM282 and CHEM463; Prereq: CHEM465

CHEM485 INTRODUCTION TO RADIOTRACER TECHNIQUES 2 HRS
Measurement of radiation and principles of radiation safety; experiments with emphasis on beta and gamma-ray counting and handling radioactive substances. Lecture: one hour per week. Laboratory: three hours per week.
Prereq: CHEM123/124 or CHEM125/126; and either CHEM281, one science laboratory course above the 200-level or department permission

CHEM487/488/489 COOPERATIVE EDUCATION IN CHEMISTRY 1/1/1 HRS
Full- or part-time employment at an industrial, federal or state agency, chemistry laboratory providing an applied experience in chemistry. Amount of credit granted determined by the nature of job responsibilities and/or duration of placement. Graded on a credit/no-credit basis. For senior-level students.

CHEM497/498/499 UNDERGRADUATE RESEARCH IN CHEMISTRY 1/1/1 HRS
Independent, original endeavors involving extensive library and/or laboratory study, under the guidance of a chemistry faculty member. A formal written report is required at the end of the semester.
Prereq: department permission

CLASSICS COURSES

CLASSIC04 QUEST FOR POWER: FAMOUS FIGURES IN HISTORY 3 HRS
An examination of the lives and times of select leaders from the ancient and modern worlds. Examples of figures to be covered are Pericles, Nero, Napoleon I and Adolf Hitler. Major literary monuments of the period will be examined as well. Team taught by a member of the History Department and a classicist. This course satisfies one literature or one history requirement. Note: see honors humanities courses.

CLASSIC06/LITR106 ROME AND AMERICA 6 HRS
An exploration into problems and pressures comparing the people and culture of ancient Rome and modern America, considering individual hopes and ideals, religious beliefs, and ideas about death, government, morality, love and sex. Team taught by a member of the English Department and a classicist. These courses must be taken concurrently and satisfy two literature requirements. Note: see honors humanities courses.

CLASSIC177/178/179 SPECIAL TOPICS 1/1/1 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

CLASSIC185 THE LEGACY OF GREECE 3 HRS
An introduction to Greek epic, drama, poetry, history and philosophy, illustrating the influence of the Greek tradition on western civilization. The literature is read in English translation. Representative examples of Greek architecture and sculpture are also examined. Team taught by a classicist and/or a member of the English Department. This course satisfies one literature requirement. Note: see honors humanities courses.

CLASSIC277/278/279 SPECIAL TOPICS 1/1/1 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

CLASSIC301 CLASSICAL MYTHOLOGY 3 HRS
An examination of classical Greek and Roman mythology, chiefly through the study of literary and artistic works. The influence of classical mythology in later literature will also be considered.

CLASSIC321/HIST321/WMST321 WOMEN AND GENDER IN THE ANCIENT WORLD 3 HRS
An investigation of life for women in antiquity, focusing on the sex-gender system of Greek and Roman societies. Literary, inscriptive and other evidence will be studied to disclose the classical roots of western beliefs and attitudes about women.

CLASSIC377/378/379 SPECIAL TOPICS 1/1/1 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

CLASSIC477/478/479 SPECIAL TOPICS 1/1/1 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

CLASSIC497/498/499 INDEPENDENT STUDY 1/1/1 HRS
Advanced study on an individual research basis in area not covered in formal course work.
Prereq: department permission

CLINICAL LABORATORY SCIENCES COURSES

CLSC277/278/279 SPECIAL TOPICS 1/1/1 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

CLSC280 CLINICAL LABORATORY TECHNIQUES 3 HRS
Basic skills necessary to function in a clinical laboratory; e.g., phlebotomy, use of the microscope, specimen collection and preparation, pipetting and lab safety.

CLSC281/282 PHLEBOTOMY TECHNIQUES 3 HRS
Phlebotomy Techniques is presented in a lecture-laboratory format. The course is designed to present the theory of blood collection and the practical techniques for venipuncture and skin puncture. Topics included in the course will cover the phlebotomist's role, professionalism and ethics, laboratory and hospital organization, specimen collection techniques, various blood drawing equipment, patient interaction, and some medical and laboratory terminology.
Prereq: perfor. AH19200 or department permission

CLSC290 CLINICAL PHLEBOTOMY PRACTICUM 3 HRS
The Clinical Phlebotomy Practicum is the second course in a two-course sequence designed to prepare students for entry-level positions as phlebotomists. The practicum will generally consist of 40 hours of training at an affiliated institution. Graded on a credit/no-credit basis.
Prereq: permission of instructor and CLSC290

CLSC297/298/299 SPECIAL TOPICS 1/1/1 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

CLSC300 MOLECULAR DIAGNOSTICS 3 HRS
This course covers molecular diagnostic techniques in the clinical laboratory. Topics will include laboratory diagnosis of infectious and genetic diseases through cytochemical, molecular, and DNA technology.

CLSC307 URINALYSIS, BODY FLUIDS AND HEMOSTASIS 3 HRS
Lecture and laboratory covering urines, body fluids and hemostasis. Specimen collection and handling, physical examination, chemical testing, and microscopic evaluation of urines and body fluids; evaluation of hemostasis testing and hemostasis theory.

CLSC330 CLINICAL IMMUNOLOGY 4 HRS
Lecture and laboratory presenting theory, basic principles, and practical experience in clinical immunology. The correlation of basic principles to human disease state.
Prereq: CLSC200 or permission of instructor
CLSC 447: Special Topics I 2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

CLSC 387: Cooperative Education in Clinical Laboratory Science 3 hrs
Three or four months of full-time employment at a clinical, research or industrial laboratory or related area chosen for providing a practical educational experience in clinical laboratory sciences. The program consists of two work experiences alternating with full-time attendance at the University. Offered on a graded or credit/no-credit basis.
Prereq: CHEM 270 and permission of program director.

CLSC 401: Laboratory Management Education 3 hrs
Basic management skills for laboratory personnel and laboratory. Personnel practices, equipment and reagent purchase, and laboratory information systems including computer applications, laboratory statistics, and evaluation of methods are covered in this lecture course.
Prereq: MATH 170 or equivalent.

CLSC 402: Clinical Chemistry 3 hrs
This lecture course covers the relationship of clinical chemistry to diagnosis, prognosis, and treatment of disease. Focus will be on testing procedures, instrumentation, and controlling the functions in order to provide correct information to the medical staff.
Prereq: CHEM 351 or permission of instructor.

CLSC 405: Cytotechnology Clinical Internship 14 hrs
Microscopic study of cellular alterations indicative of cancer and precancerous conditions, bacterial, viral, and parasitic infections, and hormonal abnormalities: cytogenetics: and a research project.
Prereq: program approval.

CLSC 406: Cytotechnology Clinical Internship 14 hrs
Continuation of CLSC 405.
Prereq: program approval.

CLSC 407: Hematology 4 hrs
This lecture and laboratory course covers the theory and application of hematological test procedures, interpretation of results, problem solving, and correlation of laboratory findings with disease states. Not open to those with credit in BIOL 407.

CLSC 410: Cytogenetics, Clinical Internship 1 14 hrs
CLSC 410 and CLSC 411 cytogenetics clinical rotation I and II will be used for the clinical practice for the cytogenetics track in the CLS program. The student will set up tissue cultures, harvest cells, prepare slides for analysis, and prepare analysis for a broad spectrum of genetic abnormalities. This will include photographic and computer-assisted chromosome analysis. Procedures will include chronic villus, fragile X, and sister chromatid exchanges.
Prereq: program approval.

CLSC 411: Cytogenetics, Clinical Internship II 14 hrs
Continuation of CLSC 410.
Prereq: program approval.

CLSC 412: Clinical Laboratory 14 hrs
Individual Clinical Laboratory Practicum experience. Experiences will be in the specialty areas of the clinical laboratory including, but not limited to molecular diagnostics.
Prereq: department permission.

CLSC 416: Basic Histotechnology and Histotechnical, Staining Methods 8 hrs
Didactic and practical experience in preparing histologic sections for light microscopy, including the study of more than 50 different histologic staining methods and their specific applications.
Prereq: program approval.

CLSC 447: Basic Electron Microscopy 8 hrs
Didactic and practical experience in basic biological electron microscopy. Electron microscopic histochromy and special techniques are also covered. Emphasis is on the electron microscope as a medical diagnostic tool.
Prereq: program approval.

CLSC 413: Immunohisto-Cytochemistry 4 hrs
A course designed to teach basic and advanced procedures of fluorescent and enzyme-labeled antibody techniques. The course includes the preparation of tissues, staining with labeled antibodies, and the use of fluorescence microscopes in clinical medicine and research.
Prereq: program approval.

CLSC 419: Internship Special Histotechnology Techniques 4 hrs
A course designed to present didactic and practical experience in molecular pathology, including in-situ hybridization and DNA analysis. Cytogenetics will be presented with emphasis on preparing karyotypes and chromosome identification. A research project will be required on a related topic, then formalized and presented as a lecture. Management and education methodologies will be presented.
Prereq: program approval.

CLSC 435: Clinical Microbiology Laboratory 2 hrs
Laboratory will cover methods of detection, isolation, enumeration, and identification of human pathogenic microorganisms encountered in the clinical microbiology laboratory.
Coreq: CLSC 453.

CLSC 434: Advanced Immunohematology 3 hrs
Principles and procedures used in the blood bank. The laboratory is designed to simulate problem situations in the clinical laboratory.
Prereq: CLSC 335.

CLSC 450: Hematology/Coagulation Practicum 5 hrs
An intensive, hands-on clinical experience in routine hematology, coagulation, and special techniques at an advanced level.
Prereq: acceptance into clinical track.

CLSC 451: Clinical Immunology/Immunohematology Practicum 5 hrs
An intensive, hands-on clinical experience at an advanced level of instruction in blood banking, immunology and serology.
Prereq: acceptance into clinical track.

CLSC 454: Clinical Chemistry Practicum 5 hrs
An intensive, hands-on clinical experience at an advanced level of instruction in automated chemistry, radioimmunoassay, electrophoresis and toxicology.
Prereq: acceptance into clinical track.

CLSC 455: Clinical Chemistry Laboratory 3 hrs
This laboratory course includes theory, instrumentation, and current procedures used in clinical chemistry laboratories. Analysis will be done on clinical specimens, and a clinical chemistry quality-control program will be integrated throughout the semester.

CLSC 456: Clinical Microbiology Practicum 5 hrs
An intensive, hands-on clinical experience at an advanced level of instruction in clinical microbiology.
Prereq: acceptance into clinical track.

CLSC 457: Clinical Methods Practicum I 1 hr
This one-week, intensive course includes an orientation to hospitals training students, one-day experience at the American Red Cross, and a combined urinalysis/phlebotomy experience at the hospital affiliations.
Prereq: acceptance into clinical track.

CLSC 459: Clinical Microbiology Practicum II 3 hrs
This is an intensive introductory lecture and laboratory course highlighting medically important fungi, disease states, and laboratory methods of isolation and identification. Offered on a credit/no credit basis.
Prereq: acceptance into clinical track or permission of instructor.

CLSC 474/478/479 Special Topics 1/2/3 hrs
Advanced level courses covering specific topics in clinical laboratory sciences not discussed in other clinical laboratory sciences courses.
Prereq: permission of instructor.
CONSTRUCTION MANAGEMENT COURSES

CONST125 INTRODUCTION TO CONSTRUCTION 3 HRS
An overview of the construction industry, including the developing, planning, and scheduling of construction projects. Site development, material usage, specifications, estimating, and construction cost control are included as topic areas.

CONST177/178/179 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

CONST201 CONSTRUCTION SYSTEMS 3 HRS
Structural systems, associated nonstructural components, and considerations appropriate to mechanical, electrical, plumbing, and support equipment. Lecture and laboratory course.

CONST203 CONSTRUCTION MATERIALS 3 HRS
The characteristics, specifications, and applications of basic construction materials such as stone, concrete, wood, glass, plastics, metals and bio-based products. Lecture and laboratory course.

CONST206 SURVEYING 3 HRS
The fundamental use of the transit and level. Linear measurements, angle measurements, differential and profile leveling, a simple transverse survey, and the keeping of accurate notes. Lecture and laboratory course.

CONST210 CONSTRUCTION SAFETY 3 HRS
Philosophical, social, economic, and technological bases for safety related to the development of a construction job site safety plan. Emphasis is also placed on the OSHA and MISHA construction industry standards.

CONST228 CONSTRUCTION GRAPHICS 3 HRS
Basic print reading skills. Symbols, terminology, print organization, and basic material take-off techniques. Sketching and some basic drawing skills will be required. Lecture and laboratory course.

CONST229 ANALYSIS OF COMMERCIAL PRINTS 3 HRS
Development of the ability to read and interpret prints. Actual commercial prints and project manuals are used for analysis and material take-off procedures. Preparation of field drawings using graph paper and sketching techniques. Lecture and laboratory course.

CONST277/278/279 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

CONST283 ELECTRICAL, MECHANICAL, AND EQUIPMENT SYSTEMS 3 HRS
This course provides an understanding of mechanical, electrical, plumbing, drainage, waste, and equipment considerations, and other specialized nonstructural systems found in commercial buildings.

CONST284 CONSTRUCTION ESTIMATING AND BIDDING 3 HRS
The principles and procedures for developing estimates, bids, and contracts for heavy highway and commercial construction. Computer applications are included.

CONST286 PLANNING AND SCHEDULING 3 HRS
The planning process of the construction industry. Various scheduling systems commonly used within the industry are studied including scheduling software.

CONST377/378/379 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

CONST387 COOPERATIVE EDUCATION IN CONSTRUCTION MANAGEMENT 1 HRS
Construction management majors will be placed on a job that relates to their primary area of study, for one semester. During this period regular employment benefits may be received. Offered on a credit/no-credit basis. Credit applicable to the major in construction management only.

CONST403 PRODUCTION CONTROL 3 HRS
Methods of control used in the construction industry for production problems involving the estimate, bidding, scheduling, cost analysis, cost comparison, scheduling systems, and control of jobs.

CONST406 CONSTRUCTION LAW 3 HRS
Common basic legal problems associated with instruction, construction, and problems of concern and their significant implications are covered.

CONST412 FUNDAMENTALS OF STRUCTURAL DESIGN 3 HRS
Fundamentals and theory of construction design including soil mechanics and basic structural elements. This is an elementary, analytical, and practical approach to the principles and physical concepts of statics, strength of materials, and soils as they relate to construction.

CONST426 MECHANICAL AND ELECTRICAL CONSTRUCTION APPLICATIONS 3 HRS
This course provides the student with a broad understanding of the principles and construction of piping, heating, ventilating and air conditioning (HVAC) and electrical systems for non-residential buildings. Emphasis will be placed on project management issues relating to these systems including estimating, coordinating, change orders and commissioning. Available only to students in the construction management program.

CONST427 HEAVY/HIGHWAY CONSTRUCTION CONTRACTING 3 HRS
An examination of construction methods and contracting procedures in the heavy/highway industry. The course will focus on actual projects underway or recently completed by agencies of the federal, state, county and local governments involved in the construction of new as well as rehabilitation work on existing infrastructure elements. Available only to students in the construction management program.

CONST430 FUNDAMENTALS OF CONSTRUCTION PROJECT MANAGEMENT 3 HRS
Students combine many previous concepts and skills into a single, comprehensive project that includes estimating, scheduling, production control techniques and documentation procedures. Lecture and laboratory course.

Prereq: ENGL324 (B or better), MGMT384, CST204 and CST261.
COBS77/478/479 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

CNST.487 Cooperaive Education in Construction Management 1 hr
The second in a two-course sequence for construction management majors. The student will be placed on a job that relates to their primary area of study, for one semester. Regular employee benefits may be received. Graded on a credit/no-credit basis.
Prereq: CNST387 and department permission

CNST.499/495/496 Industry-Based Special Topics 1/2/3 hrs
Course descriptions are formulated at the time of an industry's request and reflect the particular requirements of the client company. Offered on a credit/no-credit basis.

CNST.497/498/499 Directed Study in Construction Management Techniques 1/2/3 hrs
Available to selected students who have demonstrated ability to profit from a directed-study project. Intensive study of a problem appropriate to the student's area of concentration. Enrollment and selection of a project proposal must be approved by the department adviser and chair.
Prereq: department permission

COLLEGE OF BUSINESS COURSES

COBS77/478/479 Special Topics 1/2/3 hrs
Team-taught current topics related to career preparation for business and industry.
Prereq: department permission

COB260 Introduction to Business 3 hrs
This course is designed to provide students with an understanding of the business profession, knowledge of business disciplines, and to begin assessment and development of skills important for effectiveness in business as an individual and a member of a work team. At the end of this course, students will have developed an understanding of how the different business disciplines operate and are interrelated. Students will have developed a career objective and have had an opportunity to learn, practice and develop interpersonal communication, and group and personal effectiveness skills. Both students who have decided on a major within the College of Business and those who are undecided about their major are welcome in this course.

COBS177/478/479 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

COBS377/478/479 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

COBS477/478/479 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

COBS497/498/499 Independent Study 1/2/3 hrs
Directed study of a problem in business not otherwise treated in department courses.
Prereq: department permission

COMPUTER SCIENCE COURSES

COSC101 Computer Science Concepts and Practical Applications 3 hrs
The course emphasizes the uses and capabilities of computers in our society. Students will be exposed to several popular applications through hands-on lab activities. No previous experience with computers is assumed. Counts toward the computer science minor if taken prior to or concurrently with COSC111 Introduction to Programming.

COSC105 Everyday Computing and Social Responsibility 3 hrs
Two hours lecture/discussion, two hours lab. This course combines extensive exploration of ethical issues faced by everyday computer users with hands-on practice using a broad variety of online and computer productivity tools to support socially responsible computer use.

COSC111 Introduction to Programming 3 hrs
An introduction to computers, programming, algorithm development and a high-level language such as Java. In particular, strategies for problem solving, problem analysis, algorithm representation and algorithm verification are balanced with actual program development using good design and documentation techniques. The first course in the computer science major and minor, but open to all students.
Prereq: minimum ACT score of 26, minimum SAT score of 640 or math placement test in elementary algebra greater than or equal to 73, MATH105, MATH107, MATH118, MATH119 or MATH220

COSC145 Introduction to FORTRAN Programming 3 hrs
An introductory course for persons wishing to learn programming and applications of computers. Using the FORTRAN language, students develop and run programs to solve a variety of problems. Credit will not be given for more than one of COSC145 and COSC245. Does not count toward computer science major or minor.

COSC146 Applied Programming 3 hrs
Introduction to computer programming for the non-major. Introduces students to integrated development environments such as Visual Basic and other application tools. Students work in a combination of lectures and supervised computer labs. Does not count toward the computer science minor or major or curriculum.

COSC146 Explorations in Robotics 3 hrs
Introduction to the theory of robotics and autonomous agents. Students will be exposed to technical and social aspects of robotics in society. Students will complete selected readings, write several short papers and design and program simple robots. Fundamentals of computer science topics as applied to robotics will be covered.

COSC177/478/479 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

COSC181 Computer Visualization and Multimedia 3 hrs
This course concentrates on concepts of computer visualization/presentation of information. The focus will be on the internet and using multimedia. It will encourage hands-on problem solving using various applications programs. Each student will do a semester project of their choice.
Prereq: COSC101 or department permission

COSC205 Computer Hardware and Software Systems 3 hrs
An applied introduction to computers including: computer hardware, operating systems, web design, networking, trouble shooting and maintenance of computers. Lab projects include: Taking apart computers, installing operating systems, building a network and creating a web page.
Prereq: CDM105 and COSC101

COSC211 Programming Data Structures 3 hrs
The second course in an introductory sequence for the computer science major, minor and others. Continues software engineering methodology through specification, design, coding and program correctness. Nested procedures and functions, scope and recursion. Introduction to data structures such as stacks, queues, linear lists, trees, sets and files. Analysis of sorting and searching algorithms.
Prereq: COSC111

COSC221 Computer Science Organization I 3 hrs
Introduces students to basic concepts of computer hardware and organization including: computer structure, machine language, instruction execution, loops and interrupt, digital representation of data, computer systems
organization, elementary digital circuits, including memory and arithmetic. Students will write several programs in an assembly language simulator.

Possible COSC111, COSC145, COSC245 or E2219 or permission of the School of Engineering Technology

COSC141 Exploration in Internet-Based Computing 3 HRS
Introduction to user skills and applications in Internet-based computing including Internet history, Web page design and construction, online safety, e-mail management and e-commerce.
Prep: COSC101 or COSC111

COSC245 Computer Programming and Numeric Methods 3 HRS
An introductory programming course focusing on numerical algorithms fundamental to scientific computing work. Discussion of polynomial interpolation, numerical integration, solutions of systems of equations, and error analysis. Using the FORTRAN language, students develop and run programs to solve a variety of problems. Credit will not be given for more than one of COSC145 and COSC245. Does not count toward computer science major or minor.
Prep: or coreq: MATH211

COSC246 Programming in C++ 3 HRS
Introduction to computer programming techniques and integrated development environments using C and C++. Students work in a combination of lectures and supervised computer labs. Emphasis is on problem solving using good design principles and documentation techniques. Does not count towards the computer science minor, major or curriculum.
Prep: COSC111, COSC145, COSC146, MATH105, MATH107, MATH118, MATH119, MATH210, an ACT score of 26, a minimum SAT score of 680 or math placement test in elementary algebra greater than or equal to 73

COSC277/278/279 Special Topics 1/2/3 HRS
A 200-level course in a specific aspect of computer science, to be determined by the field of specialization of the instructor and the interest of the students.

COSC301 Applications in Computer Science 3 HRS
Information systems, simulation, graphics, audio communication, artificial intelligence, instruction and training, and communications. The student will write or use previously written programs in each of the above areas using mainframe computers. These programs will use many languages and programs including LOGO, PASCAL, BASIC, electronic spreadsheet and a database program.
Prep: COSC101, COSC211 and junior standing

COSC306 Methods of Teaching Computer Science in the Secondary Schools 3 HRS
Computer science programs in the high school, information and materials needed to prepare students for the teaching of computer science in these schools. Organization and courses, methods of teaching and learning, security and maintenance of equipment, professional journals and magazines available for future growth, copying software and the legality of software duplication, dealing with diversity of abilities, problem-solving skills, and strategies for debugging programs. This methods class does not count toward the major or minor.
Prep: COSC242, COSC250 and admission to the teacher education program

COSC311 Algorithms and Data Structures 3 HRS
Linear lists, strings, arrays and orthogonal lists. Representation of trees and graphs. Storage systems, structures, storage allocation and collection. Symbol tables, searching and sorting techniques. Formal specification of data structures and data management systems.
Prep: COSC211 and COSC221

COSC314 Computational Discrete Structures 3 HRS
Relations and algebraic structures; counting techniques, graphs, automata and languages and number theoretical algorithms. This course emphasizes discrete mathematical algorithms, their applications to problems in computer science and their implementations.
Prep: COSC211 and MATH205

COSC315 Symbolic Computing 3 HRS
Symbolic computations and graphic representations in a computer algebra system such as Mathematica; design of interactive notebooks, extensive use of electronic communications; applications from various areas of computer science, mathematics and the natural sciences; oral presentation of a project in an electronic classroom is required (two hours) and supervised lab (two hours).
Prep: COSC211 and MATH205, minimum ACT score of 28, minimum SAT score of 670 or math placement test in college level math greater than or equal to 93

COSC321 Computer Organization I 3 HRS
Basic digital circuits, data representation, and transfer, digital arithmetic. Digital storage and accessing, control functions, input-output facilities, systems organization, reliability, simulation techniques. Multiprogramming, multiprocessing and real-time systems.
Prep: COSC211 and COSC221

COSC414 Programming Languages 3 HRS
Formal definition of programming languages: structure of statements; global properties of algorithmic languages; data description; run-time representation of programs; procedural languages such as C or C++ and nonprocedural languages such as Lisp or Prolog. Credit will not be given for both COSC41 and COSC42.
Prep: COSC211 and COSC221

COSC445 Programming Languages for Educators 3 HRS
Formal definition of programming languages: structure of simple statements; global properties of algorithmic languages; structure of data processing; string manipulation, data description and simulation languages; run-time representation of programs and data structures. Special emphasis will be placed on education-oriented languages. Credit will not be given for both COSC41 and COSC42.
Prep: COSC211 and COSC221

COSC377/378/379 Special Topics 1/2/3 HRS
Covers topics not considered in other courses when the immediate needs of the field, interests of the students and expertise of the faculty coincide.
Prep: COSC211, COSC211 and department permission

COSC388 Cooperative Education in Computer Science 3 HRS
Four to six months of full-time employment at an industrial firm specially chosen to provide practical experience in computer science. The program consists of two work experiences (COSC388/389) alternating with full-time attendance at the University. On computer science majors subject to department permission. Graded on a credit/credit basis.
Prep: junior or senior majoring in computer science, any 200 level course in computer science, admission to program by application, department permission

COSC493 Seminar and Project Design for Educators 3 HRS
Major project design and more formalized, structured programming. Each student will work on an original project with which he looks to be a group project. The student will report on both projects (written or oral) and give a formal presentation of the individual project to the University community in the form of a public lecture.
Prep: COSC211, COSC42 and senior standing

COSC494 Switching Theory 3 HRS
Switching algebra, burn sequence and sequential circuit analysis and synthesis. Boolean algebra, sequential circuit state and combinational circuit minimization, hazards, and race, elementary number systems and codes.
Prep: COSC211 and COSC221; open to juniors and seniors only

COSC495 Systems Programming 3 HRS
Basics-processes, systems, components and operating characteristics, implementation techniques for parallel processing and interrupt handling. Overall structure of multiprogramming systems. Addressing techniques, file system design and management. Interprocess communication, design of system modules and interfaces.
Prep: COSC221, COSC311 and COSC41
COSC121 Introduction to Microprocessors 3 HRS
The fundamentals of small-system software development as it applies to microprocessors and minicomputers. Introduction to microprocessors and peripheral hardware; software and development applications. Graduates will have access to both microcomputers and a minicomputer to gain hands-on knowledge of this field.
Prereq: COSC221 or department permission

COSC243 Computer Operating Systems 3 HRS
Prereq: COSC221 and COSC311

COSC145 Web Programming 3 HRS
Students will learn how to set up and configure a web server and associated services. Topics covered will include: HTML, JavaScript, Web security tools, server-side programming, multi-file design, data description languages, database connectivity, scripting languages and distributed applications. Exposure to security and efficiency issues.
Prereq: COSC231, COSC311 and COSC341

COSC349 Computing Network Principles 3 HRS
The basic concepts of computer communication systems with particular emphasis on communication hardware and microcomputer networks. Students will be involved in the development and writing of software components of communications such as terminal emulators and file transfer packages. Basic communication theory and terminology, communication hardware devices, communication protocols and microcomputer networks.
Prereq: COSC221, COSC311, COSC314 recommended

COSC449 Foundations of Automata and Languages 3 HRS

COSC449 Compiler Construction 3 HRS
Prereq: COSC341 and COSC444

COSC466 Programming in Ada 3 HRS
A course in the U.S. Department of Defense language Ada for those familiar with structured programming concepts and data structures. Topics covered will be the syntax and semantics of expressions and statements, packages and procedures, typing, abstract data types, exception handling, concurrency, generics and operator overloading. Procedures and packages will be written and tested using an Ada compiler.
Prereq: COSC311 or IS315

COSC466 Microcomputer Graphics 3 HRS
A course in computer graphics using microcomputers. Display technologies. Raster graphics, displaying graphics primitives such as points, lines, curves and scan-conversion algorithms. Displaying graphics, functions, bar and pie charts, and applications. 2-D graphics including windowing, viewpoint, window-to-viewport transformation, clipping algorithms, scaling, rotation and translation transformations. Interactive graphics 3-D graphics, including scaling, rotation and translation transformations; parallel and perspective projections.
Prereq: COSC311 and MATH122, minimum ACT score of 28, minimum SAT score of 670 or math placement test in elementary algebra greater than or equal to 93

COSC461 Heuristic Programming 3 HRS
Programming techniques for problems with large-state spaces or uncertain knowledge: searches, heuristic evaluation, rule-based inference, approximate reasoning and adaptation using neural nets, genetic algorithms and reinforcement learning.
Prereq: COSC444

COSC471 Database Principles 3 HRS
A technical review of the theory and principles of database design and organization. The concepts and structures necessary to design and implement a database management system. Network, hierarchical and relational database models. Data normalization, data description languages, query languages, data integrity and security.
Prereq: COSC444 and COSC451

COSC471/478/479 Special Topics 1/1.5 HRS
Covers topics not considered in other courses when the immediate needs of the field, interests of the students and expertise of the faculty coincide.
Prereq: senior standing or major in computer science and department permission

COSC481 Software Engineering and Senior Project 3 HRS
This capstone course surveys the fundamentals of software engineering, including requirements analysis, design, disciplined implementation and evaluation. Students will work on a semester-long software project that employs principles learned in other computer science courses.
Prereq: COSC311 and department permission

COSC488 Cooperative Education in Computer Science 3 HRS
Four to six months of full-time employment at an industrial firm especially chosen to provide practical experience in computer science. The program consists of two work experiences (COSC38/488) alternating with full-time attendance at the University. Use on co-op science major subject to department permission. Graded on a credit/no credit basis.
Prereq: COSC388 and department permission

COSC499 Senior Project 1 HRS
Intended for computer science majors in their senior year. This course assesses students' knowledge of the field's core subjects, surveys students to get reactions to and suggestions for the department's academic program, and provides guidance to students as they carry out a computing project and present it in a public forum as a poster presentation or talk. Offered on a credit/no credit basis.
Prereq: COSC311, COSC341, COSC321, COSC444, senior standing or department permission

COSC497/498/499 Independent Study 1/1.5 HRS
A report or project on an approved subject in the field of computer science under the guidance of the staff of the Department of Computer Science.
Prereq: Major in computer science, junior or senior standing and department permission

COLLEGE OF TECHNOLOGY COURSES

COT177/178/179 Special Topics 1/1.5 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

COT177/178/179 Special Topics 1/1.5 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

COT177/178/179 Special Topics 1/1.5 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

COT177/178/179 Special Topics 1/1.5 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

COT197/498/499 Independent Study 1/1.5 HRS
Directed study in areas not provided in other course offerings, or advanced study in areas of special interest to the student.
Prereq: department permission

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Counseling Courses

Coun120 Career Exploration and Decision-Making 3 HRS
Self-exploration (values, interests, goals) as it relates to career and the world of work. Preparation in an experimental format of career exploration and personal decision-making strategies and processes. Investigation of career planning and resources (people and materials).

Coun140 An Introduction to Counseling Concepts and Skills 3 HRS
Introduction to basic concepts of counseling relationships, training in basic counseling skills, experiential learning activities which focus on self-development, interpersonal relationships, and related issues, and initial exposure to counseling theory and process. Open to juniors and seniors or by department permission. Recommended for those planning a career in the helping professions.

Coun477/478/479 Special Topics 1-3 HRS
An exploration and study of topics not covered in other department offerings. Students may elect more than once; provided different topics are studied. Permission by department.

Coun477/478/479 Independent Study 1-3 HRS
Advanced study on an individual basis in areas in which the department does not offer a formal course. Permission by department.

Criminal Justice Courses

CRM120 Criminal Justice 3 HRS
A critical view of the entire spectrum of criminal justice. The police, courts, and corrections studied as related institutions in the process of defining criminals.

CRM211 Criminal Justice 3 HRS

CRM520 Criminal Investigation 3 HRS
Introduction to the science of criminal investigation, including the methodology of crime scene investigation, evidence collection, preservation, and analysis. Other topics include the constitutional, legal, and historical concerns relevant to procedural issues of investigation. Permission/Career CRM400.

CRM152/SCOL132 Cooperation and Conflict in Society 3 HRS
The principles of cooperation and conflict in our competitive-individualistic society, cooperative skills, and forms of mutual aid are examined. Students learn cooperation through doing, as well as reading and writing, including a variety of group projects, exercises and discussion. Permission: SCOL105.

CRM152 Introduction to Corrections 3 HRS
An examination of corrections/punishment in contemporary society, its historical development, structural dependency, relationship to the system of justice, and problems of effectiveness. Permission: CRM300.

CRM153 Community Corrections 3 HRS
An examination of the limitations of incarceration and the potential of community-based alternatives. Permission: CRM300.

CRM154 Criminology 3 HRS
An introduction to and survey of the multi-disciplinary study of crime and society. Issues specifically examined are mass institutions of society, culture, and identity formation. Permission: SCOL105.

CRM155 Violent and Deviant Behavior 3 HRS
An introduction to the scientific study of deviance, society's reaction to deviance, and the social strategies for managing deviance. Permission: SCOL105.

CRM156 Juvenile Delinquency 3 HRS
The nature, incidence, and measurement of juvenile delinquency; theories and causation; juvenile justice philosophies and treatment methods.

CRM157 White Collar Crime 3 HRS
An examination of the definitions, causes, and policies responses that shape crimes by corporations, government agencies, professionals, and others engaged in legitimate occupations.

CRM158 Special Topics 1-3 HRS
A single topic is covered each semester, selected as the interest and/or problems change. Students may elect a special topics course several times, provided different topics are studied, but only twice for credit toward a major or minor in criminology.

CRM387 Cooperative Education in Criminal Justice 3 HRS
Practical experience in agencies or government settings to provide job skills. Offered on a credit/no-credit basis. Permission: department permission and junior standing.

CRM412 Law and Society 3 HRS
Law as a social and cultural product: the interrelationships between law and social institutions. Not open to those with credit in SCOL12. Permission: SCOL105.

CRM431 Police in Society 3 HRS
The social and historical origins of the police: police culture, role and career; police in the legal system: police discretion; ethical development of police, police and the community: police organizations and community control. Permission: CRM430.

CRM432 Police Organization 3 HRS
An examination of the major theories of police organization and how these theories can enhance our understanding of policing and help solve problems facing the police in everyday life. Permission: CRM430.

CRM447 Senior Seminar in Criminology 3 HRS
Summations and integrations of the various bodies of criminological knowledge and their applications to policies of crime prevention and control.

CRM460 Criminal Law II 3 HRS
The political, social, and historical evolution of criminal procedure with an emphasis on its application with regard to law enforcement and the judiciary.

CRM477/478/479 Special Topics 1-3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once; provided different topics are studied.

CRM487 Cooperative Education in Criminal Justice 3 HRS
Practical experience in agencies or government settings to provide job skills. Offered on a credit/no-credit basis. Permission: department permission.

CRM488/489 Field Internship in Criminal Justice 3 HRS EACH
A minimum of ten hours per week in a governmental or private agency dealing with the crime problem. The agency and the field instructor provide supervised learning experiences. Permission: junior standing and department permission; second semester junior may be admitted by department permission.

CRM490/491/492 Independent Study 1-3 HRS
Independent study, under the supervision of a department member, in areas to which the department does not offer a course. Permission: department permission.

Communication and Theater Arts Courses

CTA105 Television Laboratory 1 HRS
Students who participate in co-instructional activities may, with the approval of the professor in charge and the department head, receive credit.
one hour of credit in a single activity during one semester. Students may earn up to four hours credit in one activity or in several. Admission to the activity does not ensure credit.
Prereq: department permission.

CTAA66 Forensics 1 HR
Students who participate in co-instructional activities may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in one activity or in several. Admission to the activity does not ensure credit.
Prereq: department permission.

CTAA67 Theatre Practice 1 HR
Students participating in specific positions with major responsibility in productions of the EMU Theatre, the department's instructional activity program in theatre arts, by prior permission of the department, may receive one hour of credit during a single semester. The specified positions and prerequisites are: Head of a major technical crew for a faculty-directed production.

CTAA66 Forensics 1 HR
Students who participate in co-instructional activities may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in such activities and the credit may be earned in one activity or in several activities. Admission to the activity does not ensure credit.

CTAA67 Theatre Practice 1 HR
Students participating in specific positions with major responsibility in productions of the EMU Theatre, the department's instructional activity program in theatre arts, by prior permission of the department, may receive one hour of credit during a single semester. The specified positions and prerequisites are: Assistant directing and/or stage managing a faculty-directed production.

CTAA66 Interpretation 1 HR
Students who participate in co-instructional activities may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in such activities and the credit may be earned in one activity or in several activities. Admission to the activity does not ensure credit. (Available with a focus on oral interpretation of literature for the young.)
Prereq: department permission.

CTAA66 Radio Station WQBR 1 HR
Students who participate in co-instructional programs may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in such activities and the credits may be earned in one activity or in several activities. Admission to the activity does not ensure credit.
Prereq: department permission.

CTAA677/678/679 Special Topics 1/2/1 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

CTAA66 Forensics 1 HR
Students who participate in co-instructional activities may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in one activity or in several. Admission to the activity does not ensure credit.
Prereq: department permission.

CTAA67 Theatre Practice 1 HR
Students participating in specific positions with major responsibility in productions of the EMU Theatre, the department's instructional activity program in theatre arts, by prior permission of the department, may receive one hour of credit during a single semester. The specified positions and prerequisites are: Directing an Experimental Series production.

CTAA66 Interpretation 1 HR
Students who participate in co-instructional activities may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in such activities and the credit may be earned in one activity or in several activities. Admission to the activity does not ensure credit. (Available with a focus on oral interpretation of literature for the young.)
Prereq: department permission.

CTAA66 Radio Station WQBR 1 HR
Students who participate in co-instructional programs may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in such activities, and the credits may be earned in one activity or in several activities. Admission to the activity does not ensure credit.
Prereq: department permission, or department permission.

CTAA66 Television Laboratory 1 HR
Students who participate in co-instructional activities may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in one activity or in several. Admission to the activity does not ensure credit.
Prereq: department permission.

CTAA66 Television Laboratory 1 HR
Students who participate in co-instructional activities may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in one activity or in several. Admission to the activity does not ensure credit.
Prereq: department permission.

CTAA66 Television Laboratory 1 HR
Students who participate in co-instructional activities may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in one activity or in several. Admission to the activity does not ensure credit.
Prereq: department permission.

CTAA66 Television Laboratory 1 HR
Students who participate in co-instructional activities may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in one activity or in several. Admission to the activity does not ensure credit.
Prereq: department permission.

CTAA67 Theatre Practice 1 HR
Students participating in specific positions with major responsibility in productions of the EMU Theatre, the department's instructional activity program in theatre arts, by prior permission of the department, may receive one hour of credit during a single semester. The specified positions and prerequisites are: Directing an Experimental Series production.
program in theatre arts, by prior permission of the department, may receive one hour of credit during a single semester. The specified positions and prerequisites are additional experience in directing an experimental series production.

CTAA488 INTERPRETATION 1 HR
Students who participate in co-instructional activities may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in such activities and the credit may be earned in one activity or in several activities. Admission to the activity does not ensure credit. (Available with a focus on oral interpretation of literature for the young.)
Prep: CTAS210 or department permission.

CTAA449 RADIO STATION WQBR 1 HR
Students who participate in co-instructional programs may, with the approval of the professor in charge and the department head, receive one hour of credit in a single activity during one semester. Students may earn up to four hours credit in such activities; and the credits may be earned in one activity or in several activities. Admission to the activity does not ensure credit. (Prep: CTAS130 and CTAS131; or department permission)

CTAA477/498/499 Special Topics 1/1/3 HRS
An exploration and study of topics not covered in other department offerings. Students may elect more than once, provided different topics are studied. Prep: department permission

CTAA497/498/499 INDEPENDENT STUDY 1/1/3
Advanced study on an individual basis in areas in which the department does not offer a formal course. Normally restricted to proficient students in the senior year under the general conditions prescribed for honors courses. Prep: department permission.

Communication Courses

CTAC177/178/179 Special Topics 1/1/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

CTAC223 Public Speaking 3 HRS
The characteristics of various types of speeches and speech situations and practice in the preparation and delivery of speeches for various occasions. Prep: CTAS121 or CTAS124

CTAC231 Listening Behavior 3 HRS
The study of the behavior, processes and theory of human listening practice in improving listening skills. Prep: CTAS121 or CTAS124

CTAC236 Nonverbal Communication 3 HRS
An examination of nonverbal and situational behavior, relationships, objects and events surrounding speech communication acts.
Prep: CTAS121 or CTAS124

CTAC237 Interpersonal Communication 3 HRS
Study and practice of the basic elements of interpersonal communication with emphasis on perception, meaning, attention, listening, feedback and communication barriers. Particular attention is given to improving interpersonal communication skills. This course may not substitute as the fundamentals of speech requirements in general education.
Prep: CTAS121 or CTAS124

CTAC277/278/279 Special Topics 1/1/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

CTAC367 The Teaching of Speech 5 HRS
Emphasizes the analysis and construction of courses of study, evaluation of textbooks and teaching materials, methods of directing co-curricular speech activities, and demonstrations of teaching methods. Required of students majoring in communication and those who teach in junior or senior high school teaching curriculum. Does not count toward the major or minor. Not open to students on academic probation.
Prep: CTAS121 or CTAS124 and CURR305 and admission to College of Education

CTAC350 Persuasion 5 HRS
The study of the basic elements inherent in persuasion; the analysis of representative persuasive speeches; practice in securing the acceptance of ideas through psychological appeals as well as logical reasoning.
Prep: CTAS121 or CTAS124

CTAC352 Communication in Negotiation 3 HRS
The course emphasizes the principles and practice of negotiation strategies and techniques in interpersonal and group interactions, grievance handling and collective bargaining.
Prep: CTAS121 or CTAS124 and department permission

CTAC354 Organizational Communication 3 HRS
The course examines the relationship between organizational structures and communication patterns with an emphasis on individual communication strategies appropriate in different organizational settings.
Prep: CTAS121 or CTAS124

CTAC356 Argumentation and Debate 5 HRS
Emphasizes the principles of logical reasoning and oral presentation of reasoned discourse in group situations. Exercise in debate and in general argumentative speaking.
Prep: CTAS121 or CTAS124

CTAC337 Interviewing as Communication 3 HRS
The principles and practices of the interview as they relate to communication elements; the interview process, structure, functions and techniques as explored from both the perspective of the interviewer and the interviewee.
Prep: CTAS121 or CTAS124 or department permission

CTAC339 Small Group Communication 3 HRS
The course provides students with an understanding of theory and research in small group interaction. Practical dimensions of group communication are emphasized through group projects and exercises.
Prep: CTAS121 or CTAS124

CTAC360 Gender Communication 3 HRS
Exploration of the multifaceted ways that communication is conditioned and the influence of each. Critical analysis of gender communications and the "differences" of women and men in everyday communication.
Prep: CTAS121 or CTAS124

CTAC370 Nonprofit Organizational Communication 3 HRS
A critical examination of the fundamental differences between communication in a for-profit organization and communication in a nonprofit organization. Students will learn and apply communication skills necessary to effectively and efficiently communicate in a nonprofit organization.
Prep: CTAS121 or CTAS124

CTAC372 Assertive Communication 3 HRS
Individualized approach to study and training in effective assertive communication for social, conversational and stress-oriented situations.
Prep: CTAS121 or CTAS124 or department permission

CTAC373 Family Communication 3 HRS
Descriptive and theoretical study of communication in families with emphasis on the influence of family communication on individuals.
Prep: CTAS121 or CTAS124 and CTAC227

CTAC374 Intercultural Communication 3 HRS
Analysis of processes and problems of communication as affected by national cultures; the effects of differences in verbal and nonverbal communication, values, perception and thought.
Prep: CTAS121 or CTAS124 or department permission

CTAC375 Interracial/Interethnic Communication 3 HRS
The analysis of how ethnocentric attitudes toward perceived cultural/ethnic minority group speakers/listeners influence interpersonal communication transactions.
Prep: CTAS121 or CTAS124
and development. Communication and learning are continuous processes that occur throughout the development of a student. Effective communication and learning can be facilitated by creating an environment that supports open dialogue and active participation. This can be achieved through the use of technology, such as online platforms and virtual classrooms, which allow for real-time interaction and feedback. Additionally, it is important to consider the cultural and linguistic diversity of the student body, and to facilitate opportunities for cross-cultural understanding and communication.

In order to support effective communication and learning, it is important to provide appropriate training and resources for educators. This includes training in the use of technology, as well as strategies for facilitating effective communication and learning. Educators should also be encouraged to reflect on their own communication and learning practices, and to seek opportunities for professional development. By creating a supportive and inclusive environment, educators can help to ensure that all students have the opportunity to develop their communication and learning skills.

In conclusion, communication and learning are critical components of student development. By creating an environment that supports open dialogue and active participation, and by providing appropriate training and resources for educators, we can help to facilitate effective communication and learning. This is essential for the success of our students, and for the future of our society.
CITA 411 Advanced Problems in Interpretation 3 HRS
The presentation of programs of some length and difficulty in prose, poetry, and drama. Emphasis on programming, styles of interpretation, total reading and experimental work. A public program will be presented by the class.
Prereq: six hours of oral interpretation or department permission.

CITA 419 Oral Interpretation of Poetry 3 HRS
The application of the principles of oral interpretation to the reading of poetry, with emphasis on modern and contemporary poetry.
Prereq: CITA 410.

CITA 425 Performing Oral Narrative 3 HRS
This course explores the nature of oral narrative, both personal and historical and the development of skills necessary for their collection. The focus is on primary sources, including interviewing, transcribing, scripting, and staging for performance, as well as ethical considerations.
Prereq: Three credit hours in CITA (interpretation/performing studio) or department permission.

CITA 477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

CITA 487/488/489 Internship in Interpretation 1/2/3 HRS
One semester of practical, on-the-job work experience and training (four hours per week minimum) at select on-campus or off-campus facilities.
Prereq: 20 credit hours of concentration courses and department permission.

CITA 497/498/499 Independent Study 1/2/3 HRS
Advanced study on individual basis in areas in which the department does not offer a formal course. Normally restricted to proficient students in the senior year under the general conditions prescribed for honors courses.
Prereq: department permission.

Theatre and Educational Drama Courses

CITA 505 Introduction to the Performing Arts 3 HRS
A survey of the arts of dance, theatre and music, developing an understanding and appreciation of representative works in the three fields. The place of these arts in contemporary society and their contribution to a richer life receive special emphasis. Attendance required at specific on-campus performances. Not open to those with credit in MUSC 106/107.

CITA 530 Introduction to Theatre 3 HRS
A lecture-demonstration course with the purpose of fostering appreciation of theatre through an understanding of its production components, its forms and styles, and its historical development. Attendance required at select EMU theatre productions. Required of theatre arts majors and minors.

CITA 531 African American Theatre: An Introduction 3 HRS
An introductory survey of the roots, purposes and contemporary manifestations of theatre and drama reflecting the African American experience. Emphasis will be placed on the reading, analysis and discussion of representative African American plays.

CITA 532 Technical Theatre: Scenery and Lighting 2 HRS
The comprehensive study and application of design fundamentals and basic technology for theatrical scenery and lighting.

CITA 533 Technical Theatre: Costume and Makeup 2 HRS
The comprehensive study and application of design fundamentals and basic technology for theatrical costuming and makeup.

CITA 535 Producing Theatre 2 HRS
A comprehensive introduction to theatrical production organization business management, direction and technical production. Laboratory hours by appointment.
Prereq: CITA 530 strongly recommended for majors and minors.

CITA 537 Beginning Acting 3 HRS
This course is designed for non-theatre majors desiring basic knowledge and practice of acting skills related to the stage. Non-majors will gain experience in self-awareness, relationships, character analysis, improvisation, scene study and action exercises. Attention will be given to overcoming stage fright. For non-theatre majors only.

CITA 581 Fundamentals of Acting 3 HRS
A study of the fundamental theories and techniques of acting. Major emphasis on theatre acting, but considerations given to radio and television acting. Laboratory hours by arrangement.

CITA 577/578/579 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

CITA 522 Drama and Play in Human Experience 3 HRS
A study of dramatic experience as intrinsic in human development. An introduction to spontaneous dramatic games and exercises as a way of sharpening imagination, deepening interpersonal relations, and strengthening individual identity. Integration of such experience in learning and growth is emphasized.

CITA 551 African American Theatre: Creative Problems 3 HRS
A practical consideration of those aspects of the theatre production in particular to African American theatre. Emphasis will be placed on the presentation of scenes from African American theatre.

CITA 552 Stage Craft 3 HRS
A study and application of the technical elements of stage production with emphasis on stage mechanics, construction and scene painting. Laboratory hours will be arranged in order to ensure adequate practical experience in the scenic arts and crafts.
Prereq: CITA 532; CITA 535 strongly recommended for department majors and minors.

CITA 554 Stage Makeup 1 HRS
The theory and techniques of theatrical makeup. Laboratory hours to be arranged.

CITA 558 Movement for Actors 3 HRS
This is a performance-oriented survey of techniques exploring style, history and theory of movement for actors. The class will include physical preparation, preparation of production materials, scripting movement design and actual performance.

CITA 577/578/579 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

CITA 572 Theatre for the Young 3 HRS
An introductory study of the development, philosophy and techniques of theatre for the young.

CITA 573 Improvisation and Role-Play 3 HRS
Exploration of spontaneous dramatic play through intense exercise and dramatic games meant to generate greater individual freedom and self-discipline, as well as to expand resources and techniques for teaching and directing.

CITA 574 Oral Interpretation of Literature for the Young 3 HRS
Selection and evaluation of literature for oral interpretation with and for young people. Focus is on the use of narrative prose and folklore.

CITA 562 Drama/Theatre for Persons with Disabilities 2 HRS
Study of principles, theories and practices of developmental drama/theatre as related to physically challenged persons. Application to educational, recreational and institutional settings stressed.

CITA 575 Plays for the Young 3 HRS
A study of dramatic literature for the young from developmental and artistic viewpoints in the total educational experience of children and adolescents.
CTAR129 Performing Theatre for the Young 3 HRS
Students will gain practical experience in play development and performance for young audiences. A theatre production designed for touring will be performed at area schools and other community sites.

CTAR131 Scene Design 3 HRS
The history of design in terms of stage scenery; an investigation of current trends, techniques and media of scene design and the practical execution of models and sketches by the student. Prereq: CTAR252, CTAR155 or department permission.

CTAR133 Play Direction 3 HRS
An intensive study of the process of directing plays. Whenever possible, students in the course will direct a one-act play for public presentation. Laboratory hours by arrangement. Prereq: CTAR155, CTA167 or department permission.

CTAR138 Characterization 3 HRS
The creation of character and characterization by the actor. Analysis, development and performance of roles studied in depth. Prereq: CTAR135 or CTAR158.

CTAR136 Dramatic Composition 3 HRS
An examination of the elements of dramatic structure through the analysis and composition of works of varying scope. Emphasis on actual plays for the stage; the special problems of drama for children and for the various broadcast media also considered. Prereq: department permission.

CTAR136 Dramatic Writing 2 HRS
Intensive concentration on the writing of a significant example of adult or children's drama for the stage or the broadcast media. Prereq: department permission.

CTAR137 Stage Lighting 2 HRS
Stage lighting; historical development, basic electrical theory, switchboards and lighting instruments, color theory, principles and practices in stage lighting. Laboratory hours to be arranged. Prereq: CTAR252, CTAR155 or department permission.

CTAR138 Stage Costume: History and Theory 3 HRS
A survey of the principles and practices of stage costume from antiquity to the present. Prereq: department permission.

CTAR139 Stage Costume: Design and Construction 3 HRS
The fundamentals of designing theatrical costumes and a study of specific construction problems found in the making of period costumes. Prereq: department permission.

CTAR140 Law, Public Policy, and the Arts 3 HRS
Examination of the impact of public policy and law on arts organizations and the individual artist. Emphasis on legislation and contract law. Prereq: 12 hours in arts management or department permission.

CTAR142 Arts Administration 3 HRS
A study of managerial practices of arts organizations and agencies. Emphasis on facility planning, personnel, income sources, promotion, budget development and management.

CTAR143 Marketing the Arts 3 HRS
Relates traditional marketing practices to arts administration and provides experience in applying marketing skills to the arts. The study of marketing in the arts and information relating to past market analysis, research and preparation of a specific market plan for an arts organization; presentation of market plan.

CTAR144 Audition 2 HRS
Intensive study in the preparation of audition material for a wide range of stylistic demands that exist within the professional theatre. Prereq: CTAR157, CTAR158, CTAR135, CTAR461 or CTAR464.

CTAR145 Acting/Directing/Production Intensive I 3 HRS
This course is the collaborative study and presentation of post-1950 theatrical styles and genres for actor, director and designer. Students work in production teams to develop and present multiple solutions. Prereq: CTAR155 and 12 hours in theatre or department permission.

CTAR146 Acting/Directing/Production Intensive II 2 HRS
An analysis and application of the performance skills needed by the actor/singer in musical theatre. Prereq: nine hours in theatre arts or department permission.

CTAR147 Directors on Directing 2 HRS
Study of select, noted stage directors past and present. Prereq: CTAR155 and nine hours in theatre arts or department permission.

CTAR148 The American Musical Stage 3 HRS
Character, production, style in the American musical including concept musicals, operetta, golden age, rock, and musical revue. Historical survey and production workshop format. Prereq: junior standing or above.

CTAR149 Style for the Actor 3 HRS
This course will address the challenge of matching the actor's personal techniques with the wide range of stylistic demands that exist in the theatrical repertory. The student will discover that acting means translating the text into a series of actions and that physical actions take on a particular shape or style in accordance with the given circumstances of the text. Prereq: CTAR158 or CTAR157; open to senior and graduate students with permission.

CTAR150 Special Topics 1-3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

CTAR151 Internship in Arts Management 1-3 HRS
One semester of practical, on-the-job work experience and training (four hours per week minimum) at selected campus or off-campus facilities. Prereq: 20 credit hours of concentration courses and department permission.

CTAR152 Senior Seminar 2 HRS
A capstone course for theatre majors. A comprehensive and unified study of all areas of theatre. Combining knowledge and skills with preparation for professional careers and/or graduate study.
Fundamentals of Speech Courses

CTAS12: Fundamentals of Speech 2 hrs
Theory and practice in the principles of effective speech composition and presentation. Not open to students with credit in CTAS12.

CTAS14: Fundamentals of Speech 3 hrs
More intensive theory and practice in the principles of effective speech composition. Not open to students with credit in CTAS12.

CTAS17/178/179 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Not open to students with credit in CTAS12.

CTAS17/178/179 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Not open to students with credit in CTAS12.

CTAS37/178/179 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

CTAS17/178/179 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

CTAS47/178/179 Independent Study 1/2/3 hrs
Advanced study on individual basis in areas in which the department does not offer a formal course. Not open to students in the senior year under the general conditions prescribed for honors courses.

Telecommunications and Film Courses

CTAS15: Introduction to Telecommunications and Film 3 hrs
An introduction to mass media and telecommunications systems in the United States. Emphasis on development of telecommunications industries including radio-television programming, new technology, regulation and financial support.

CTAS31: Introduction to Audio Production and Direction 3 hrs
For majors and minors only. Class meets for three hours per week, one hour lecture and two hours laboratory. The students will work with the audio facilities in Quirk Building including audio facilities in WQCR, Quirk TV studio, and the audio production booths. The course will be open to all telecommunications majors and minors. As an introductory course in audio production, CTAS131 is essential to all other advanced production courses, including video and film. As such, CTAS131 must be taken before CTAS132 or other courses in the production curriculum.

CTAS32: Introduction to Video Production and Direction 3 hrs
For majors and minors only. Class meets three times per week. One hour will be devoted to lecture and discussion. The remaining hours will be spent in the television studio working with production equipment under supervised conditions. This course is required for all majors and minors in Telecommunications and Film. CTAS132 is designed as an introductory course in video production.

CTAS41: Introduction to Radio-TV-Film Production 3 hrs
For non-majors and non-minors. A study and application of the technical elements of radio and television with emphasis on the operation of studio equipment. Laboratory hours will be arranged in order to ensure adequate practical experience in the operation of studio production facilities.

CTAS45: Introduction to Film Appreciation 3 hrs
An introduction to understanding the moving image as a medium of artistic expression and persuasion. The course will consider the principal components of film/video language including photography, writing, performance, editing, mise-en-scéne, and major classification systems such as genres and auteurism. It will include an historical overview of the development of film/video industries, major theoretical approaches, and an analysis of the moving image's effects on audiences.

CTAS51: Audio Recording Techniques 3 hrs
An introduction to the practical problems of recording music ensembles from soloists to symphony orchestras. A professional audio engineer will supervise on-site recording sessions and all postproduction work. Two regular lecture hours and two hours of laboratory per week. Fieldwork projects arranged. Laboratory fee.

CTAS53: History and Criticism of Radio and Television 3 hrs
An historical and critical survey of radio and television entertainment and public affairs programming with an emphasis on how the networks' offers were received by a select number of social and cultural critics of the two media.

CTAS54: Radio-Television Film Announcing 3 hrs
A study of the various types of radio and television nondramatic speaking such as news, commercials, interviews and documentaries. Practice and evaluation of announcing styles and styles.

CTAS56: A Survey of American Cinema, 1894-1986 3 hrs
This course is a chronological survey of the development of American cinema with an emphasis on the roles played by technological innovations, corporate development, government intervention and the emergence of a dominant mode of film production practice. Key films by important directors from the entire period will be screened and discussed.

CTAS57: History of American Cinema, 1925-1986 3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may select more than once, provided different topics are studied.

CTAS315: Fundamentals of Radio Production and Direction 3 hrs
The fundamentals of preparation, production, direction and evaluation of nondramatic radio programs.

CTAS317: Fundamentals of Television Production and Direction 3 hrs
The fundamentals of preparation, production, direction and evaluation of nondramatic television programs. Emphasis is placed on basic techniques of studio and remote productions.

CTAS331: Fundamentals of Electronic Moviemaking 3 hrs
An introduction to the principles of digital video production. Course offers theory and practice of digital video continuity, master sequencing, narrative and non-narrative editing. Two short video projects will be required.

CTAS334: Radio-Television News 3 hrs
A study of the principles, techniques, and forms of broadcast journalism. Emphasis is placed on broadcast news writing, editing, and delivery.
CTAT335 Studies in Film 3 HRS
Students will examine non-Hollywood films including European, Asian, and Third World theatrical film or documentary, animated and experimental films or film music. The topics will alternate over terms to allow for an in-depth approach. May be taken twice provided different topics are studied.
Prereq: CTAT145

CTAT336 Studies in Telecommunications 3 HRS
A comparative study of broadcasting services in Europe, Soviet and Third World nations, also international shortwave, satellite interconnections, CATV, limited application video systems and new technologies. The topics will alternate over terms to allow for an in-depth approach. May be taken twice provided different topics are studied.
Prereq: CTAT130 or department permission

CTAT341 Radio-Television-Film Dramatic Performance 3 HRS
A study of types and styles of dramatic speaking for radio, television and film. Practice in the basic techniques of acting for the three media.
Prereq: CTAT241, CTAT158 or department permission

CTAT344 Continuity Writing for Radio-Television-Film 3 HRS
A study of the forms of non-dramatic writing for radio, television and film, including commercial, public service announcements, music continuity and narrations.
Prereq: department permission

CTAT345 American Film Genres 3 HRS
This course examines key American film genres, both past and present, identifies their unique narrative and stylistic properties and shows their important economic, social, psychological and symbolic functions. Genres to be considered include westerns, musicals, horror films, science fiction films, the "woman's" film, detective films, African-American films and sequels.
Prereq: CTAT145 or department permission

CTAT377/378/379 Special Topics 1/1.5 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

Cooperative Education in Radio-TV-Film 1.5 HRS
One semester of supervised work in concentration area. An evaluation is required at the end of the employment period.
Prereq: nine hours in concentration. approved by Cooperative Education Office and department permission

CTAT431 Advanced Radio Production and Direction 3 HRS
A continuation of CTAT331. Advanced theory and practical experience in production of longer, more complex dramatic and nondramatic material for radio.
Prereq: CTAT130 and CTAT132

CTAT432 Advanced Television Production and Direction 3 HRS
A continuation of CTAT332. Principles, practices and techniques of directing and producing dramatic material for television. Major television formats discussed and analyzed. Practical experience in depth provided for each student. Laboratory fee.
Prereq: CTAT332 or department permission

CTAT433 Advanced Electronic Moviemaking 3 HRS
Course will guide students through intensive use of video editing software. The theory and practice of narrative and non-narrative editing techniques will be reinforced through a series of short digital video projects.
Prereq: CTAT333 or department permission

CTAT445 Film Theory and Criticism 3 HRS
An intensive study of the key theories of film structure, historical development and sociological function. Emphasis upon theories of editing, author criticism, genres and textual analysis.
Prereq: CTAT143

CTAT446 Contemporary Problems in Telecommunications 3 HRS
A study of contemporary issues and problems affecting the telecommunications industries, including sociological and psychological influences, programming, new technology, regulation and research.
Prereq: CTAT130

CTAT447 Radio-Television Station Management 3 HRS
Study of station management in the areas of advertising, programming, personnel, applied research and public relations.
Prereq: CTAT130

CTAT477/478/479 Special Topics 1/1.5 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

CTAT481/488/489 Internship in Radio-TV-Film 1/1.5 HRS
One semester of practical, on-the-job work experience and training (ten hours per week minimum) at select on-campus or off-campus facilities.
Prereq: 20 hours of concentration courses and department permission

CTAT497/498/499 Independent Study 1/1.5 HRS
Advanced study on individual basis in areas in which the department does not offer a formal course. Normally restricted to proficient students in the senior year under the general conditions prescribed for honors courses.
Prereq: department permission

Curriculum Courses
CURR377/478/479 Special Topics 1/1.5 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

CURR414 The Developing Child in ECE 3 HRS
Developmental patterns of children in various settings. Physical, mental, social and emotional components of growth through the first five stages of the family life cycle.
Prereq: PSY101 and sophomore standing

CURR415 The Developing Professional in ECE 2 HRS
An orientation to the profession of early childhood education. Students will learn communication skills, how to interact with children and adults, and how to build relationships. Students will begin to apply effective teaching practices and to use a reflective-inquiry approach to understand child development theories as the bases for early childhood programs.
Prereq: PSY101 and sophomore standing

CURR477/478/479 Special Topics 1/1.5 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

CURR494 Curricular and Methods: Elementary 3 HRS
The concept of curriculum and its relationship to differing philosophies of education and styles of teaching. The instructional process and multiple teaching strategies examined and applied through lesson planning and demonstration. Social studies content used in lesson planning by students seeking elementary certification. Classroom management principles and techniques considered in the light of a curriculum and instruction perspective. Includes a planned practice experience in public schools in addition to the regularly scheduled hour.
Prereq: EDPS322 or EDPS325

CURR505 Curriculum and Methods: Secondary 3 HRS
The concept of curriculum and its relationship to differing philosophies of education and styles of teaching. The instructional process and multiple teaching strategies examined and applied through lesson planning and demonstration. Classroom management principles and techniques considered in the light of a curriculum and instruction perspective. Includes a planned practice experience in public schools in addi-
DANCE COURSES

DANC101 BALLET I 2 HRS
Introduces the theory and technique of classical ballet at the beginning level for the non-major student. Develops and maintains classical ballet technique at the beginning level and fosters critical understanding of ballet as an historical and contemporary art form.

DANC102 MODERN DANCE I 2 HRS
Introduces the theory and technique of modern dance at the beginning level for the non-major student. Designed to give students introductory experiences in modern dance as a contemporary performing art and fosters the critical understanding of modern dance as an historical and contemporary art form.

DANC103 TAP I 2 HRS
Introduces the theory and technique of tap at the beginning level for the non-major student. Will develop and maintain tap technique and foster critical understanding of tap as an historical and contemporary art form.

DANC104 HIP-HOP DANCE 2 HRS
An introduction to the theory and technique of hip hop dances at the beginning level for the non-major student. Develops hip-hop technique and fosters understanding of hip-hop as a contemporary art form. Taught as a lecture/laboratory course.

DANC105 AFRICAN DANCE 2 HRS
The theory and technique of beginning African dance for the non-major dance student. Introduces students to African culture through traditional dance and music. Taught as a lecture/laboratory course.

DANC106 INTRODUCTION TO THE PERFORMING ARTS 3 HRS
A survey of the arts of dance, theatre and music; developing an understanding and appreciation of representative works in the three fields. The place of these arts in contemporary society and their contribution to a richer life. Attendance required at specific on-campus performances.

DANC107 RHYTHMIC ANALYSIS AND DANCE ACCOMPANIMENT 3 HRS
The study of rhythm, sound, and music literature as related to the teaching and performing of dance. Assigned listening experiences and designated explorations of pertinent elements of music.

DANC108 CLASSICAL BALLET TECHNIQUE I FOR DANCE MAJORS/MINORS 3 HRS
A lecture/laboratory class that introduces the theory and technique of beginning/intermediate classical ballet and fosters critical understanding of ballet as an art form at the dance major/minor level.

DANC109 CLASSICAL BALLET TECHNIQUE II FOR DANCE MAJORS/MINORS 3 HRS
A lecture/laboratory class that introduces the theory and technique of intermediate classical ballet and fosters critical understanding of ballet as an art form at the dance major/minor level.

DANC110 MODERN DANCE I FOR DANCE MAJORS/MINORS 3 HRS
A lecture/laboratory class that introduces the theory and technique of modern dance and fosters critical understanding of modern dance as an art form at the dance major/minor level.

DANC111 MODERN DANCE II FOR DANCE MAJORS/MINORS 3 HRS
A lecture/laboratory class that develops the theory and technique of modern dance and fosters critical understanding of modern dance as an art form at the dance major/minor level.

DANC112 BALLET TECHNIQUE III 3 HRS
A continuation of the theory and technique of beginning/intermediate ballet technique and theory for the non-major student. Pre: DANC101 and/or instructor permission.

DANC113 BALLET TECHNIQUE IV 3 HRS
A continuation of the theory and technique of advanced and intermediate ballet. Pre: DANC101 and/or instructor permission.

DANC114 MODERN DANCE TECHNIQUE III 3 HRS
A continuation of DANC111. Pre: DANC111.

DANC115 MODERN DANCE TECHNIQUE IV 3 HRS

DANC116 SERVICE TEACHING 1 HRS
Service Teaching is designed to provide practical experience for students to assist in dance technique classes in the Dance Program. This experience should be under the direction of a qualified instructor and must be approved prior to registering.

DANC117 ELEMENTS OF DANCE COMPOSITION 3 HRS
An introduction to the fundamentals of choreography, including the use of improvisation and the development of compositions. Exploration and manipulation of the elements of dance. Pre: DANC110.
DANC 355 Dance Production 3 HRS
A study of the fundamentals of dance production including publicity, planning and organization, set design and construction, stage lighting, sound effects, recording, costumes and stage makeup. Laboratory projects coordinated with dance productions.

DANC 277/378/379 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

DANC 314 Service Teaching 1 HR
Service Teaching is designed to provide practical experience for students to assist in dance technique classes in the Dance Program. This experience should be under the direction of a qualified instructor and must be approved prior to registering.

DANC 315 Service Teaching 1 HR
Service Teaching is designed to provide practical experience for students to assist in dance technique classes in the Dance Program. This experience should be under the direction of a qualified instructor and must be approved prior to registering.

DANC 350 History of Dance 3 HRS
This course is designed to provide students with an overview of dance history, through the critical examination of selected dances. Intended for Dance Majors. Minors and any EMU student, the course includes lectures, discussions, collaborative interaction, and the learning of dances, through a variety of resources including teacher instruction, videos, music and the library.

DANC 354 Methods and Materials in Teaching of Dance 3 HRS
A study of the methods and the use of materials in the teaching of dance idioms K-12. Modes and models that facilitate learning, lesson planning and vertical progression. Experiences in teaching and field observations.

DANC 377/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

DANC 400 Advanced Dance Composition 4 HRS
An extension of the principles explored in DANC 245 with emphasis on structural development and experiences in the use of thematic materials, selected dance idioms, multimedia resources, and group choreography. A choreographic work will be required of students.
Prereq: DANC 107 and DANC 211

DANC 445 Seminar in Dance 2 HRS
Current literature and dance research, trends in dance education and developments in contempo-  

DANC 446 Creative Dance for Children 2 HRS
Goals, concepts, materials and experiences to teach children's creative dance.

DANC 477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

DANC 477/478/499 Directed Study 1/2/3 HRS
An opportunity for directed study in areas not provided in other course offerings, or greater depth of study in areas in which the student has a continuing interest. Students will be assigned to select faculty members for direction, consultation and evaluation of the completed study or project. Open only to department majors and minors who have attained junior standing, with a grade point average of 3.0 or above, and who have completed the appropriate background courses.
Prereq: department permission.

Decision Science Courses

DSC 177/178/179 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

DSC 496 Business Statistics I 3 HRS
Concepts of statistics and applications to business decisions. Elements of probability, random samples, descriptive statistics, sampling distributions, point and interval estimation, hypothesis testing, chi-square analysis, and regression and correlation analysis.
Prereq: IS 215 and MATH 118 or MATH 120

DSC 477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

DSC 477/478/499 Directed Study 1/2/3 HRS
Direct study of a problem or group of problems in decision science.
Prereq: department permission.

Dietetics Courses

DTC 301 Fundamentals of Personal Nutrition 3 HRS
How much do you know about nutrition and its impact on health, disease and lifestyle? This course will help you develop skills to critically evaluate the role of nutrition in a healthy lifestyle by providing an overview of nutrients, their functions, relationship to health and disease and explain how culture and society influence one's nutritional status.

275
DTC108 CAREERS IN NUTRITION AND DIETETICS 2 HRS
Orientation to Dietetics profession by exploring its roles in the health care system, examining the different facets and specialties of the profession and investigating future trends.
Course previously listed as DTC301; therefore students could not earn credit for both DTC108 and DTC301.

DTC155 FUNDAMENTALS OF HEALTHY LIFESTYLES 2 HRS
Current nutrition strategies to promote fitness and a healthy lifestyle.

DTC177/178/179 SPECIAL TOPICS 1/2/3 HRS
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: department permission

DTC201 NUTRITION FOR HEALTH PROFESSIONALS 3 HRS
Study of the functions, digestion, absorption and metabolism of nutrients in health and wellness. Application of principles of medical nutrition therapy in the provision of care to clients in acute/long-term and ambulatory care settings.
Prereq: CHEM121/122

DTC204 Sports Nutrition 3 HRS
Study of sources, functions, digestion, absorption and metabolism of nutrients. Emphasis on diet in athletic training and exercise science. Open only to sports medicine majors.
Prereq: CHEM120

DTC251 Experimental Foods 4 HRS
Nature and reactions of food explained in terms of chemical composition, microbial flora and manipulative practices.
Prereq: CHEM121/122 and MICRO22

DTC257/258/259 SPECIAL TOPICS 1/2/3 HRS
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: department permission

DTC302 NUTRITIVE METABOLISM 3 HRS
Biochemical and metabolic functions of nutrients with emphasis on cellular reactions and their relationship to health and disease.
Prereq: DTC202 and ZOO1306

DTC306 NUTRITION THERAPY I 3 HRS
Principles of interviewing and counseling techniques, use of medical terminology, components of nutritional screening and assessment; includes topics in medical nutrition therapy relevant to hypermetabolism, gastrointestinal and endocrine systems disorders. Open only to dietetics majors and nutrition minors.
Prereq: DTC202 and CHEM351

DTC311 NUTRITION THERAPY I EXPERIENCE 2 HRS
Supervised practice experience in the medical nutrition therapy professional environment. Emphasis is on nutrition assessment utilizing a review of systems approach. Open only to dietetics majors.
Prereq: DTC202, CHEM351, ZOO1306

DTC320 Food Systems Management I 3 HRS
Introduction to food systems management with emphasis on sanitation safety, equipment selection and operation, food purchasing, receiving and storage, and personnel management. Open only to dietetics majors.
Prereq: DTC251

DTC321 Food Systems Management II EXPERIENCE 2 HRS
Application of basic components of an operating quantity food service facility. Supervised practice experiences. Open only to dietetics majors.
Prereq: DTC251; Coreq: DTC320

DTC326 Food and Culture 3 HRS
Food habits are best understood within the context of culture. This course will explore factors that influence food habits including religion, culture and society, traditional health benefits, and intercultural communication.

DTC327 Nutrition Therapy II EXPERIENCE 3 HRS
Development, implementation, and evaluation of nutrition care plans for individuals requiring medical nutrition therapy for cardiovascular disease, liver disease, renal disorders and diabetes. Open only to dietetics majors.
Prereq: DTC320

DTC328 Nutrition Therapy II EXPERIENCE 4 HRS
Supervised clinical and ambulatory site based practice experiences in the clinical nutrition professional environment. Open only to dietetics majors.
Prereq: DTC330 and DTC331; Coreq: DTC370

DTC329 Nutrition of the Life Cycle 3 HRS
Emphasis on nutrient needs and influencing factors for each of the physiological stages of the life cycle.
Prereq: DTC202, DTC203 or DTC204

DTC375 COMPLEMENTARY AND ALTERNATIVE MEDICINE 3 HRS
This course provides an overview of current strategies to integrate fundamental concepts of nutrition, and health promotion using complementary therapies, phytochemicals, nutriceuticals, and herbalism to establish a healthy lifestyle.
Prereq: DTC202, DTC203 or DTC204

DTC377/378/379 SPECIAL TOPICS 1/2/3 HRS
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: department permission

DTC430 NUTRITION THERAPY II 3 HRS
Examination of federal, state, and local nutrition programs, conduct needs assessment in community and design appropriate education program. Open only to dietetics majors.
Coreq: DTC202

DTC431 NUTRITION THERAPY III EXPERIENCE 4 HRS
Supervised practice experience in a variety of community settings with emphasis on nutrition education techniques and the operation of federal, state and local nutrition programs. Open only to dietetics majors.
Prereq: DTC30

DTC432 SEMINAR IN DIETETICS 2 HRS
Analysis and application of research topics and techniques as they apply to the field of dietetics.
Prereq: senior dietetics student

DTC435 Food Systems Management II 1 HR
Administrative functions of food service departments such as ordering, ordering, receiving, and training.
Prereq: DTC350 and DTC351

DTC436 Food Systems Management II EXPERIENCE 4 HRS
Supervised practice experiences.
Prereq: DTC350 and DTC351; Coreq: DTC450

DTC437 NUTRITION THERAPY IV 1 HR
Formulation, implementation, and evaluation of nutritional care plans for individuals requiring nutrition therapy focusing on abnormal nutrition metabolism, trauma, and critical illness, examination of enteral and parenteral nutrition regimens, fluid electrolyte balance and acid-base management. Open only to dietetics majors.
Prereq: DTC430

DTC438 NUTRITION THERAPY IV EXPERIENCE 4 HRS
Supervised practice experience in the medical nutrition therapy professional environment. Focus is on complicated disease states and the management of enteral and parenteral nutrition regimens. Open only to dietetics majors.
Prereq: DTC438; Coreq: DTC470

DTC439/440/441 SPECIAL TOPICS 1/2/3 HRS
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: department permission

DTC497/498/499 INDEPENDENT STUDY 1/2/3 HRS
Advanced study on an individual basis in areas in which the department does not offer a formal course.
Prereq: department permission
EARLY CHILDHOOD EDUCATION COURSES

ECE302 Methods of Integrating Curriculum and Resources in ECE
3 HRS
To help students design and implement developmentally appropriate curricula and programs for children prekindergarten through third grade. An inquiry approach will be used to assist the student in broadening the scope of curriculum to provide for individual interests and needs.
Prerequisites: EDPS322 or EDPS325, concurrent registration in CURR303 and admission to the teacher education program.

ECE303 Implementing the Curriculum in ECE
3 HRS
This course is divided into two parts, the first being a 1 1/2 hour class each week. The content of the class will focus on implementing a developmentally appropriate curriculum in the classroom setting. The second part is a three-hour-per-week practicum experience in a program serving preschool or kindergarten.
Prerequisites: EDPS322 or EDPS325, concurrent registration in CURR303 and admission to the teacher education program.

ECE307 Young Children in Poverty: Educational Implications
3 HRS
This course analyzes the critical conditions of young children living in poverty and the social-psychological development of all children whose families are in crisis. Educational implications for teachers are emphasized with a focus on child advocacy and early educational interventions that promote understanding of family, ethnic, cultural, and socioeconomic diversity.
Prerequisites: CRWR214 and CRWR215.

ECE315 Play and Creativity in ECE
3 HRS
An overview of approaches to play and creative expression in education of young children. Application will be made to the fields of early childhood, elementary education, special education, and extended day programs. Students will conduct observations and interviews on play and experiment with a variety of play materials and media with children.
Prerequisites: CRWR214, CRWR215 and admission to the teacher education program.

ECE316 Assessment of the Young Child
3 HRS
Procedures and practices used in the evaluation and assessment of young children from birth through the elementary years, with emphasis on children up through age eight.
Prerequisites: CRWR214, CRWR215 and EDPS322 or EDPS325; admission to the teacher education program.

ECONOMICS COURSES

ECON100 Introduction to Economic Problems and Policies
3 HRS
A nontechnical introduction to basic problems facing the U.S. economy and current economic opinion and policy. Analysis of the government's role in a private market economy. Not recommended for business majors.
Prerequisites: ECON101 and either MATH105, MATH118, MATH119 or MATH210.

ECON205 The American Economy: Price, Taxation, and Government Policy
3 HRS
A study of the principles of economics, the basic knowledge of the functioning of the present-day American economy. Not open to students with ECON201/202.

ECON210 Principles of Macroeconomics
3 HRS
The first half of basic principles of economics. Emphasizes classical economic concepts of employment, income, and unemployment, and problems of unemployment, inflation, and economic growth.
Prerequisites: Level I, MATH105, MATH118, MATH119, MATH210, MATH212 or MATH213.

ECON211 Principles of Microeconomics
3 HRS
Second half of an introduction to basic principles of economics. Emphasizes classical economic concepts of demand, supply, and problems relating to prices and resource allocation.
Prerequisites: ECON210.

ECON212 Special Topics in Microeconomics
3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prerequisites: one 100- or 200-level course in economics.

ECON213 Contemporary Economics
3 HRS
Analysis of contemporary economic problems. Topics may change each semester as the interest and/or problem change. Students may elect this course several times, provided different topics are studied but it may be taken only twice for credit toward a major or minor in economics.
Prerequisites: one 100-, 200-, or 300-level course in economics.

ECON215 Intermediate Macroeconomic Analysis
3 HRS
Examines macroeconomic theory of the determination of national income, employment, the price level, interest rates, and economic growth; and linkages between the domestic and international economies. Topics include unemployment, inflation, recession, and fiscal policy, and the policy positions of various schools of thought. Standard analytical tools, such as IS-LM and aggregate demand and supply, are examined.
Prerequisites: ECON210/212 and either MATH105, MATH118, MATH119 or MATH210.

ECON216 Intermediate Microeconomic Analysis
3 HRS
Analyzes contemporary theories of consumer and firm behavior, prices, and resource allocation. Examines firm behavior for several market structures, and evaluates the efficiency and equity implications of market outcomes.
Prerequisites: ECON210 and MATH105, MATH118, MATH119 or MATH210.

ECON311 Consumer Economics
3 HRS
This course focuses on the analysis of consumer economic behavior, the public and private institutions designed to protect consumer's interests, and the evaluation as well as the effectiveness of consumer education. This course will also include emphasis on buying skills, money management, and consumer citizenship responsibility.
Prerequisites: ECON100 or ECON210.

ECON312 Economic Statistics
3 HRS
Introduction to statistical measurement and analysis of data with applications to economics. Elements of descriptive statistics, probability, random sampling, point and interval estimation, hypothesis testing, and regression analysis are examined.
Prerequisites: MATH105, MATH118, MATH119 or MATH210.

ECON313 Labor Economics
3 HRS
Analysis of the theory of wage determination, with attention to labor supply and labor demand, human resource development, trade unions, and labor market institutions.
Prerequisites: ECON210 or equivalent.

ECON314 Minority Workers in the Labor Market
3 HRS
Special problems and unique employment situations of minority workers (racial and ethnic minorities, women, handicapped) involving historical and market influences, and employer union, and government policies. Recent and proposed legislation affecting the labor force status of minorities.
Prerequisites: one 100-, 200-, or 300-level course in economics.

ECON315 American Labor Unions
3 HRS
The nature, characteristics, and principles of American labor unions; the government and structure of unions and their role in the economy.
Prerequisites: one 100-, 200-, or 300-level course in economics.

ECON316 Labor and Government
3 HRS
The economic aspects of labor legislation and governmental administrative rulings affecting
ECON 420 COMPARATIVE LABOR UNIONISM 3 HRS
Comparative survey of labor union movements in various economies. Differences in theories behind the movement to organize the working class, and differences in union movement evolution, giving ideological and functional perspectives.
Prereq: ECON 202 or equivalent

ECON 416 HEALTH ECONOMICS 3 HRS
The production, distribution, supply and utilization of health care resources, especially in the United States. Relevant tools of economic analysis and empirical studies, allocation of resources to the health care sector.
Prereq: ECON 202 or equivalent

ECON 440 MONEY, CREDIT, AND MONETARY POLICY 3 HRS
An analytical study of the theories of money demand and money supply. Also studied are commercial banking and the operations and conduct of Federal Reserve monetary policy under alternative policy procedures and economic disturbances. The subject is viewed from both domestic and international perspectives.
Prereq: ECON 301 or ECON 302

ECON 445 ECONOMIC FLUCTUATIONS AND FORECASTING 3 HRS
Study of the history, nature and causes of economic fluctuations. Also included are alternate approaches in economic forecasting used by business and government including econometric forecasting and the role of monetary and fiscal policies, supply shocks, international factors and structural change in generating economic fluctuations.
Prereq: ECON 202 or equivalent

ECON 455 COST-BENEFIT ANALYSIS 3 HRS
Cost-benefit analysis techniques and their application to evaluating economic efficiency of government expenditure programs. Determination and distribution of benefits and costs in specific public projects.
Prereq: ECON 201 and ECON 202

ECON 460 INDUSTRIAL ORGANIZATIONS 3 HRS
Monopoly, competition, mergers, concentration and antitrust, and other public policies affecting private enterprise in the United States.
Prereq: ECON 202 or equivalent

ECON 477/478/479 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: ECON 202 or equivalent

ECON 487 COOPERATIVE EDUCATION IN ECONOMICS 3 HRS
Provides practical experience in the student's major field for four to six months of full-time employment at an individual employer. The program consists of one or two work experiences (ECON 387/487) alternating with full-time attendance at the University. A written report is required at the end of each employment period. Admission to program by application only. Graded on a credit/no-credit basis. Credits count a maximum of three hours toward degree requirements in the labor studies program and none in the economics major or minor.
Prereq: ECON 387

ECON 491 RESEARCH SEMINAR IN ECONOMICS 3 HRS
Selected issues in economic methodology, research procedures, and techniques with the preparation of a major research paper and group analysis of its findings.
Prereq: ECON 301 and ECON 302

ECON 497/498/499 INDEPENDENT STUDY 1/2/3 HRS
Advanced study on an individual research basis in areas not covered in formal course work. Restricted to economics majors and minors.

EDUCATIONAL LEADERSHIP COURSES

EDLD 477/478/479 SPECIAL TOPICS 1/2/3 HRS
Courses that can be offered on an experimental basis for one semester for purposes of meeting special needs, interests and of innovations.
Prereq: department permission

EDLD 497/498/499 INDEPENDENT STUDY 1/2/3 HRS
Advanced study on an individual basis in areas in which the department does not offer a formal course.
Prereq: department permission

EDUCATIONAL MEDIA AND TECHNOLOGY COURSES

EDMT 130 INSTRUCTIONAL APPLICATIONS OF MEDIA AND TECHNOLOGY 2 HRS
This course guides pre-service teacher educators to critically and creatively apply the concepts, principles, hardware and software associated with the infusion of technology in solving educational problems and meeting challenges in their roles as facilitators of learning. General Education computer course or equivalent competency are necessary to complete course requirements.
Prereq: CURR 304, CURR 305, BEd 101, PHED 317, MUSC 330, MUSC 332 or TEDU 339; admission to the teacher education program.

EDMT 477/478/479 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

279
EDMT 497/498/499 Independent Study 1/2/3 HRS
Advanced study on an individual basis in areas in which the department does not offer a formal course.
Pre-req: department permission

EDUCATIONAL PSYCHOLOGY COURSES

EDPS 516 Strategically Learning for Academic Success 3 HRS
Introduction to EMU services, diagnostic testing of learning styles, and learning strategies for academic success.

EDPS 477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Pre-req: department permission

EDPS 497/498/499 Independent Study 1/2/3 HRS
Advanced study on an individual basis in areas in which the department does not offer a formal course.
Pre-req: department permission

EDUCATIONAL TECHNOLOGY COURSES

EDTC 477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Pre-req: department permission

EDTC 497/498/499 Independent Study 1/2/3 HRS
Advanced study on an individual basis in areas in which the department does not offer a formal course.
Pre-req: department permission

EDUCATION COURSES

EDC 410 Student Teaching 8 HRS

EDC 491 Student Teaching 10 HRS

EDC 492 Student Teaching 12 HRS

EDC 493 Student Teaching 8 HRS
For experienced, certified teachers.
Pre-req: permission from College of Education Office of Academic Services

EDC 494 Student Teaching 12 HRS
For experienced, certified teachers.
Pre-req: permission from College of Education Office of Academic Services

EDC 495 Student Teaching 8 HRS
Pre-req: permission from College of Education Office of Academic Services

EDC 496 Student Teaching 8 HRS
Pre-req: credit toward certification in either EDC 495 or EDC 499.

EDC 497 Student Teaching 8 HRS
Pre-req: credit toward certification in either EDC 495 or EDC 499.

EDC 498 Student Teaching 6 HRS
Pre-req: permission from College of Education Office of Academic Services

EDC 499 Student Teaching 6 HRS
Pre-req: permission from College of Education Office of Academic Services

ELECTRONIC TECHNOLOGY COURSES

ELEC 477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Pre-req: department permission

ELEC 490 Circuit Analysis I 3 HRS
A first course in the fundamentals of circuit analysis and design. Kirchhoff's and Ohm's Laws, Thevenin and Norton network theorems, with primary emphasis on DC circuits. Electronic instruments, laboratory data collection and report writing are also emphasized. Simulation software is used for computer assisted learning.
Pre-req: MATH 113/107

ELEC 491 Circuit Analysis II 3 HRS
The second course in the study of the fundamentals of circuit analysis and design. Emphasis to AC circuits with consideration of steady-state
and transient waveform analysis, using Laplace transform and Fourier methods. Laboratory data collection and report writing, Simulation software is used.
Prereq: ELEC200; Coreq: MATH112, MATH120 or Math Placement

ELEC214 DIGITAL CIRCUIT ANALYSIS I 3 HRS
The study of combinational and sequential circuits, logic families and design procedures. Simulation software is used for computer-aided learning. Lab exercises with typical circuits data collection and report writing.
Prereq: ELEC200

ELEC215 COMPUTER-AIDED ELECTRONICS 3 HRS
This course will introduce the student to the computer and software used for electronic circuit design and layout. CAD tools are used to develop block diagrams, electronic symbols, component representation, layout and assemblies.

ELEC216 MOTORS AND CONTROLS 3 HRS
The study of DC and AC motor theory, operation and control. Power, energy, efficiency and applications of motors and motor control circuitry are featured.
Prereq: ELEC200

ELEC219 TECHNIQUES OF ENTRYP CONTROL 3 HRS
An introduction to the use of tools, materials, machines, equipment, supplies, and mechanisms utilized in power mechanics for energy control. Lecture and laboratory course.

ELEC277/278/279 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

ELEC280 ANALOG CIRCUIT ANALYSIS I 3 HRS
The study of the fundamentals of discrete solid state devices and linear integrated circuits. The concepts of instrumentation and control applications are included. Data collection and report writing are required.
Prereq: ELEC210; Coreq: MATH120

ELEC281 ANALOG CIRCUIT ANALYSIS II 1 HRS
The continuation of analog circuit design and analysis, including operational amplifiers, filters and phase-locked-loops. Laboratory exercises, data collection and report writing are included. Simulation software is used for enhanced learning.
Prereq: ELEC280; Coreq: MATH21

ELEC314 DIGITAL CIRCUIT ANALYSIS II 1 HRS
The continuation of digital circuit design and analysis. Laboratory exercises with circuitry interfaced to a personal computer and report writing. Simulation software used.
Prereq: ELEC214

ELEC320 MICROCOMPUTER CIRCUITS 1 HRS
Circuit design and principles are considered, including address-control-data lines in micro-processors, memory and interfacing. Machines and other programming languages are used in laboratory exercises.
Prereq: ELEC214/250; Coreq: COSC111

ELEC377/378/379 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

ELEC387 COOPERATIVE EDUCATION IN ELECTRONIC TECHNOLOGY 3 HRS
An industrial experience in some facet of business or industry where the primary work emphasis is related to electronic engineering technology. During this period employee benefits may be received. Offered on a credit/no-credit basis.
Prereq: department permission

ELEC415 COMMUNICATION CIRCUITS 3 HRS
The principles of communication circuits and systems are studied, including oscillators, amplifiers, modulators, antennas and transmission lines. Information theory, voice and data communications are included.
Prereq: ELEC310, ELEC314 and COSC21

ELEC420 ADVANCED MICROPROCESSORS 3 HRS
Further study of microprocessors and interfacing applications. Use of personal computers as the platform for data collection, instrumentation and control applications.
Prereq: ELEC310, ELEC314 and COSC21

ELEC430 SENIOR DESIGN PROJECT 1 HRS
This course is intended to be the capstone activity for the student: includes proposal phase, development phase and final project, using the skills learned throughout the program.
Prereq: ELEC420 and ELEC415

ELEC477/478/479 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

ELEC487 COOPERATIVE EDUCATION IN ELECTRONIC TECHNOLOGY 3 HRS
The second industrial experience for electronic technology majors. The students will be placed on a job that relates to their primary area of study, for one semester. Regular employee benefits may be received. Offered on a credit/no-credit basis.
Prereq: ELEC387 and department permission

ELEC494/495/496 INDUSTRY-BASED SPECIAL TOPICS 1/2/3 HRS
Course descriptions are formulated at the time of an industry's request and reflect the particular requirements of the client company. Offered on a credit/no-credit basis.

ELEC497/498/499 INDEPENDENT STUDY 1/2/3 HRS
Available to selected students who have demonstrated ability to profit from a directed-study project. Intensive study of a problem appropriate to the student's area of concentration. Enrollment and selection of a project proposal must be approved by the department advisor and chair.
Prereq: department permission

ENGL120 COMPOSITION I: WRITING THE COLLEGE EXPERIENCE 3 HRS
Introduces use of writing and reading for inquiry. Students write extended essays about subjects relevant to the college experience using conventions of standard written English. Assignments may also incorporate other genres and styles. Emphasis is placed on using writing and reading as a process for discovery, and on communicating ideas to audiences.

ENGL121 COMPOSITION II: RESEARCHING THE PUBLIC EXPERIENCE 3 HRS
Focuses on academic writing and inquiry. Students use multiple modes of research to develop literacies used in academic and other public contexts. Through extended reading and writing, students engage in the process of writing research essays that reflect conventions of standard written English and standard document styles.

ENGL177/178/179 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

ENGL123 WRITING IN A CHANGING WORLD 3 HRS
Students will analyze and produce writing intended to affect change in particular contexts. Writing in the course will include analyses of and reflections on contexts, genre features and audiences for writing. The course will culminate in a document reflecting understanding of these issues, preferably for an audience beyond the class.
Prereq: ENGL121 and sophomore or graduate standing.

ENGL127 WRITING ABOUT LITERATURE 3 HRS
An intermediate writing course that introduces students to a variety of critical approaches to literature and that teaches reading and writing as interrelated activities. Restricted to the following majors: Language, Literature and Writing/English Language, Literature, Written Communication—Imaginative Writing and Language, Literature and Writing (Secondary Teacher Certification)
Prereq: two courses in Literature
ENGL 127/128/129 Special Topics 1/2/3 hrs
An examination of topics in English not covered in other departmental offerings. Students may elect this course more than once, provided different topics are studied.
Prereq: ENGL 120

ENGL 168 INTERNSHIP IN
ENGLISH 1-3 hrs
An advanced writing course that introduces students to the principles of designing, preparing, and testing documents common in the computer industry, particularly software documentation for users.
Prereq: COSC 101 and ENGL 234 or department permission.

ENGL 169 TECHNICAL WRITING 1-3 hrs
An advanced writing course focused on composing documents for publication on the World Wide Web and other electronic spaces, such as interactive CD-ROMs.
Prereq: ENGL 121 and ENGL 125, ENGL 227 or any 300-level ENGL class.

ENGL 230 CHILDREN'S LITERATURE: CRITICISM AND RESPONSE 3 hrs
Practical criticism of children's literature, prose, and poetry, designed to help students develop critical judgment and a clear prose style. Applies toward the minor in children's literature and the interdisciplinary major in children's literature and drama/theatre for the young.
Prereq: LITR 207

ENGL 231 WRITING ABOUT CONTROVERSY IN LITERATURE FOR THE YOUNG 3 hrs
This course will deal with strategies for the collector, organization, and presentation of materials dealing with controversial issues in literature for young adults.
Prereq: ENGL 121 and LITR 207 or department permission.

ENGL 271/272/273 Special Topics 1/2/3 hrs
An examination of topics in English not covered in other departmental offerings. Students may elect this course more than once, provided different topics are studied.

ENGL 274 TECHNICAL WRITING 1-3 hrs
An advanced writing course focused on composing documents for publication on the World Wide Web and other electronic spaces, such as interactive CD-ROMs.
Prereq: ENGL 121 and ENGL 125, ENGL 227 or any 300-level ENGL class.

ENGL 299 WRITING ABOUT
CONTR ADVERSITY 3 hrs
The reading, analysis, and writing of argumentative essays on different types of controversies, with emphasis on how to use various types of arguments and appeals for different readers and on the different forms of written arguments.
Prereq: any two ENGL courses at the 200- or 300-level

ENGL 323 WRITING IN THE PROFESSIONAL WORLD 3 hrs
Prepared junior and senior majors in education, the humanities, and the social sciences to write in their professions.
Prereq: ENGL 121 and junior or graduate standing.

ENGL 324 PRINCIPLES OF TECHNICAL COMMUNICATION 3 hrs
A course for juniors and seniors who wish to study the style and focus of communication that is particularly appropriate to the fields of science and technology.
Prereq: ENGL 121 and junior or graduate standing.

ENGL 326 RESEARCH WRITING 3 hrs
A course designed to explore the strategies, format and styles of writing appropriate for academic research with emphasis on the student's own field of study.
Prereq: ENGL 121 and sophomore or graduate standing.

ENGL 328 WRITING, STYLE, AND TECHNOLOGY 3 hrs
An advanced writing course that explores a range of styles for multiple purposes, audiences, and technologies. Applications of word processing, online discussion, and Internet resources will be integrated with writing assignments.
Prereq: ENGL 121, ENGL 122, ENGL 227, ENGL 323, ENGL 324 or ENGL 326.

ENGL 335 IMAGINATIVE WRITING 3 hrs
The study and practice of the techniques of imaginative writing, including poetry and prose fiction. The elements of narration, including description, character development, plot structure, and dialogue will be emphasized. Course may be repeated for additional credit if topic is different.
Prereq: one 200- or 300-level LITR course.

ENGL 337 WRITING COMPUTER DOCUMENTATION 3 hrs
An advanced writing course that introduces students to the principles of designing, preparing, and testing documents common in the computer industry, particularly software documentation for users.
Prereq: COSC 101 and ENGL 234 or department permission.

ENGL 444 WRITING FOR THE WORLD WIDE WEB 3 hrs
An advanced writing course focused on composing documents for publication on the World Wide Web and other electronic spaces, such as interactive CD-ROMs.
Prereq: ENGL 121 and ENGL 125, ENGL 227 or any 300-level ENGL class.

ENGL 471/472/473 Special Topics 1/2/3 hrs
An examination of topics in English not covered in other departmental offerings. Students may elect this course more than once, provided different topics are studied.

ENGL 474 SEMINAR IN WRITTEN COMMUNICATIONS 3 hrs
A seminar requiring students to assess their progress in the major and to consider how their beliefs and practices concerning written communication relate to larger social and rhetorical considerations. Portfolio.
Prereq: ENGL 434.

ENGL 487 COOPERATIVE EDUCATION IN ENGLISH 3 hrs
Employment for pay in a business or industry chosen to provide practical experience in the use of English skills. Work experiences generally are alternated with full-time attendance at the University.
Prereq: junior standing; admittance by application only.

ENGL 488/489/490 INTERNSHIP IN
TECHNICAL WRITING 1/2/3 hrs
Optional, practical on-the-job work experience for recommended students electing an opportunity provided by the department or finding an appropriate outside opportunity subsequently approved by the department. Internship paid or non-paid. One hour credit for 10-15 hours per
ENGL497/498/499 INDEPENDENT STUDY 1/2/3 HRS
An intensive study of a topic not offered in the
regular curriculum, the particular topic to be
defined (and credit hours set) by the teacher and
student, subject to approval by the curriculum
committee. Restricted to students taking majors
or minors in the English Language and Litera-
ture Department.
Prereq: nine hours in the appropriate major or minor

ELEMENTARY SCIENCE COURSES
ESC1101 BEGINNING ESL WRITING 3 HRS
This course focuses on basic grammatical pat-
terns while introducing paragraph organization
and form.
Prereq: department permission

ELNI510 BEGINNING ESL GRAMMAR 3 HRS
The basic components of the simple sentence
are taught. There is a special emphasis on basic
verb tenses, question and negative forms.
Prereq: department permission on placement

ELNI511 BEGINNING ESL WRITING 3 HRS
A course which focuses on basic grammatical pat-
terns while introducing paragraph organization
and form.
Prereq: department permission on placement

ELNI517/518/519 SPECIAL TOPICS 1/2/3 HRS
An examination of topics in elementary science
not covered in other departmental offerings. Students
may elect this course more than once, provided
different topics are studied.
Prereq: department permission

ELNI517/518/519 ELEMENTARY SCHOOL SCIENCE 3 HRS
Intended for those planning to teach in the
elementary grades. Prepares the student to
organize the programs, collect the materials, and
direct the activities of the elementary science
class. Methods of presenting simple experiments
to children and conducting field trips will be
demonstrated. Two one-hour lecture and one
two-hour laboratory. Not open in students who
have taken BFSI303.

ELNI517/518/519 SPECIAL TOPICS 1/2/3 HRS
An examination of topics in elementary science
not covered in other departmental offerings. Students
may elect this course more than once, provided
different topics are studied.
Prereq: department permission

ELNI517/518/519 SPECIAL TOPICS 1/2/3 HRS
An examination of topics in elementary science
not covered in other departmental offerings. Students
may elect this course more than once, provided
different topics are studied.
Prereq: department permission

ELNI517/518/519 SPECIAL PROBLEMS IN BIOLOGY 1/2/3 HRS
Individual work in some area of elementary science
under direction of a staff member. Prelimi-
nary draft of proposed study must be approved
by the department prior to enrollment. May be
elected more than once, after resubmission and
approval.
Prereq: department permission

ENGLISH FOR INTERNATIONAL STUDENTS COURSES

ELNI510 BEGINNING ESL GRAMMAR 3 HRS
The basic components of the simple sentence
are taught. There is a special emphasis on basic
verb tenses, question and negative forms.
Prereq: department permission on placement

ELNI511 BEGINNING ESL WRITING 3 HRS
This course focuses on basic grammatical pat-
terns while introducing paragraph organization
and form.
Prereq: department permission on placement

ELNI520 INTERMEDIATE ESL GRAMMAR 3 HRS
Basic sentence components emphasizing verb
structures and usage. Some work on complex
sentence structures.
Prereq: department permission on placement

ELNI521 INTERMEDIATE ESL WRITING 3 HRS
Expanding paragraph constructions while de-
veloping unity, cohesion and transition.
Prereq: department permission on placement

ELNI524 INTERMEDIATE ESL READING 3 HRS
Development of techniques to build vocabulary
and reading skills. Materials emphasize
informational reading.
Prereq: department permission on placement

ELNI526 INTERMEDIATE ESL SPEAKING AND LISTENING 3 HRS
Development of conversational skills, both
speaking and listening. Delivery of short speeches and
the development of listening for details.
Prereq: department permission on placement

ELNI527/528/529 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in
other departmental offerings. Students may elect
more than once, provided different topics are studied.
Prereq: department permission

ELNI529 ADVANCED ESL GRAMMAR 3 HRS
The formation and manipulation of clauses in
complex sentences and the sequence of verb
tenses across clauses. A review of verb tenses and
problematic grammar points.
Prereq: ENGL210, department permission or
placement

ELNI529 ADVANCED ESL WRITING 3 HRS
Development of knowledge of organization pat-
terns used in writing both paragraphs and com-
positions. The principal parts of a composition;
writing devices used to achieve coherence.
Prereq: ENGL212, department permission or
placement

ELNI529 ADVANCED ESL READING 3 HRS
Practice in comprehending and analyzing un-
simplified texts of greater length and linguistic
complexity in a variety of fields.
Prereq: ENGL214, department permission or
placement

ELNI529 ADVANCED ESL SPEAKING AND LISTENING 3 HRS
Development of conversational, speaking and
listening skills. Production and comprehension of
short discourses on personal and nonper-
personal topics.
Prereq: ENGL216, department permission or
placement

ELNI529 ADVANCED ESL LABORATORY 1 HRS
Individual and/or group lab sessions.
Prereq: department permission on placement

ELNI529 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in
other departmental offerings. Students may elect
more than once, provided different topics are studied.
Prereq: department permission

ELNI529 ACADEMIC ESL WRITING 3 HRS
A review of the components of composition;
practice in composition skills and researching,
outlining, formating and writing a short research
paper. Fulfills area L of the general education
requirements, a course in written composition.
Prereq: ENGL312, department permission or
placement

ELNI529 ACADEMIC ESL READING 3 HRS
Reading in specialized fields at professional
levels. Practice in outlining, summarizing, and
synthesizing ideas from different sources.
Prereq: ENGL315, department permission or
placement

ELNI529 ACADEMIC ESL SPEAKING AND LISTENING 3 HRS
Strategies for and practice in comprehending
lectures, taking notes and effectively participat-
ing in informal and formal classroom speaking
activities.
Prereq: ENGL316, department permission or
placement

ELNI529 SPECIAL TOPICS 1/2/3 HRS
These courses deal with subject matter not pro-
vided in other department offerings. Students
may elect such a course several times, provided
different topics are studied.
Prereq: department permission

ELNI529 INDEPENDENT STUDY 1/2/3 HRS
Advanced study on an individual research basis
in areas not covered in formal course work.
Prereq: department permission
Earth System Science Courses

ESSC107/BIO107  Introduction to Environmental Science  3 HRS
An introduction to the basic biological, physical and chemical processes that control today's environmental conditions. The global ecosystem is presented as a structure that includes human society. The understanding of local and global environmental problems and discussion of potential solutions are emphasized. Does not count toward the Biology major or minor.

ESSC108  Earth Science for Non-Science Majors  3 HRS
This class provides a basic understanding of the nature of the lithosphere, hydrosphere, and atmosphere for non-science majors. Emphasis is on understanding the dynamic processes that affect the earth and how to apply this knowledge in everyday life. Does not count toward major or minor.

ESSC108 Earth Science Laboratory for Non-Science Majors  1 HRS
The laboratory class to accompany ESSC108. Applications of the scientific method of inquiry as applied to earth sciences to reinforce basic concepts taught in ESSC108. Does not count toward major or minor.

ESSC110  The Dynamic Earth System  4 HRS
An introduction to the earth system and its components. Utilizes the scientific method to introduce composition of the earth system, fundamental processes within the earth system and linkages between all components of the system. Includes consideration of how humans impact, and are impacted by, the earth system.

ESSC111  The Earth System: Through Time  4 HRS
The origin, development and succession of earth materials. Surface and life forms, culminating in one present scene and organic population. Field trips and reports may be required. Required for geology and earth science majors and minors. Lecture: three hours per week. Laboratory: one two-hour period per week.

ESSC112  National Parks and Monuments  2 HRS
This class, geared towards non-majors, provides an overview of the geology of U.S. national parks and monuments and the basic geologic processes responsible for their formation.

ESSC113  The Fuoric Life Record  3 HRS
The origin, development and succession of life on earth. Systematic study of the evolution of life through time. An introduction to the record of life on earth for the non-science major.

ESSC172/373/379 Special Topics  1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

ESSC200  Introduction to Hydrology  3 HRS
Study of physical, chemical and biological elements of rivers, lakes, wetlands and groundwaters and the human, social, political and legal issues currently associated with these systems. Required for the hydrogeology major.

ESSC202  Earth Science for Elementary Teachers  3 HRS
Lecture and laboratory deal with earth science concepts and teaching methodology. Nationally used elementary science curriculums acquire the student with techniques of teaching basic earth science concepts. Emphasis on student-centered, process-oriented approaches widely used in elementary classrooms. Lecture: two hours per week. Laboratory: one two-hour period per week. Equivalent to ESSC108.

ESSC208  Natural Environmental Hazards  3 HRS
Analysis of catastrophic events, volcanic eruptions, floods, violent storms, fires and other environmental catastrophes, emphasizing their causes and human adjustments to these events.

ESSC213  Weather, Climate and the Earth System  3 HRS
An examination of earth-sun relationships, the nature of atmospheric processes, weather, and climate. Lecture: two hours per week. Laboratory: two hours per week.

ESSC227  Topographic Maps  2 HRS
Interpretation of distances, slopes and terrain features as shown on topographic contour maps. Preparation of contour maps from profile data and from topographic profiles from contour maps; correlation of landforms and topographic patterns with the geologic materials and processes responsible for these.

ESSC232  Mineralogy  4 HRS
A study of the crystallography, crystal chemistry and identification of the most important rock forming and economic minerals of the crust of the earth. Lecture: three hours per week. Laboratory: one two-hour period per week. Prereq: ESSC110 and CHEM211/22.

ESSC233  Rocks and Minerals  3 HRS
The identification and classification of rocks and minerals with special emphasis on characteristics used in the field. Lecture: two hours per week. Laboratory: one two-hour period per week. Prereq: ESSC110.

ESSC230  Introduction to Coastal Processes  3 HRS
Description and analysis of the physical and biogeographical processes of ocean and lake coastline. Distribution and origins of coastal environments. Natural and human modification of beach, river valley, estuary, marsh, dunes and coral reef environments by waves, currents and tides. Classroom demonstrations and field trips.

ESSC277/278/279 Special Topics  1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

ESSC283  Field Geography  3 HRS
Techniques in the observation and analysis of geographic features in the field. Emphasizes individual and group problem formulation, problem solving of geographic questions by using the scientific method, and combining traditional field exploration with the use of library aids.

ESSC287  Essentials of Oceanography for Elementary Teachers  3 HRS
A course designed to prepare Elementary Education majors to conduct classes using marine-based materials. Ocean processes including marine geology, sediments, seawater properties, currents, waves, tides, coastal environments and marine organisms will be discussed. Students will receive hands-on activities created to directly engage K-8 pupils in the scientific method of investigation.

ESSC291  Weather and Climate for Elementary Teachers  3 HRS
Elementary investigation of weather and climate in their geographical distributions and relationships with other components of the earth system. Earth science principles and methods applicable to an elementary classroom using simple materials are stressed. Class activity includes simple hands-on demonstrations, application of the scientific method, field trips and analyses of weather and climate maps.

ESSC311  Plate Tectonics for Elementary Teachers  3 HRS
This course is an introductory through intermediate-level examination of plate tectonics, the dynamic process that causes earthquakes, volcanoes and mountain building. Students will receive hands-on training designed to directly engage K-8 pupils in the scientific method of investigation.

ESSC313  Water and the Environment for Elementary Teachers  3 HRS
This course, designed for elementary education majors, is an introductory through intermediate-level examination of earth science, emphasizing fresh water environments, supply and demand, and their relationship to the depletion of natural resources. Students will receive hands-on training designed to directly engage K-8 pupils in the scientific method of investigation.
ESSC420 Oceanography 3 HRS
A study of the world's oceans, including coasts, waves, currents, tides, sediments, marine geology, properties of sea water, the energy balance, oceanographic research techniques and marine resources, stressing physical oceanography.
Prereq: ESSC111

ESSC414 Weather 3 HRS
Introduction to the properties and processes that create weather, including an analysis of conditions aloft, the formation of storms, and methods and problems of weather forecasting. Lecture: two hours per week. Laboratory: two hours per week.
Prereq: ESSC212

ESSC425 Geomorphology 4 HRS
A detailed study of surface features and the degradational, aggradational and structural processes by which they are formed. Worldwide examples are used extensively. Lecture: three hours per week. Laboratory: one-three hour period per week.
Prereq: ESSC111

ESSC426 Structural Geology 4 HRS
Introduction to the terminology, geometry, kinematics and mechanics of rock deformation. Laboratory emphasizes geometric techniques of structural analysis. Lecture: three hours per week. Laboratory: one-half two-hour period per week.
Prereq: ESSC111 and MATH107, MATH112, MATH1120 or MATH122

ESSC427 Soil Science 3 HRS
The mineralogical, physical, chemical, and engineering properties of soils as related to soil formation, groundwater movement, soil erosion, plant-soil relationships and land development capability. Field trips and exercises required.
Prereq: ESSC111

ESSC429 Igneous and Metamorphic Petrology 4 HRS
A study of the texture, chemistry, classification, origin and evolution of igneous and metamorphic rocks. Lecture: three hours per week. Laboratory: one-two hour period per week.
Prereq: ESSC111 and ESSC228

ESSC436 Sedimentology and Stratigraphy 4 HRS
The properties, description and classification of sedimentary rocks, processes and environments of sediment deposition: principles and techniques of stratigraphy. Field trips and reports required. Lecture: two hours per week. Laboratory: four hours per week.
Prereq: ESSC111 and ESSC228

ESSC431 Palaeontology 4 HRS
Origin and development of life on earth and the environments in which animal assemblages lived. Study of the principles involved in the interpretation of fossils. Systematic study of the features of the organisms most important in the fossil record. Lecture: three hours per week. Laboratory: one-two hour period per week.
Prereq: ESSC210, ESSC111 or BIOL120

ESSC447 Teaching Earth Science and Physical Geography 3 HRS
The techniques of teaching laboratory-centered earth science and physical geography courses, emphasizing inquiry teaching and questioning techniques. Practical experience is obtained by teaching actual earth science and physical geography classes. A requirement for teacher certification in earth science, geology and geography. Not open to students on academic probation.
Prereq: ESSC220 and ESSC324

ESSC450 Biogeography 3 HRS
Analysis of the distribution, ecological setting and ecological function of inland freshwater lakes and Great Lakes coasts. Emphasis on sediment, vegetation, wildlife, waterfowl and fisheries resources.
Prereq: ESSC110

ESSC455 Field Geology I 3 HRS
Theory and practice of precision mapping using tape, alidade, plane table and stadia rod in local area. With ESSC356, satisfies the field requirement for major in geology. May include field study in a quarry.
Prereq: ESSC226, ESSC229 and ESSC320

ESSC456 Field Geology II 3 HRS
Instruction and practice in pace-traverse mapping, measurement of stratigraphic sections and a mapping of areal geology and geologic structure. With ESSC355, satisfies field requirement for geology major.
Prereq: ESSC326, ESSC229 and ESSC330

ESSC470 Glacial Geology 4 HRS
The study of the glacial environment and ice age deposits. Topics include glacial flow, meltwater production, glacial erosion and deposition, formation of landforms, and causes of the ice ages. Many labs will involve the outdoor study of ice age landforms and deposits. Weekend field trips and reports required. Lecture: three hours per week. Laboratory: one-three hour period per week.
Prereq: ESSC111

ESSC477/577/579 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

ESSC487 Cooperative Education in Geoscience 3 HRS
Four to six months of full-time employment at a firm or agency, chosen for imparting a practical educational experience in geoscience. A written report is required at the end of the employment period. Graded on a credit/no-credit basis.
Prereq: department permission

ESSC496 The Nature of Science 2 HRS
This course examines the nature of scientific evidence, inquiry, hypothesis, models and laws. The development of science is put in the context of the structure and history of the scientific community. Interactions among scientists and between scientists and the rest of society are studied from an ethical perspective.

ESSC498 Hydrogeology 3 HRS
Subsurface water occurrence, distribution, relationships to surface water and precipitation; subsurface flow, especially as related to well water production, tests of aquifers; well drilling and installation; ground water exploration and recharge: legal problems.
Prereq: ESSC210 and MATH105, MATH107, MATH112, MATH120 or MATH122

ESSC499 Economic Geology 3 HRS
A study of the geochronological behavior of metallic elements: the origin, processes, controls and classification of ore deposits. Lecture: two hours per week. Laboratory: two hours per week.
Prereq: ESSC329

ESSC548 Optical Mineralogy 3 HRS
A study of the optical properties of minerals and the use of the petrographic microscope to identify common minerals in thin section. Lecture: two hours per week. Laboratory: two hours per week.
Prereq: ESSC228

ESSC549 Petroleum Geology 3 HRS
A study of the origin, migration and accumulation of petroleum: reservoir analysis, exploration and development techniques. Lecture: two hours per week. Laboratory: two hours per week.
Prereq: ESSC326 and ESSC330

ESSC559 Economic Geology 3 HRS
A study of the geochronological behavior of metallic elements: the origin, processes, controls and classification of ore deposits. Lecture: two hours per week. Laboratory: two hours per week.
Prereq: ESSC329

ESSC548 Hydrogeology 3 HRS
Subsurface water occurrence, distribution, relationships to surface water and precipitation; subsurface flow, especially as related to well water production, tests of aquifers; well drilling and installation; ground water exploration and recharge: legal problems.
Prereq: ESSC210 and MATH105, MATH107, MATH112, MATH120 or MATH122

ESSC550 Lake and Coastal Management 3 HRS
An analysis of modern coastal management problems of island lakes and Great Lakes coasts. Selected topics include beach erosion, development, loss of wetlands, wildlife habitat degradation and impact of shoreline development.
Prereq: ESSC250 or ESSC350
ENGINEERING TECHNOLOGY COURSES

ETD00 INTRODUCTION TO ENGINEERING TECHNOLOGY 3 HRS
Introduction to the engineering technology profession. Demonstrates and applies problem solving concepts from science and technology courses. Development of the technical communication skills. Introduction to open-ended technological projects. Learns to work in a group activity in an interdisciplinary environment.
Prereq: freshman standing

ETG74/478/479 SPECIAL TOPICS 1-3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

ETG74/479/499 INDEPENDENT STUDY 1-3 HRS
Available to selected students who have demonstrated ability to profit from a directed-study project. Student is expected to: a problem appropriate to the student's area of concentration. Enrollment and selection of a project proposal must be approved by the department advisor and chair.
Prereq: department permission

FIELD EXPERIENCE COURSES

FETE301 FIELD EXPERIENCE I 1 HRS
Prospective teachers will participate in a service-learning experience in a diverse community, and examine their beliefs and attitudes about working with others who are different from themselves.
Concurrent prereq: EDPS322

FETE301 FIELD EXPERIENCE II: ELEMENTARY 1 HRS
Field placement in an elementary school. Focus is on reflective teaching and assessment decisions.
Prereq: EDPS322
Concurrent prereq: CURR304

FETE301 FIELD EXPERIENCE II: SECONDARY 1 HRS
Field placement in a middle level or high school. Focus is on reflective teaching and assessment decisions.
Prereq: EDPS322
Concurrent prereq: CURR305

FETE401 FIELD EXPERIENCE III: ELEMENTARY 1 HRS
Field placement in an elementary school with a diverse student population. Emphasis is on developing literacy in diverse populations and adapting instruction to individual student needs.
Prereq: CURR304
Concurrent prereq: RDNG310

FINANCE COURSES

FIN171/178/179 SPECIAL TOPICS 1-3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

FIN271/278/279 SPECIAL TOPICS 1-3 HRS
These courses deal with subject matter not provided in other departmental offerings. Students may elect such a course several times, provided different topics are studied.
Prereq: department permission

FIN287 COOPERATIVE EDUCATION IN FINANCE 1-3 HRS
Four months of full-time employment at a business or public organization in a finance position chosen for imparting practical experience in finance. Use of a finance major or minor not permitted. Offered on a credit/credit basis. Administration by application only.
Prereq: ACC240 and department permission

FIN350 PRINCIPLES OF FINANCE 3 HRS
A survey course covering the financial operations of business corporations. Begins with a general overview, then goes into detail on several concepts and techniques used in financial decision making. Specific topics emphasized include the time value of money, asset valuation models, risk management, and financial statement analysis. The course is designed for the general business student.
Prereq: ACC240

FIN373 FINANCIAL MANAGEMENT FOR ENTREPRENEURS 3 HRS
A continuation of FIN350, but with an emphasis on financial management for growth of the small-to-medium-sized firm. Working capital management, long-term financing, equipment financing, and other topics pertinent to the growth firm.
Prereq: FIN350 or equivalent

FIN374 INVESTMENTS 3 HRS
The purpose of the course is to introduce students to fundamentals of investment analysis. The course attempts to highlight the descriptive nature of the discipline and also introduce students to the way of thinking about investments. The course is a mixture of description and theory. The descriptive material involves a discussion of available investment instruments and considers the way the capital market currently works. The theoretical portion takes into consideration ways
you should evaluate current investments and
future opportunities.
Prereq: FIN350
FIN357 FINANCIAL MARKETS AND
INSTITUTIONS 3 HRS
The operation and behavior of capital markets and
financial intermediaries as sources of in-
vestment capital to the business firm. Liability
management and investment portfolio behavior
of financial market participants. Flow of funds
trough money and capital markets, and invest-
ment characteristics of securities traded. Term
structure of yields, yield differentials, and the
valuation of debt and equity securities.
Prereq: FIN350
FIN358 ANALYSIS OF FINANCIAL
STATEMENTS 3 HRS
Analysis and interpretation of the financial
statements and reports of various types of busi-
nesses and industries. Examination of the im-
pact of using alternative accounting methods on
reported profits, taxes and cash flows. Forecast
of financial statements for planning purposes.
Prereq: FIN350
FIN399 INTERMEDIATE FINANCIAL
THEORY 3 HRS
Students learn the theory behind a firm's fi-
nancial management decisions. The focus is on
how a firm creates value through its invest-
ment decisions. Topics include the valuation of
investment decisions, cost of capital, risk and
capital budgeting, real options, and mergers and
acquisitions.
Prereq: FIN350
Coreq: FIN360
FIN360 THEORY OF FINANCIAL
DECISIONS 3 HRS
Students learn the theory behind a firm's fi-
nancial management decisions. The focus is on
how a firm raises capital and whether financial deci-
sions create value. Topics include short-term
financing, capital structures, capital acquisition,
dividend policy, leasing, the interaction between
the firm's financial and investment decisions,
and financial distress and bankruptcy. Restricted
to Finance Majors only.
Prereq: FIN350
Coreq: FIN359
FIN370 INTERNATIONAL BUSINESS
FINANCE 3 HRS
This course deals with how decisions about fi-
nancial management are made in modern mul-
tinational enterprises. Financial management of
any firm involves acquisition of funds, investing
of these funds in economically productive as-
sets, the managing of assets so acquired, and
eventual conversion of some of the productive
assets into funds to return to the original inves-
tors, creditors, suppliers, employees and other
interest groups. International Business Finance
deals with the management of these functions for
firms operating in several countries.
Prereq: FIN350 or equivalent
FIN377/378/379 SPECIAL TOPICS 12/3 HRS
These courses deal with subject matter not pro-
vided in other department offerings. Students
may elect such a course several times, provided
different topics are studied.
Prereq: department permission
FIN387 COOPERATIVE EDUCATION IN
FINANCE 3 HRS
Four months of full-time employment at a
business or public organization in a finance
position chosen for imparting practical exper-
ience in finance. Use on a finance major or minor
not permitted. Offered on a credit/no-credit basis.
Admission by application only.
Prereq: FIN387 and department permission
FIN427/428/429 INDEPENDENT STUDY 12/3 HRS
Directed study of a problem or group of prob-
lems in finance.
Prereq: department permission

GENERAL FOREIGN
LANGUAGE AND
BILINGUAL-BICULTURAL
EDUCATION COURSES

FLAN377/378/379 SPECIAL TOPICS 12/3 HRS
An exploration and study of topics not covered
in other departmental offerings. Students may
select more than once, provided different topics
are studied.
Prereq: department permission
FLAN325 THE CULTURES OF MEXICAN-
AMERICANS AND CUBANS IN THE
UNITED STATES 3 HRS
A study of contemporary life of two of the prin-
cipal Latino groups in the United States. Since
their language and literature reflect a unique so-
cial-cultural situation, they will be used as a point
of departure. Topics will include traditional
family structure, economic, political, educa-
tional, ethnic and religious backgrounds, artistic
contributions, and prospects for the future.
FLAN377/378/379 SPECIAL TOPICS 12/3 HRS
These courses deal with subject matter not pro-
vided in other department offerings. Students
may elect such a course several times, provided
different topics are studied.
Prereq: department permission
FLAN377/378/379 SPECIAL TOPICS 12/3 HRS
These courses deal with subject matter not pro-
vided in other department offerings. Students
may elect such a course several times, provided
different topics are studied.
Prereq: department permission
FLAN387 COOPERATIVE EDUCATION IN
FOREIGN LANGUAGE 3 HRS
Four to six months of full-time employment in
a position designed to give practical experience
in a field related to the student's foreign lan-
guage major. The program ordinarily consists of
two work experiences (FLAN387/388) alternating
with full-time attendance at the University.
Offered on a credit/no-credit basis.
Prereq: junior standing, admission to the program
by application only

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FLAN588 Internship 1 HR
An opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisors. Offered on a credit/no-credit basis.
Pre-req: department permission

FLAN411 Theory and Methods of Modern Language Teaching 3 HRS
The history, theory, and techniques of modern language teaching. Not counted in the language area of the degree requirements. Not toward a major in any modern language. Should be taken during the fall semester prior to student teaching.
Not open to students on academic probation.
Pre-req: junior standing, FMNH343/SPN343/GERN343 or department permission

FLAN421 History and Theory of Bilingual Education 3 HRS
Sociolinguistic and psycholinguistic aspects of bilingualism, language acquisition and cognitive development in the bilingual child; different instructional models for bilingual education programs, and school and community relations. A minimum of 24 hours of field experience required. Not open to students on academic probation.

FLAN447 Teaching Hispanic Culture and Language 3 HRS
The techniques and materials for teaching the language and culture of Hispanic groups within the bilingual, classroom. Techniques and materials for teaching other subject-matter areas in Spanish. A minimum of 24 hours of field experience in a bilingual classroom required. Not open to students on academic probation.

FLAN447/478/479 Special Topics 1-1/2 HRS
These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times, provided different topics are studied.
Pre-req: department permission

FLAN487 Cooperative Education in Foreign Language 3 HRS
Four to six months of full-time employment in a position designed to give practical experience in a field related to the student's foreign language major. The program ordinarily consists of two work experiences (FLAN487/487) alternating with full-time attendance at the University. Offered on a credit/no-credit basis.
Pre-req: FLAN487, admission to the program by application only

FLAN490 Internship in Language and International Trade 3 HRS
An opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisors. Offered on a credit/no-credit basis.
Pre-req: department permission

FLAN497/498/499 Independent Study 1,1/2,2 HRS
Advanced study on an individual basis in an area not covered in formal course work.
Pre-req: department permission

Facility Management Courses

FMGT317/378/379 Special Topics 1,1/2 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Pre-req: department permission

FMGT320 Introduction to Facility Management 3 HRS
The student will gain an overview of the facility management profession. The following topics will be introduced: history of the facility management profession, organizational structure, property management, facilities planning, management and operations, managing support services, managing construction projects, strategic planning and budgeting, and conducting a facilities audit.

FMGT330 Facility Operations and Maintenance 3 HRS
This course provides the student with an introduction to the operation and maintenance of facility systems. These systems include heating, ventilation and air conditioning; elevators; grounds; building exterior and roof; interior walls and floors; building electrical, telecommunications; fire safety and security.

FMGT377/378/379 Special Topics 1,1/2,2 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Pre-req: department permission

FMGT387 Cooperative Education in Facility Management 3 HRS
Facility management majors will be placed on a job that relates to their primary area of study for one semester. During this period regular employee benefits may be received. Offered on a credit/no-credit basis. Credit applicable to the major in facility management only.
Pre-req: department permission

FMGT346 Managing Utilities, Lighting Systems, and Code Compliance 3 HRS
This course covers utility rate structures and their effect on building operation strategies, building code requirements, and managing lighting systems for cost efficiency and code compliance.
Pre-req: FMGT201 and FMGT202

FMGT447 Computer-Aided Facility Management 3 HRS
This course teaches the student how to use software that is dedicated to managing facilities.
Pre-req: FMGT201 and FMGT250

FMGT448 Building Automation Systems 3 HRS
This course teaches the student how computerized control systems work in a building. The principal systems covered will be heating, ventilation and air conditioning, central lighting, security systems, sprinkler and smoke detectors, and total building automation.
Pre-req: FMGT201 and FMGT202

FMGT424 Industrial Plant Facilities and Planning 3 HRS
Planning procedures related to small and large industrial production. Mass production layout methods, machine and production equipment arrangements, types of plant architecture and related facilities, transportation and handling facilities, lighting, ventilation, water supply, electrical power, and personal facilities are included.

FMGT452 Senior Seminar in Facility Management 3 HRS
This course is an exposure experience that consider and integrates special problems in facility management.
Pre-req: FMGT201. FMGT250, seniors standing, completed or concurrent co-op

FMGT477/478/479 Special Topics 1,1/2,2 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Pre-req: department permission

FMGT487 Cooperative Education in Facility Management 3 HRS
The second in a two-course sequence for facility management majors. The students will be placed on a job that relates to their primary area of study for one semester. Regular employee benefits may be received. Graded on a credit/no-credit basis.
Pre-req: FMGT387 and department permission.
FRENCH COURSES

FRNH111 Beginning French 3 HRS
Introductory course including practice in listening, speaking, reading and writing in French. Sessions in the language laboratory are part of regular assignments. Satisfies general education foreign language composition requirement. Area I.

FRNH121 Intermediate French (Reading) 3 HRS
Rapid reading of large quantities of French. Materials include readings in literature and civilization. Students who plan to continue in French should take this course concurrently with FRNH123. Satisfies general education intermediate or advanced foreign language literature requirement. Area IV.

FRNH122 Intermediate French (Reading) 3 HRS
Rapid reading of large quantities of French. Materials include readings in literature and civilization. Students who plan to continue in French should take this course concurrently with FRNH123. Satisfies general education intermediate or advanced foreign language literature requirement. Area IV.

FRNH213 Intermediate French Conversation, Composition, and Grammar 3 HRS
A review of grammar; practice in writing and speaking. Sessions in the language laboratory are available. Students who plan to continue in French should take this course concurrently with FRNH223. Does not satisfy general education literature requirement. Satisfies general education foreign language composition requirement. Area I.

FRNH223 French Conversation, Composition, and Grammar 3 HRS
A review of grammar; practice in writing and speaking. Sessions in the language laboratory are available. Students who plan to continue in French should take this course concurrently with FRNH223. Does not satisfy general education literature requirement. Satisfies general education foreign language composition requirement. Area I.

FRNH233 French Conversation, Composition, and Grammar 3 HRS
A review of grammar; practice in writing and speaking. Sessions in the language laboratory are available. Students who plan to continue in French should take this course concurrently with FRNH223. Does not satisfy general education literature requirement. Satisfies general education foreign language composition requirement. Area I.

FRNH331 Survey of French Literature 3 HRS
This survey course covers major authors and literary movements from the beginning of French literature up to the 19th century. Must be taken in French. Satisfies general education intermediate or advanced foreign language literature requirement. Area IV.

FRNH332 Survey of French Literature 3 HRS
This survey course covers major authors and literary movements of the 19th and 20th centuries. Must be taken in French. Satisfies general education intermediate or advanced foreign language literature requirement. Area IV.

FRNH333 French Composition 3 HRS
Review and drill of intermediate and advanced linguistic patterns in French. Written composition in French. Must be taken in French. Satisfies general education intermediate or advanced foreign language literature requirement. Area IV.

FRNH334 French Conversation 3 HRS
Additional classwork in conversation: improving pronunciation and acquiring a larger, active vocabulary for daily life. Must be taken in French. Satisfies general education intermediate or advanced foreign language literature requirement. Area IV.

FRNH411 French for International Trade 3 HRS
This course is intended for students who already have a solid intermediate-level command of French and who wish to acquire minimum professional competence in the French language as it is used in the world of international business. It includes practice in various forms of business communication, both oral and written. In French.

FRNH433 Advanced French Grammar and Composition 3 HRS

FRNH434 Advanced French Conversation 3 HRS
This course aims to develop advanced fluency. Group discussions are based on the reading of periodical literature. May be repeated for credit. In French.

FRNH435 French Phonetics 3 HRS
Study of the sound system of the French language including both theory and practice. Major focus on the International Phonetic Alphabet as it applies to French. Lecture and practical exercises in class. In French.

FRNH444 Business French 3 HRS
Study of principles and practices of business communication in France with emphasis on business correspondence and translation. Introduction to the French economy including business law, industry, business and services. In French.

FRNH445 Business French 1 3 HRS
Further study of business practices, business law and the French economy. Emphasis on business correspondence and translation and on French tactics with the European economic community, the U.S., the East, developing countries and francophone countries. Prepares student for language proficiency examinations (CCIP diplomas). In French.
**FRNH 410 French Civilization in Film** 3 HRS
The purpose of this course is to study a number of French films and distinguish between fiction and reality as portrayed in the film. Students will research the era and compare the events shown in the film with the societal or historical facts found in their research. 
Prep: FRNH 343 or department permission.

**FRNH 414/415 Readings In French 1/2 HRS**
Special projects in directed readings for majors and minors who have completed the available offerings in French or who, because of most unusual circumstances, are granted department approval to substitute one or both of these for the regular courses. 
Prep: FRNH 341, FRNH 342 or department permission.

**FRNH 466 French Speaking Cultures of the World** 3 HRS
Survey of the more than two dozen different cultures of the world that make up "La Francophonie." Language and cultural variations that one must know in order to understand and communicate successfully with people in these cultures. In French. 
Prep: FRNH 465 and FRNH 444.

**FRNH 467 French Culture and Civilization** 3 HRS
A study of French history and civilization. All major pre-World War I historical periods and cultural movements will be covered. In French. 
Prep: FRNH 345 or department permission.

**FRNH 476 20th-Century French Civilization** 3 HRS
A study of the main events of the 20th century. The major historical and social movements will be covered. In French. 
Prep: FRNH 403; open to juniors and seniors.

**FRNH 477/478/479 Special Topics 1/2/3 HRS**
These courses deal with subjects matter not provided in other department offerings. Students may elect such a course several times, provided different topics are studied. 
Prep: department permission.

**FRNH 488/489 Internship** 2/3 HRS
Provides an opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisors. In French. 
Prep: department permission.

**FRNH 490 Intensive French Abroad 3 HRS**
An intensive spring/summer course offered in a French-speaking environment. Instruction at many different levels. May be counted for equivalent hours on 100- to 400-level. May be repeated for credit.

**FRNH 497/498/499 Independent Study 1/2/3 HRS**
Advanced study on an individual research basis in areas not covered in formal course work. 
Prep: department permission.

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**Geography Courses**

**GEOG 100 Human Geosciences 3 HRS**
This course illustrates the dynamic dependence of global and local human activities upon the known and perceived geoscientific aspects of the earth. Geoscientific knowledge, gained through such disciplines as geology and geology, is constantly evolving. Geoscientific knowledge will affect future human relationships with the earth. This course presents a systematic survey of the sub-disciplines of human geography and their interrelationships with the evolving discipline of geology.

**GEOG 107 Introduction to Geography 3 HRS**
A survey of the major concepts and subfields in modern geography. Physical, cultural, economic, political and social geography are among the major areas explored.

**GEOG 200 World Regions 3 HRS**
Geographic evaluation of the human imprint on the world, focusing on how peoples of various societies have approached the problems of living in their natural environments and with each other. A requirement for both the major and minor in geography.

**GEOG 262 Regions and Resources 3 HRS**
A comparative analysis of the economic resources of major regions of the world. The relationships among countries, corporations, and multiple levels of technology are examined. 
Prep: GEOG 110.

**GEOG 212 Introduction to Travel and Tourism** 3 HRS
An introduction to the travel and tourism industry, including traditional and emerging careers; the ethical, behavioral and logistical aspects of the travel experience; traveler needs and motivations; tourist travel destination and related organizations.

**GEOG 262 Foundations of Guest Service** 2 HRS
Analysis of guest-host service concepts and interactions in the travel and tourism industry emphasizing the requisite attitudes and role of the professional host. The course will improve student motivation and skills toward providing positive guest experiences.

**GEOG 263 Observing the Human Landscape** 2 HRS
A geography course for students of any curriculum designed to enlighten travel experiences by developing observational awareness and perceptual appreciation of human landscapes and by enhancing sensitivity to the personality of places.

**GEOG 277/278/279 Special Topics 1/2/3 HRS**
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. 
Prep: department permission.

**GEOG 282 Geography of Travel and Tourism 3 HRS**
A review of the philosophy, historical development and geographical distribution of travel and tourism. The economic, social and environmental impacts of these activities are studied illustrating their significance from all regions of the world. 
Prep: GEOG 110 or GEOG 112.

**GEOG 285 Economic Geography 3 HRS**
Systematic treatment of economic activities in select world locations. Area factors included in the evaluation, production and distribution of goods and services.

**GEOG 276/GPLN 276 Principles of Geographic Information Systems 3 HRS**
Introduction to the concept of computer mapping. Accessing online sources of spatial data; creating digital maps and charts using online data sources, vector and raster data models, spatial data entry and editing, coordinate systems and methods of geo-referencing digital maps, elementary database management and spatial data analysis. (Required for GIS minors and Urban and Regional Planning majors. Also suggested for teachers who would like to incorporate digital mapping into their teaching. Appropriate for all other disciplines using spatial mapping.) 
Prep: GEOG 107, GEOG 110, ESFC 108 or ESFC 110.

**GEOG 277/278/279 Special Topics 1/2/3 HRS**
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. 
Prep: department permission.

**GEOG 283 Geography of Michigan 3 HRS**
Detailed analysis of the natural setting, population and settlement characteristics, industry, recreation and agriculture in the state. 
Prep: GEOG 110.

**GEOG 284 Geography of Russia and Neighboring States** 3 HRS
A systematic and regional study of physical, cultural and economic factors in Russia and other states of the former Soviet Union. Distribution of natural resources, population and ethnic questions, environmental problems, and political evolution will be emphasized. 

**GEOG 285 Travel and Tourism: The European Scene** 3 HRS
Consideration of Europe as the most significant continent for modern tourism. Emphasis is placed on the natural, cultural, and historical factors that form the foundation of this industry and on the major economic, social and environmental impacts that can be attributed to tourism. 
Prep: GEOG 112 and GEOG 212.

**GEOG 286 History and Geography of Modern Europe** 3 HRS
An interdisciplinary geographical-historical study of modern Europe with the geographical co-
GEOG31 Geography of the United States and Canada 3 HRS
A regional treatment of natural setting, distribution of the people, important occupations and problems of future development in each of several regions.
Prereq: GEOG110

GEOG32 Geography of Latin America 3 HRS
A regional treatment of natural setting, distribution of the people, important occupations and problems of future development in each of several regions.
Prereq: ESSC108

GEOG33 Urban Geography 3 HRS
A study of geographic principles related to distribution, function, structure and regional setting of urban centers.
Prereq: GEOG110

GEOG34 Settlement Geography 3 HRS
Cultural, functional and ecological factors underlying human settlement patterns.
Prereq: GEOG110 or GEOG115

GEOG36 Tourism and Socioeconomic Development 3 HRS
Socioeconomic impacts of tourism; national and international development strategies.
Prereq: GEOG112 or GEOG212

GEOG41 Geography of Resorts 2 HRS
Historical and systematic study of resorting and the resort as a functionally specialized settlement type; major resort areas of the world.
Prereq: GEOG110/212

GEOG44 Teaching Social Studies in Elementary Schools 3 HRS
Survey of the social studies and evaluation of methods commonly used in the teaching of social studies in the elementary grades, with special emphasis on inquiry. Types of activities most effective in the presentation of materials and the use of visual aids are featured. A study of maps and globes; controversial issues, social values, environmental education, consumer education, global education and ethnic groups is included. Not open to students on academic probation.
Prereq: one course in geography

GEOG56 Cultural Geography 3 HRS
Human landscape patterns; emphasis upon the processes concerned with their origins, locations and persistence.
Prereq: GEOG110

GEOG57 Geography of Population 3 HRS
An analytical study of population characteristics and growth, world patterns of fertility, mortality and migration. Major attention is given to human population problems, including ecology, resources depletion and impact of urbanization.
Prereq: GEOG110

GEOG58 Geography of Information Systems Analysis 3 HRS
A more detailed presentation of theories and procedures associated with geographic information systems. Emphasis will be on data models and advanced techniques in data automation, database management and spatial analysis. Students will be exposed to a broad range of functionalities within ArcGIS to conduct GIS analyses, including ArcView and ArcEditor for the analysis and management of spatial data, GeoDatabase for managing personnel and enterprise GIS and ArcIMS for distributing GIS information on the Internet or Intranet.
Prereq: GEOG276/376; POL276

GEOG59 Advanced Geographic Information Systems 3 HRS
Advanced concepts and techniques in vector and raster-based GIS. Topics include: surface modeling, local, neighborhood and zonal map algebraic operators, geostatistical analysis using raster structures and modeling spatio-temporal processes, multi-criteria decision analysis, point pattern analysis, spatial autocorrelation, regression models and network analysis.
Prereq: GEOG376

GEOG77/178/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

GEOG87 Cooperative Education in Geography 3 HRS
Four to six months of full-time employment at a firm or agency, chosen for imparting a practical educational experience in geography. The program consists of two work experiences (GEOG387/487) alternating with full-time University attendance. A written report is required at the end of each employment period. Graded on a credit/no credit basis.
Prereq: completion of sophomore year, geography major; admission by application only

GEOG405 Aerial Photo Interpretation 3 HRS
Analysis of black and white and color infrared photographs for land use planning, environmental assessment, geology and resource management. Weekly lab exercises. Optional field trip. Not open to students with credit in ESSC275.
Prereq: GEOG276/GPLN276

GEOG441 Transportation Geography and Planning 3 HRS
Explores the evolution of transportation in American society, with special attention paid to the impact of railroads, the automobile and the airline industry. Topics include an introduction to techniques for modeling transportation system demand.
Prereq: GEOG235. GEOG212 or GPLN215

GEOG445 Cultural Tourism Resources 3 HRS
Survey of the relationships between cultural heritage resources and tourism. The tourism potentials of cultural centers and museums, archeological sites, folk crafts and foodways, regional cultural museums, ethnic landscapes, architecturally significant buildings, historic cities and towns, and other types of historic landscapes will be covered.
Prereq: GEOG212 or GEOG336

GEOG446 Heritage Interpretation and Tourism 3 HRS
Evolution of the private sector tour-guiding and the public sector heritage interpretation concepts. Practice in the application of interpretive techniques to cultural and tourist landscapes. Stategies for the integrated use of interpretive methods, including tours, demonstrations, talks, person-to-person experiences, publications, exhibits, signage and audiovisuals.
Prereq: GEOG445

GEOG476 Advanced Geographic Information Systems 3 HRS
Advanced concepts and techniques in vector and raster-based GIS. Topics include: surface modeling, local, neighborhood and zonal map algebraic operators, geostatistical analysis using raster structures and modeling spatio-temporal processes, multi-criteria decision analysis, point pattern analysis, spatial autocorrelation, regression models and network analysis.
Prereq: GEOG376

GEOG477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission
GEORC30 Geographic Information Systems/Projects 1/2/3 HRS
A study of different ways in which GIS is being used to resolve problems in the public and private sectors and in academia. Emphasis is on how GIS technology is being used in areas such as facility management, natural resource management, urban planning, environmental modeling, historical preservation, geology, health planning, etc. By working on a number of small, but realistic, projects, students learn how to conceptualize GIS solutions to problems and how to professionally implement GIS projects.

GEORC37 Cooperative Education in Geography 3 HRS
Four to six months of full-time employment at a firm or agency chosen for imparting a practical educational experience in geography. The program consists of two work experiences (GEORC367/368), alternating with full-time attendance at the University. A written report is required at the end of each employment period. Guided on a credit/no-credit basis.

GEORC491/492 Internship 4/6 HRS
Supervised internship in some aspect of geography that is of mutual interest to the qualified student and the place the student will work. Designed to integrate academic training with practical application. May be taken only once for credit.

GEORC497/498/499 Independent Study 1/3/4 HRS
Advanced study on individual basis in areas in which the department does not offer a formal course. Normally restricted to proficient students in the senior year under the general direction prescribed for honors courses.

GERMAN COURSES

GERN121 Beginning German 5 HRS
Interaction includes pronunciation, oral-and-written practice, the fundamentals of grammar, written exercises, reading. Mandatory listening exercises satisfy general education foreign language composition requirement, Area I.

GERN122 Beginning German 5 HRS
The goals of the two-course Beginning German sequence are the development of oral and written communication through the use of verbal and nonverbal symbols. Emphasis is on communicative competence (both spoken and written) through mastery of vocabulary and grammar appropriate to given communicational situations. Besides gaining communicative skills in German, the student can expect to gain some familiarity with modern German culture. Satisfies general education foreign language composition requirement, Area I.

GERN122 Intermediate German Reading 3 HRS
This course consists of readings in German literature and civilization. Students who plan to continue in German should take GERN233 concurrently with GERN221. GERN233 satisfies Area IV of general education requirements.

GERN122 Intermediate German Conversation, Composition, and Grammar 3 HRS
This course requires the student to practice spoken and authentically correct language in the social cultural situations that occur in German-speaking Europe.

GERN123 Intermediate German Conversation, Composition, and Grammar 3 HRS
This course requires the student to practice spoken and authentically correct language in the social cultural situations that occur in German-speaking Europe.

GERN124 Intermediate German Conversation, Composition, and Grammar 3 HRS
This course requires the student to practice spoken and authentically correct language in the social cultural situations that occur in German-speaking Europe.

GERN127/128/129 Special Topics 1/2/3 HRS
These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times, provided different topics are studied.

GERN128 Internship 2 HRS
An opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisor.

GERN129 Survey of German Literature 3 HRS
This is an introduction to literary criticism as applied to German literature. Extensive readings of materials in German literature and culture. Covers introduction to literature analysis and major writers and trends in modern German prose and short stories. Satisfies general education foreign language composition requirement, Area I.

GERN132 Survey of German Literature 3 HRS
This is the second part of the introductory survey course in German literature. It continues the introduction to literary criticism begun in GERN121, and students study the application of principles of analysis to a chronological selection of literary works from the beginning of German literature to 1945. It is a prerequisite for all later courses in literature. Students must have sufficient comprehension to follow lectures in German.

GERN133 German Composition on Cultures and Civilization 3 HRS
A detailed examination of German culture and historical and contemporary German, Austrian and Swiss life. A systematic grammar review accompanies a prose-oriented composition writing.

GERN134 Principles of German Phonetics and Consonantology 3 HRS
Students learn and practice German language sounds and articulations. Pronunciation exercises and applied German phonetics are the basis for improved speaking competence in combination with vocabulary and idiom building. Readings, tapes, video, the Internet and film provide conversation stimulus.

GERN136 German for International Trade 3 HRS
Develops working knowledge of commercial material including economics and business in multinational settings. Cross-cultural references provide opportunities for comparative and critical analysis of American and German cultural patterns in a business setting.

GERN137/138/139 Special Topics 1/2/3 HRS
These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times, provided different topics are studied.

GERN138 Internship 2 HRS
An opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisor.

GERN143 German Literature from the Middle Ages to the Baroque 3 HRS
Readings from the period are discussed in class meetings and taken as topics for student essays and reports. The Literature is considered in the broad context of culture in Germany. Satisfies general education foreign language composition requirement, Area I.
GERN446 GERMAN LITERATURE FROM 1750-1850 3 HRS
The literature of Germany from the period through Romanticism is discussed in class meetings and treated in student essays and reports. Perspectives of the arts and of political and social developments enable the student to appreciate the literature in the context of European civilization. In German.
Preapr: GERN342 or department permission

GERN437 GERMAN LITERATURE FROM 1850-1945 3 HRS
Selections from the literature of the Realism, Biedermeier, Naturalism, Neo-Romanticism and Expressionism viewed against the background of political and cultural history. Classroom discussion and student reports. In German.
Preapr: GERN343 or department permission

GERN458 GERMAN LITERATURE FROM 1945 TO THE PRESENT 3 HRS
These works that have shaped and are shaping current German literary and cultural life. Classroom discussion, papers, and reports. In German.
Preapr: GERN344 or department permission

GERN443 GERMAN SYNTAX AND ADVANCED COMPOSITION 3 HRS
Builds on the foundation in written expression acquired in GERN343. Intensive vocabulary and idiomatic writing treatment of the more complex structural features of German and stylistics. Frequent assignments increase the student's ability to write for a variety of purposes.
Preapr: GERN343 or department permission

GERN444 ADVANCED GERMAN CONVERSATION 3 HRS
Development of advanced conversational fluency. A variety of media are employed to increase the student's facility in oral comprehension and to stimulate conversational exchange among the class members.
Preapr: GERN343 and GERN444 or department permission

GERN446 BUSINESS GERMAN I 3 HRS
The idiomatic and terminology of the German economy and economic geography. Emphasis on business communication in German.
Preapr: GERN446 or department permission

GERN447 BUSINESS GERMAN II 3 HRS
The idiomatic and terminology of the German economy and management. Emphasis on business communication and correspondence in German.
Preapr: GERN446 or department permission

GERN452/453 READINGS IN GERMAN 1/2 3 HRS
Special projects in directed reading for majors and minors who have completed the available offerings in German or who, because of unusual circumstances, are granted department approval to substitute this for the regular courses.
Preapr: department permission

GERN456 TECHNICAL GERMAN I 3 HRS
Specialized vocabulary and jargon used in selected fields of technology. Basic technical concepts and terminology that students may encounter in German industry, development of oral and teaching facility as well as accurate translation of technical documents. Selected aspects of electronics, wood and metalworking, metallurgy, brake systems, computers, robotics, and auto production. Content areas will occasionally be changed and updated in order to keep pace with changed student needs and changes in technology.
Preapr: GERN343 or department permission

GERN457 TECHNICAL GERMAN II 3 HRS
Specialized vocabulary and jargon used in selected fields of technology. Basic technical concepts and terminology that students may encounter in German industry, development of oral and teaching facility as well as accurate translation of technical documents. Selected aspects of internal combustion engines, fuel systems, and the petroleum industry. Content areas will occasionally be changed and updated in order to keep pace with changing student needs and changes in technology.
Preapr: GERN456 or department permission

GERN477/478/479 SPECIAL TOPICS 1/2/3 HRS
These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times, provided different topics are studied.
Preapr: department permission

GERN480/489 INTERNSHIP 1/2/3 HRS
An opportunity for the student to extend his or her theoretical classroom learning through work-related experiences. This course is offered on a credit/no-credit basis.
Preapr: department permission

GERN490 INTENSIVE GERMAN IN EUROPE 3 HRS
An intensive summer course offered in Europe at many different levels available. May be counted for equivalent hours on 100-400 levels. May be repeated for credit.
Preapr: department permission

GERN491 READING KNOWLEDGE OF GERMAN 3 HRS
This course (taught in English) teaches students how to read, understand and translate a variety of authentic German text, including scientific writing based on the majorn of the participants. Students will learn basic German grammar and the most important principles of translation as well as how to use dictionaries.
Preapr: department permission

GERN497/498/499 INDEPENDENT STUDY 1/2/3 HRS
Advanced study on an individual research basis in areas not covered in formal course work.
Preapr: department permission

GERONTOLOGY COURSES

GERT177/178/179 SPECIAL TOPICS 1/2/3 HRS
Specialized topics integral to the field of gerontology. Gerontology faculty members will select contemporary topics that are different from existing courses. Since topics change, a student may elect to take the course more than once.
Preapr: department permission

GERT181 INTRODUCTION TO CAREERS IN GERONTOLOGY 1 HRS
Exploration of gerontology as a field of study, gerontological research, and professional practice: introduction to key professional organizations, literature sources, and Internet resources.
Preapr: department permission

GERT177/178/179 SPECIAL TOPICS 1/2/3 HRS
Specialized topics integral to the field of gerontology. Gerontology faculty members will select contemporary topics that are different from existing courses. Since topics change, a student may elect to take the course more than once.
Preapr: department permission

GERT447 WORK AND RETIREMENT 2 HRS
Issues on the historical aspect of retirement, the realities of retirement, the necessity of preparing individuals for this significant part of their life span, and work past the age of 65.
Preapr: junior/senior or graduate student

GERT448 EDNA GATES CONFERENCE: SEMINAR ON DEMENTIA CARE 1 HRS
This two-day seminar provides opportunity to participate in a premier regional conference on dementia care and networks with hundreds of health care professionals. Experts will present on cutting edge developments in research and practice. Students will learn ways to develop partnerships with staff, people with dementia and their families.
Preapr: junior/senior standing

GERT475/476/477 SPECIAL TOPICS 1/2/3 HRS
Content will change from semester to semester. Experimental course for subject majors not yet provided in other program offerings. Students may elect this course more than once, provided different topics are covered.
Preapr: department permission

GERT488/489 GERONTOLOGY PRACTICUM/SEMINAR 1/2 HRS
Integration of knowledge and skills gained from other gerontology courses and life experiences. Insights on aging available from the humanities disciplines.
Preapr: junior standing, completion of two courses in the gerontology minor or advisor's permission
CHP/CONTRACTION PLANNING AND CONTROL

CHP-01/CONTRACTS formation and administration

Certificate of Conformance (Joint Venture Agreement) to be prepared in accordance with the requirements of the Contract document.

THE CONTRACT

The contract is a formal agreement between the parties to the project, specifying the terms and conditions under which the work will be performed. It includes a statement of work, scope of work, and the parties involved.

CHP-02/CONTRACT ADMINISTRATION

The contract administration is the process of ensuring that the contract terms are met and that the work is performed in accordance with the specifications and requirements.

CHP-03/CONTRACT MODIFICATIONS

Modifications to the contract may be necessary to address changes in the project scope, budget, or schedule. These changes must be documented and approved in accordance with the contract terms.

CHP-04/CONTRACT DISPUTES

Disputes arising from the contract should be resolved through negotiation or arbitration, following the procedures outlined in the contract.

HISTORIC PRESERVATION

Certificate of Conformance (Historic Preservation) to be prepared in accordance with the requirements of the Historic Preservation Act.

ARCHITECTURAL DESIGN

Certificate of Conformance (Architectural Design) to be prepared in accordance with the requirements of the Architectural Design Act.

URBAN AND REGIONAL PLANNING

Certificate of Conformance (Urban and Regional Planning) to be prepared in accordance with the requirements of the Urban and Regional Planning Act.

CERTIFICATE OF CONFORMANCE (PROJECT)

Certificate of Conformance (Project) to be prepared in accordance with the requirements of the Project Act.

CERTIFICATE OF CONFORMANCE (ENGINEERING)

Certificate of Conformance (Engineering) to be prepared in accordance with the requirements of the Engineering Act.

CHP-05/ARCHITECTURAL DESIGN

The architectural design is the process of creating the design for the project, including the preliminary design, working drawings, and specifications.

CHP-06/URBAN AND REGIONAL PLANNING

The urban and regional planning is the process of planning the development of the project area, including the zoning, land use, and transportation planning.

CHP-07/ENGINEERING

The engineering is the process of designing and constructing the physical infrastructure of the project, including the structures, utilities, and roads.

CHP-08/PROJECT

The project is the overall process of initiating, planning, executing, and closing the project, including the project management, quality control, and risk management.
GPN427/428/429/430 Cooperative Education 3 HRS
Four to six months of full-time employment at a firm or agency, chosen for imparting a practical educational experience in urban and regional planning. The program consists of two work experiences alternating with full-time University attendance. A written report is required at the end of each employment period. Offered on a credit/no-credit basis.
Prereq: completion of sophomore year; urban and regional planning major; admittance by application only.

GPN431/GPHRQ1 Planning/Preservation Graphics 3 HRS
A lecture-laboratory course in graphic techniques of mapmaking, topographic analysis, communication of data, and presentation. Media explored will include pen and ink, colored pencil and markers, and digital photography.
Prereq: GPN215

GPN432 Professional Practice for Planners 3 HRS
A senior-level course for urban and regional planning majors and minors, intended to be taken concurrently with GPN410. A seminar format is used to present a series of topics relating to professional practice in planning. Readings, case studies, simulations and guest speakers are used to expose students to professional activities. Topics include public hearings, dealing with community controversies, and professional-level communication techniques. Topics also deal with issues of professional ethics and certification.
Prereq: GPN215 and senior standing. Coreq: GPN410

GPN433 Site Planning Studio 3 HRS
A studio course in urban planning, giving hands-on experience in developing a site plan. Using an actual site and client, a project will be taken through the various stages of plan development. Activities include program analysis, data collection, development of alternative solutions, and selection and presentation of a final site plan.
Prereq: GPN215 and GPN333 and senior standing.

GPN434 History of Urban Form and Function 3 HRS
Historically important periods of urban planning are analyzed in select cities throughout the world and in the United States. Comparisons are made between cities from different cultures and our own. GEOG323 is recommended.
Prereq: GPN215 and GPN216.

GPN435 History of Urban Form and 3 HRS
An exploration of urban planning topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

Supervised internship in some aspects of urban and regional planning. The program consists of two work experiences alternating with full-time University attendance. A written report is required at the end of each work period. Offered on a credit/no-credit basis.

GPN437/438/439/440 Environmental Assessment and Planning 3 HRS
An examination of the program elements of environmental impact statements. Geo-based data sources are explored and analyzed. Impact statements are prepared by the class, and existing impact statements are evaluated.
Prereq: GPN410 or GPN215

GPN439/440/441/442 Independent Study 1/3/3/3 HRS
Advanced study on an individual basis in areas in which the department does not offer a formal course. Normally restricted to proficient students in the senior year; under the general conditions prescribed for honors courses.
Prereq: department permission; sophomore standing.

GREEK COURSES

GREEK1 Beginning Ancient Greek I 3 HRS
For students with a strong interest in archaic and classical Greek culture. Acquaints students with sufficient ancient Greek grammar, vocabulary, and syntax to facilitate the reading of the masterpieces of Greek literature. Satisfies the general education foreign language composition requirement, Area 1.

GREEK2 Beginning Ancient Greek II 3 HRS
As a follow-up to GREK101, this course will continue to introduce students to ancient Greek grammar, vocabulary, and syntax to facilitate the reading of the masterpieces of Greek literature. Satisfies the general education foreign language composition requirement, Area 1.
Prereq: GREK101

GREEK27/278/279 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

GREEK20 Intermediate Ancient Greek I 3 HRS
As a follow-up to GREK101-102, this course will complete a full survey of the elements of the grammar and syntax of ancient Greek. It will also introduce students to the reading of original passages of major authors. Especially preparatory writers such as Herodotus, Plato, Xenophon, and the Evangelists.
Prereq: GREK102

GREEK202 Intermediate Ancient Greek II 3 HRS
As a follow-up to GREK201, this course will review basic and finer points of the grammar and syntax of ancient Greek during the reading of major authors such as Homer, Thucydides, Plato, Lytias, Sophocles, Euripides, and Aristophanes.
Prereq: GREK201

GREEK27/278/279 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

GREEK277/278/279 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

GREEK435/440/441/442 Independent Study 1/3/3/3 HRS
Advanced study on an individual basis in areas not covered in formal course work.
Prereq: department permission.

HISTORY COURSES

HIST100 Comparative Study of Religion 3 HRS
An introduction to the systematic study of religious experience and expression, organized around representative motifs, phenomena, and institutions, and illustrated with relevant examples from the various historical religious traditions. Satisfies general education philosophy/religion requirement. Does not satisfy general education history requirement. Does not count toward social science major or minor, or history major or minor.

HIST101 Western Civilization to 1668 3 HRS
A topical survey of western civilization from its Greek-Roman origins to the 17th century. Cultural development and institutional growth are emphasized. Geocentric contributions, the Indo-Christian heritage, Byzantine and Islamic cultures, European expansion and militarism, the Renaissance, and the Reformation are among the major topics considered.
HIST 101 Western Civilization, 1648 to World War 1 3 HRS
A topical survey of Western civilization from the 17th century to World War I. Cultural development and institutional growth are emphasized. The Baroque era, Enlightenment, political and industrial revolutions, nationalism, and imperialism are among major topics considered.

HIST 102 20th-Century Civilization 3 HRS
An examination of the international developments of the 20th century with particular emphasis on the interactions between the West and other world cultures.

HIST 103 Quest for Power: Famous Figures in History 3 HRS
An examination of the lives and times of selected leaders from the ancient and modern worlds. Examples of figures to be covered are: Bricks, Nero, Napoleon I, and Adolf Hitler. Major literary measurements of the periods will be examined as well. Team taught by a member of the History Department and a classicist. This course satisfies one literature or one history requirement. Note: see history humanities courses, page 26.

HIST 106 Asian and African Civilizations 3 HRS
The civilizations of the Modern world: Africa, India and East Asia in historical perspective. Philosophical outlook, cultural development and technological advances are emphasized with attention also being given to political and economic changes in the period since 1500.

HIST 109 World History to 1600 3 HRS
A survey of world civilizations (Africa, Asia, Europe, Western Hemisphere) from prehistory to 1600. The course will emphasize the diversity and interrelationships of world cultures and civilizations.

HIST 110 World History since 1600 3 HRS
A survey of world civilizations (Africa, Asia, Europe, Western Hemisphere) from 1600 to the present. The course will emphasize the diversity and interrelationships of world cultures and civilizations.

HIST 123 The United States to 1877 3 HRS
A study of United States history through the Reconstruction following the Civil War.

HIST 124 The United States, 1877 to the Present 3 HRS
A study of United States history from the end of Reconstruction to the present.

HIST 125 Reason and Revolution 3 HRS
An examination of the transition in political, social, economic, and intellectual terms. Events in Europe and their political, economic, and intellectual effects on the American Revolution, the rise of nationalism, and the development of modern Europe.

HIST 177/178/179 Special Topics 1/1/1 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

HIST 277/278/279 Special Topics 1/1/1 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

HIST 290 Introduction to the History of Technology 3 HRS
An introduction to western technology from medieval times to the present. Emphasizes the process of technical change, the nature of technological systems, the diffusion of technological improvements, and the role of technology in broader historical movements.

HIST 291 Researching and Writing History 3 HRS
An introduction to the historian's skills. Exercises include preparing a bibliography, writing book reviews and preparing a research paper. Required for the history major.

HIST 101 The Religions of South and East Asia 3 HRS
A survey of the religious traditions of India, Ceylon, Burma, Thailand, China, Tibet, and Japan, showing the interaction of folk religion with the developing concepts and institutions of Hinduism, Buddhism, Confucianism, Taoism and Shinto.

HIST 102 Near Eastern and Western Religions 3 HRS
A survey of the historical evolution of the several religions originating in western Asia, concentrating especially on the development and interaction of Judaism, Christianity, and Islam.

HIST 103 History of American Religion 3 HRS
A survey of religious institutions and ideas in relation to American culture from colonial times to the present.

HIST 105 Native American History 3 HRS
An ethnohistory of America's indigenous peoples and nations from before contact to the present. Prereq: one course in history or department permission.

HIST 209 France to 1789 3 HRS
A study of the main currents in early modern times with special emphasis on the impact of the Protestant Reformation and the Renaissance on French society, the rise of absolutism, and the political and intellectual background of the French Revolution.

HIST 310 France since 1789 3 HRS
An examination of the major trends in French history since the start of the Revolution. Emphasizes cultural, social, economic, intellectual and political trends and ways in which France has been a model for new movements in Europe.

HIST 311 Michigan History 3 HRS
A survey of major economic, social and political developments in Michigan from prehistoric times to the present. Emphasizes the period prior to the 20th century.

HIST 312 History of Black Americans 3 HRS
A survey of African American ancestry from 1877 to the present. Emphasis slavery, the post-Civil War South, northward migration and urban settlement, and the growth of black political and social movements.

HIST 136 History and Geography of Modern Europe 3 HRS
An interdisciplinary and geographical-historical study of modern Europe with the geographical component emphasizing information on an urban, demographic, occupational and environmental nature, and with the history component stressing major political, social and cultural developments. A requirement for majors in language and institutional studies. Must be taken concurrently with GEOG 316.

HIST 337 History and Geography of Spanish America 3 HRS
An interdisciplinary geographical-historical study of Spanish America, emphasizing political, cultural and socioeconomic forces from the conquest to the present. Studies similarities and differences within and between nations and the special relationships that arise between the nations and the United States. A requirement for majors in language and institutional studies. Must be taken concurrently with GEOG 317.

HIST 338 History and Geography of Latin America 3 HRS
A study of Latin America and the Caribbean region, with an emphasis on the role of Spain and other European powers in the region's development. Prereq: one course in history or department permission.
HIST319 The Civil Rights Movement in the United States 3 hrs
Focusing on the 20th-century history of the African American struggle for equality, this course examines the rise of de jure racial segregation as a social system; the origins and early history of the Civil Rights movement; the movement's development from the 1920s through the 1950s and its historic victories over segregation in the 1950s and 1960s. Prereq: HIST124, HIST135 or department permission.

HIST321/CLAS321/WMST321 Women and Gender in the Ancient World 3 hrs
An investigation of conditions of life for women in antiquity, focusing on the sex-gender system of Greek and Roman societies. Literary, inscriptive and other evidence will be studied to disclose the classical roots of western beliefs and attitudes about women. Prereq: one course in history.

HIST323 Greek History 3 hrs
Examines the Greeks' achievements from the Bronze Age to the Roman conquest, focusing on the period after 800 B.C.E. Emphasizes political, social and economic developments; also considers literary, intellectual and artistic accomplishments. Prereq: one course in history.

HIST324 Roman History 3 hrs
Examines the Romans' achievements from earliest times to the German conquest, focusing on the period 500 B.C.E.-C.E. 500. Emphasizes political, social and economic developments; also considers literary, intellectual and artistic accomplishments. Prereq: one course in history.

HIST326 History and Geography of Modern Asia 3 hrs
An interdisciplinary geographical-historical study of modern Asia. The geography component emphasizes urban, demographic, occupational and environmental trends and developments; the history component stresses major political and social developments and international relations. A requirement for majors in the Japanese program in language and international trade. Must be taken concurrently with GEOG326. Prereq: GEOG110 and either HIST103 or HIST106.

HIST327 Europe in Early Middle Ages 400-1050 3 hrs
Analyzes emergence of common European culture from fusion of Roman, Germanic and Christian elements. Includes examination of Merovingian and Carolingian culture, Anglo-Saxon Britain, Ottonian Germany, medieval Christianity and medieval women. Cultural traditions of Celts, Moslems and Vikings also explored.

HIST328 Europe in Late Middle Ages 1050-1400 3 hrs
Examines local feudalism and rise of French and English feudal monarchies. Special emphasis on crusades, medieval Christianity and heresy, women, and Paris and Venice in late middle ages. Culture explored through extensive use of contemporary literature and art.

HIST330 Europe in the Renaissance and Reformation 3 hrs
A survey of the political, cultural, religious, and economic history of Europe from the Italian Renaissance to the Peace of Westphalia.

HIST332 Modern Europe 1815-1919 3 hrs
A study of the development and conflicts of the national states of Europe from the Congress of Vienna to the Treaty of Versailles.

HIST333 Europe since 1919 3 hrs
A history of Europe since Versailles with emphasis upon the Communist, Fascist and Nazi revolutions and their impact on the world, the origins and outbreak of the Second World War, and the post-1945 era. Prereq: junior standing or department permission.

HIST335/WMST335 History of Women in Europe 3 hrs
A study of the history of women and views of women in western society from the 18th century to the present. Emphasizes the struggles, setbacks and achievements of the women's movements in the context of modern European history. Prereq: one course in history or department permission.

HIST336/WMST335 History of Women in the United States and Great Britain, 1800 to the Present 3 hrs
A comparative study of the history of women in the United States and Great Britain. Examines the ideology of the nature and role of women, the history of women's lives, the impact of industrialization, and the feminist movements of the 19th and 20th centuries. Prereq: one course in history or department permission.

HIST338 German History since 1815 3 hrs
Considers unification and Empire, World War I, the Weimar Republic, the rise of National Socialism, World War II and postwar Germany. Prereq: junior or department permission.

HIST339 Arab-Israeli Conflict 3 hrs
Course covers a major, ongoing issue in 19th- and 20th-century history, namely the conflicts between Arabs and Israelis in the Middle East. Prereq: one course in history or one course in political science or department permission.

HIST341 The Middle East, 1798 to the Present 3 hrs
A survey of the political, economic and social history of the Middle East, including Turkey and Iran, with emphasis on the growth of independence movements within the area. Prereq: junior standing or department permission.

HIST342 North Africa, 1798 to the Present 3 hrs
A survey of the political, economic and social history of North Africa, Egypt and the Sudan, emphasizing the internal movements for independence from colonial powers. Prereq: junior standing or department permission.

HIST343 Russia to 1855 3 hrs
A survey of political, economic, and cultural trends in the history of Russia from Peter the Great to the death of Tsar Nicholas I, with special emphasis on the growth of tsarist absolutism. Prereq: junior standing or department permission.

HIST344 Russia since 1855 3 hrs
A survey of the political, economic, and diplomatic history of imperial Russia and the Soviet Union from the great reforms of the 1860s to the present. Prereq: junior standing or department permission.

HIST345 Sub-Saharan Africa to 1885 3 hrs
The historical evolution of sub-Saharan African civilizations including their origins, interrelations and responses to European colonialism. Prereq: junior standing or department permission.

HIST346 20th-Century Africa 3 hrs
A detailed examination of Africa's response to the historical experience of European colonialism, along with the evolution of those responses, forms and patterns applicable not only to Africa, but also to the entire non-Western world.

HIST350 History of Canada 3 hrs
A survey of the development of Canada from prehistoric times to the present with an emphasis on social and economic topics.
HIST345 LATIN AMERICAN COLONIAL
Period 3 HRS
Surveys the history of Spanish America and Portuguese America from the conquest to the independence era, stressing political, social and economic aspects.
Pre: Hist 124 or department permission

HIST346 LATIN AMERICAN NATIONAL
Period 3 HRS
Surveys the history of Latin America from the independence era to the present, stressing political, social, intellectual and economic topics.
Pre: Hist 124 or department permission

HIST352 UNITED STATES URBAN
History 3 HRS
The development of United States cities from the commercial town of colonial times to the industrial metropolis of today. Emphasizes urban economic activities, boss and reform politics, immigrant and racial minorities, and city and suburban expansion.
Pre: Hist 123 or department permission

HIST364 UNITED STATES MILITARY
History 3 HRS
A study of the origins and development of military institutions, traditions, and practices in the United States from the colonial period to the present, with attention given to the interrelationship between military history and political, social and economic conditions in the United States and the world. A requirement for cadets in ROTC programs.
Pre: one course in history

HIST366 THE OLD SOUTH 3 HRS
The South from the colonial foundations to the formation of the Confederacy in 1861.
Pre: Hist 123 or department permission

HIST375 MODERN INDIA 3 HRS
The development and maturing of British rule in India against the background of Indian culture. Examines the rise and development of Indian nationalism, the struggle for independence, and the problems facing of India since 1947.
Pre: one course in history

HIST377/378/379 SPECIAL TOPICS 1/1.5/2 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than one, provided different topics are studied.
Pre: one course in history or department permission

HIST380 AMERICAN COLONIES TO
INDEPENDENCE 3 HRS
A study of the European prelude to colonization; the founding of the colonies; and their political, economic, and social development; the deterioration of the relationship between Great Britain and the American colonies after 1763.
Pre: Hist 123 or department permission

HIST382 THE AGE OF JACKSON 3 HRS
A study of the United States from the end of the War of 1812 through the Mexican War, with the major emphasis on the transportation revolution, sectionalism, the second American party system, Manifest Destiny, and the social movements of the era.
Pre: Hist 123

HIST385 CIVIL WAR AND
RECONSTRUCTION 3 HRS
A study of the United States from the Mexican War through the era of Reconstruction. Examines the sectional tensions leading to the Civil War, the political, social, military, and economic aspects of the war; the problems of reconstruction and the rise of the solid South.
Pre: Hist 124 or department permission

HIST387 COOPERATIVE EDUCATION IN
HISTORY 3 HRS
Four to six months of full-time employment in a business or industry chosen to provide practical experience in the student's major field. The program consists of one or two such work experiences alternating with full-time attendance at the University.
Pre: one course in history or social studies major; admission to program by application only; department permission

HIST391 ENGLAND TO 1689 3 HRS
The general history of England to the Revolution of 1688, with emphasis on its cultural and constitutional contributions to the modern world.

HIST392 ENGLAND 1689 TO PRESENT 3 HRS
England in the period of imperial expansion, its industrial and social revolutions and its transition into a modern socially minded nation. A continuation of HIST 391.

HIST393 THE AUTOMOBILE INDUSTRY AND
MODERN AMERICA 3 HRS
An examination of the European and American origins of the automobile industry, the emergence of Michigan's dominant position in the industry, and the social, economic and general cultural influence that the automobile and the industry have exerted on 20th-century America.

HIST394 THE UNITED STATES FROM 1917 TO
1941 3 HRS
A study of United States history from World War I through U.S. entry into World War II. The course covers foreign affairs, national government and politics, economic developments and social trends, World War I, modernization, and cultural conflict of the 1920s and the Great Depression, and New Deal of the 1930s receive special attention.
Pre: Hist 124 or department permission

HIST395 THE UNITED STATES FROM 1941 TO
1965 3 HRS
A study of United States history from entry into World War II to the death of President John F. Kennedy. The course covers national government and politics, foreign policy, and social history of the American people. World War II diplomacy and home front; Cold War; Truman, Eisenhower, and Kennedy administrations; Red Scare; civil rights; suburbanization; mass culture; and other postwar social and cultural trends receive special attention.
Pre: Hist 124 or department permission

HIST396 THE UNITED STATES FROM 1965 TO
THE PRESENT 3 HRS
A study of United States history from the presidency of Lyndon B. Johnson to the present. The course covers national government and politics; foreign policy; and social history of the American people. The Great Society, Vietnam War, protest movements of the 1960s; Nixon administration and Watergate; economic, social, and cultural trends of the 1970s and 1980s; the conservative resurgence, and the Reagan Revolution and its aftermath are among topics that receive special attention.
Pre: Hist 124 or department permission

HIST421 EUROPE FROM ABSOLUTION TO
REVOLUTION, 1648-1815 3 HRS
A political, social and cultural study of Europe from the Peace of Westphalia through the Napoleonic Era. Emphasizes the development of absolutism in France, constitutionalism in England, the Enlightenment and the French Revolution.

HIST431 ITALY SINCE 1700 3 HRS
The political, social and economic development of Italy from the Congress of Vienna to the present. Emphasizes the unification movement, domestic and foreign problems of the 19th and 20th centuries, World War I and its effects, Mussolini and Fascism, World War II, and the newly liberal republic.
Pre: one course in history or department permission

HIST441 THE FAR EAST TO 1800 3 HRS
A study of the history of China, Korea and Japan from ancient times to the beginning of the 19th century, stressing political, cultural, and social developments and the dominant role of China.
Pre: one course in history

HIST442 MODERN CHINA 3 HRS
China from 1800 to the present; traditional Confucian China in crisis; impact of the West; reform and revolution. Republican China; the Communist revolution. China since 1949.
Pre: one course in history

HIST443 MODERN JAPAN 3 HRS
Japan from 1800 to the present; collapse of the shogunate, 19th century reforms. Use of the empire to great power status, defeat in World War II, postwar changes. Political, economic, and cultural developments are considered.
Pre: one course in history

HIST444 CHINA AND ITS NOMADIC
NEIGHBORS 3 HRS
This course traces the evolution of relations between the Chinese Empire and the peoples of northern and central Asia between c. 100 BCE-1700 CE. It will include the economics and geographical factors that influenced the interactions between sedentary Chinese and nomadic peoples.
Pre: one course in history, junior standing
HIST410 EUROPEAN MILITARY HISTORY
1895-1945  3 HRS
This course will examine the European art of
war from Napoleon to the end of World War
II. Topics include the Boer War, Russo-Japanese
War, World War I, Spanish Civil War, and
World War II. A key question will be the role
played by new "hardware," such as rifles, ma-
chine guns, and the tank.

HIST411 HISTORY OF THE FIRST WORLD
WAR 1914-1918  3 HRS
This course will offer a detailed look at the ori-
gins, causes, and results of the so-called "Great
War" from 1914-1918, a conflict better known
today as the First World War. Special attention
will be paid to the military campaign of the
war, with particular emphasis on the role of the
new industrial technology upon military tactics
and operations.

HIST416 EUROPE SINCE 1945  3 HRS
Study of the political, economic, social and
diplomatic history of Europe since the end of
World War II, with emphasis on the Cold War,
economic recovery and decline, the European
integration movement, solidarity and dissonance
within the communist bloc, stability and unces-
tralization among the democracies, and the impact of U.S.-
Soviet detente.

HIST457 HISTORY OF MEXICO  3 HRS
An introduction to Mexican history from the
Aztec period through the recent past. Exam-
ines political, social, economic and cultural
developments in the area comprising the pres-
tent day nation as well as those areas in North
America once included in Mexico.

HIST461 FOREIGN RELATIONS OF THE
UNITED STATES  3 HRS
A survey of the foreign relations of the United
States emphasizing the diplomacy of the period
after the Civil War.

HIST463 UNITED STATES LABOR
HISTORY  3 HRS
A history of workers in the United States from
colonial times to the present with special
emphasis on developments occurring between
1820 and 1940. Considers working-class life
and culture, labor unions, government-labor
relations, and the impact of economic change.

HIST466 THE OLD WEST, 1840-1890  3 HRS
A study of Spanish settlement, the fur trade,
great explorations, settlement and expansion,
transportation and mining frontier, the cattle
industry and cowboy culture, and the impact
on the Indians.

HIST467 UNITED STATES CONSTITUTIONAL
HISTORY  3 HRS
A history of the development of the American
Constitution from English and American colo-
nial origins to the present.

HIST468 THE AMERICAN MIND TO THE
CIVIL WAR  3 HRS
Ideas and culture in America during the 17th,
18th and early 19th centuries. Includes such
subjects as Puritanism, the Enlightenment and
Romanticism/Transcendentalism, together with
their general cultural implications.

HIST469 THE AMERICAN MIND SINCE THE
CIVIL WAR  3 HRS
Ideas and culture in America during the late-
19th and 20th centuries. Includes such subjects
as pragmatism, social Darwinism, nationalism
and internationalism, and liberal and conser-
vative thought together with their general cultural
implications.

HIST472 SOCIAL AND INTELLECTUAL
HISTORY OF 19TH-CENTURY EUROPE  3 HRS
A detailed study of the original concepts of
Europe's 19th-century intellectuals whose works
were of major influence in the 19th and 20th
centuries.

HIST477/478/479 SPECIAL TOPICS 1/1/1  3 HRS
An exploration and study of topics not covered
in other departmental offerings. Students may
elect more than once, provided different topics
are studied.

HIST481 THE TEACHING OF SOCIAL
STUDIES  3 HRS
For intending teachers in junior and senior high
schools. Examines the nature of the subjects
included in social science in the public schools
and the problems related to the teaching of
history and other social studies. Not open to
students on academic probation.

HIST482 THE AGE OF WASHINGTON AND
JEFFERSON  3 HRS
The formation of the new nation during the
War for Independence, the creation of the Con-
stitution, the Federal era, the Republican
administration through Madison's term in office,
the War of 1812 and postwar diplomacy.

HIST486 THE UNITED STATES AS AN
EMERGING WORLD POWER  3 HRS
The peaking of the frontier after the Civil War,
the Industrial Revolution, the big city and its
problems, Populist revolt and Progressive refor-
mation, Imperialism and World War I.

HIST487 COOPERATIVE EDUCATION IN
HISTORY  3 HRS
Four to six months of full-time employment in
a business or industry chosen to provide practi-
cal experience in the student's major field. The
program consists of one or two two-credit expe-
riences alternating with full-time attendance at
the University.

HIST489 INTERNSHIP  3 HRS

HEALTH ADMINISTRATION COURSES

HAD277/278/279 SPECIAL TOPICS 1/1/1  3 HRS
An exploration and study of topics not covered
in other departmental offerings. Students may
elect more than once, provided different topics
are studied.

HAD287/288/289 SPECIAL TOPICS 1/1/1  3 HRS
An exploration and study of topics not covered
in other departmental offerings. Students may
elect more than once, provided different topics
are studied.

HAD378 COOPERATIVE EDUCATION IN
HEALTH EDUCATION  3 HRS
Employment for pay in a work setting chosen
to provide practical experience related to health
administration. The cooperative education
sequence consists of two work experiences (HAD287/288) alternating with full-time at-
tenance at the University. Preparatory: sophomore standing and health administra-
tion major.

HAD380 HEALTH CARE ISSUES  3 HRS
This survey of the organization, traditions, pro-
cessional identification, and current issues of the
U.S. health care system is designed to introduce
the non-health administration major to the field
of managing and administering health care ser-
dices in hospitals, public health systems, nursing
homes and ambulatory settings.

HAD390 THE U.S. HEALTH CARE
SYSTEM  3 HRS
A survey of important issues facing the health
field: the U.S. health care system and the rela-
tionship between competition: the changing
nature of the health field and implications for
the future (encouraged in sophomore year or
early junior year).

HAD410 ADMINISTRATION OF HEALTH
CARE ORGANIZATIONS  2 HRS
Analysis of modern health care organizations
with emphasis on management structure.
HLED215 Instructional Skills and Strategies for Health Education 3 HRS
This course is designed to prepare health minors to plan and implement instructional programs of quality comprehensive health education. Emphasis will be placed on development of materials as well as methods and strategies used to effectively teach K-12 health education. Methods include lecture, cooperative learning, student presentations and peer evaluation.
Prep: HLED270 and HLED305 or HLED315

HLED340 Health Education and Nutrition: Enhancing Health and Fitness 3 HRS
This course offers a broad overview of nutrition and its applications to enhancing healthy lifestyles. This course is intended for those entering health education or fitness-related fields who will have responsibility for educating future students or clients. Methods include lectures, discussions, personal dietary analysis and the use of web resources.

HLED350 Scientific Foundations in Health Education 3 HRS
This course will familiarize students with the scientific foundations of disease prevention and health promotion, focusing on risk and protective factors for leading causes of death and disability. This course is designed for health minors. Methods include lectures, discussions, personal health risk analysis and the use of web resources.

HLED351 Health Education Program Planning 3 HRS
This course is designed to prepare health minors to understand and develop the skills necessary to identify health needs, plan, implement and evaluate health education programs in the schools and in the community. Methods include lecture, cooperative learning and student presentations.
Prep: HLED270 and HLED305 or HLED315

HLED377/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

HLED380 Psychosocial Health and Service Learning 3 HRS
The mental/interpersonal, psychological/emotional, social and spiritual dimensions of health will be explored as they affect the health of the human being, specifically to psychological functioning. Students will explore self-assessment for aspects of their psychosocial health and complete a service-learning project.
Prep: HLED380

HLED399 Teaching About AIDS 1 HR
A course for prospective teachers, nurses, or others who want to examine the issues pertaining to teaching about AIDS prevention. Includes curriculum, methods and resources.
Prep: one course in AIDS or department permission

HLED402 Selecting Health Products and Services 3 HRS
The development of skills in making wise selections of health products and services. Characteristics of the health consumer, consumer protection agencies and laws, quackery, evaluation of health products and services.
Prep: sophomore standing

HLED405 Health and Aging 3 HRS
A study of some of the major physiological aspects of aging. A review of the basic systemic anatomy and physiology necessary to understand the major aspects of biological aging and the chronic diseases associated with aging. For the general student.
Prep: sophomore standing

HLED450 Health Education Assessment 3 HRS
This course provides an introduction to the use of assessment strategies for health education. Methods include lecture, discussion and active learning projects.
Prep: HLED270/325

HLED460 Concepts in Sexuality Education 3 HRS
This course examines the biological and behavioral dynamics of human sexuality and sexuality education with the identification and examination of contemporary issues. Emphasis will be placed on sexuality education in schools and the community. Methods include lecture, small group discussion, computer applications and student presentations.

HLED477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

HLED480 Stress Management for Teachers 1 HR
This course will introduce students to the relationship between stress and health. Stress management techniques will be emphasized. Methods include lectures, discussions, cooperative learning strategies, personal exploration, lesson plan creation and using web resources.

HLED481 Life Loss Education for Teachers 1 HR
This course is designed to familiarize teachers and pre-service teachers with the skills, resources and activities needed to assist the school age child with the issues of loss, grief and trauma. Methods include: lecture, discussion, self-assessment, cooperative group activities, role-play and the World Wide Web.

HLED482 Conflict Resolution for Teachers 1 HR
This course is designed to familiarize teachers and pre-service teachers with the skills needed for healthy and peaceful resolution of conflict. Methods include: lecture, discussion, self-assessment, cooperative group activities, role-play and the World Wide Web.

HLED490 Drug Use and Abuse 3 HRS
This course offers a broad overview of drug use. Historical perspectives of current problems, pharmacology of drug commonly used and abused, physiological and psychological factors related to abuse, adverse abuse prevention programs, treatment and drugs and the law are all addressed. Methods include lecture, small group discussion, student presentations.

HLED495 Health Education for Diverse Populations 3 HRS
This course is designed to help students identify and develop effective health education programming that will lead to the reduction of health disparities which exist in diverse populations. Methods will include lecture, discussion, and classroom activities designed to enhance application of course content.

HLED497/498/499 Directed Study 1/2/3 HRS
Directed study in areas not covered in other course offerings, or in greater depth of study in an area in which the student has a continuing interest. Students will be assigned to select faculty members for direction, consultation, and evaluation of the completed study or project. Open only to department majors and minors who have attained junior standing, with a grade point average of 3.0 or above, and who have completed the appropriate background courses.
Prep: department permission

HOTEL AND RESTAURANT MANAGEMENT COURSES

HRM103 Introduction to the Hospitality Industry 3 HRS
This is a course designed to expose the hospitality undergraduate to the food service and lodging industries. It covers an introduction to the various segments of the food service industry and lodging industry. Career choices in food service and lodging industries will also be discussed.

HRM130 Sanitation in the Hospitality Industry 2 HRS
Management of basic sanitation in food-service and lodging facilities. Meets specifications required by National Institute for the Food Service Industry certification.

HRM177/178/179 Special Topics 1/2/3 HRS
An experimental course designed to investigate specific topics of concern in specialization areas.
Prep: department permission

HRM180 Foundations of Food Preparation 3 HRS
Study of kitchen sanitation and safety, food

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRM151</td>
<td>Meal Service Management 3 HRS</td>
<td></td>
<td>Theories, principles and skills for food and beverage service in institutional, commercial and retail properties. Supervisory techniques and training tools effective for food service.</td>
</tr>
<tr>
<td>HRM170</td>
<td>People Skills for the Hospitality Industry 3 HRS</td>
<td></td>
<td>An applied approach to encourage the improvement of human relation skills. Addresses personal and professional skills in human relations and encourages the improvement of human interactions. Focused on efforts to enhance the quality of interactions between the service provider and customer.</td>
</tr>
<tr>
<td>HRM177/178/179 Special Topics 1/2/3 HRS</td>
<td>An experimental course designed to investigate specific topics of concern in specialization areas.</td>
<td></td>
<td>Precon: department permission</td>
</tr>
<tr>
<td>HRM187/188/189 Cooperative Education in Hotel and Restaurant Management 1/2/3 HRS</td>
<td>Employment in an appropriate setting, chosen to provide practical and educational experience. Credit hours determined by program area and academic advisor. Offered on credit-credit basis only.</td>
<td></td>
<td>Precon: approval of the Cooperative Education Office and department permission</td>
</tr>
<tr>
<td>HRM190</td>
<td>Franchising and Contract Management 3 HRS</td>
<td></td>
<td>A study of the franchising concept and contract management in hotels and restaurants that represents a substantial segment of the hospitality industry. Analysis of current functioning of the major franchisors. Responsibilities and advantages of contract management in food-service and lodging establishments.</td>
</tr>
<tr>
<td>HRM199</td>
<td>Human Resource Issues in the Hospitality Industry 3 HRS</td>
<td></td>
<td>Hotel and restaurant industry issues related to the administration of personnel with emphasis on strategies for successful recruitment, employment, and retention of employees, particularly technical, service, immigration, and disabled candidates. Includes worker-consumer fit, motivation, and general legal issues relevant to personnel laws in this industry.</td>
</tr>
<tr>
<td>HRM200</td>
<td>Quality Service Management 3 HRS</td>
<td></td>
<td>This course is designed to explore and define the principles of guest-service management in any hospitality organization. Topics include characteristics and attributes of service, analysis of service gaps and development of service strategies to address these gaps and develop strategies.</td>
</tr>
<tr>
<td>HRM202</td>
<td>Seminar in Hospitality Management 3 HRS</td>
<td></td>
<td>Current topics in hospitality management will be covered along with professional development topics related to finding and obtaining a position upon graduation. The development and implementation of a professional communication project will be included in the course.</td>
</tr>
<tr>
<td>HRM240</td>
<td>Cost Controls in the Hospitality Industry 3 HRS</td>
<td></td>
<td>Techniques used by hospitality managers to control food, equipment, labor and operating costs. Purchasing, labor and pilferage controls and fiscal management.</td>
</tr>
<tr>
<td>HRM441</td>
<td>Commercial Purchasing 3 HRS</td>
<td></td>
<td>Study of principles and techniques applicable to purchasing with emphasis on selection and specification requirements for food, supplies, equipment and contract services.</td>
</tr>
<tr>
<td>HRM450</td>
<td>Conference and Catering Management 3 HRS</td>
<td></td>
<td>Overview of the conference planning and catering industry with emphasis on defining the management of events. Discussion of the components of various types of events, negotiating contracts, facilities, catering, support services, and legal issues.</td>
</tr>
<tr>
<td>HRM470</td>
<td>Hospitality Industry Marketing 3 HRS</td>
<td></td>
<td>This course covers information on developing, implementing, and evaluating strategic marketing plans for hospitality properties. Principles of service marketing are covered as they apply to the hospitality industry.</td>
</tr>
<tr>
<td>HRM475</td>
<td>International Hospitality Management 3 HRS</td>
<td></td>
<td>This course is focused on providing a better understanding and deeper appreciation of management and marketing applications within a globalized context. The course presents a systematic approach to preparing students for leadership roles in tomorrow's worldwide lodging industry.</td>
</tr>
<tr>
<td>HRM480</td>
<td>Gaming and Casino Management 3 HRS</td>
<td></td>
<td>This course provides an overview of game and casino operations and management. Topics include gaming trends in the United States and the world, casino and hotel organizational structure, government regulations, and casino games. Also covered are the practices and concerns associated with casino management including staffing, controls, security, marketing, and entertainment.</td>
</tr>
<tr>
<td>HRM496</td>
<td>Strategies in Hospitality Management 3 HRS</td>
<td></td>
<td>Strategies for assessing, planning, implementation, evaluation, and training in hospitality operations will be addressed.</td>
</tr>
<tr>
<td>HRM497/498/499 Independent Study 1/2/3 HRS</td>
<td>Advanced study on an individual basis in areas in which the department does not offer a formal course.</td>
<td></td>
<td>Precon: department permission</td>
</tr>
</tbody>
</table>

Precon: Pre-conference; MATH: Mathematics; HRM: Hospitality Industry Management.
INTERIOR DESIGN COURSES

IDE110 INTERIOR DESIGN STUDIO I 4 HRS
Introduction to technical drawing techniques, interior construction processes, and construction materials used in interior design. Emphasis on graphic communication.
Pre: Interior design majors only
Coreq: IDE111

IDE111 HUMAN FACTORS AND SPECIAL NEEDS 2 HRS
Introduction to the principles of ergonomics and anthropometrics as they influence the design of interior environments. Emphasis: Human factors, universal design, and special-user needs as they impact interior design practice.
Coreq: IDE110

IDE120 INTERIOR DESIGN STUDIO II 4 HRS
Development of interior design graphic presentation skills. Emphasis on sketching, delineation, axonometric and perspective drawing and rendering techniques.

IDE121 INTERIOR DESIGN MATERIALS AND COMPONENTS 2 HRS
Investigation of characteristics, properties, and uses of materials and components specified by the interior designer. Emphasis: Interior finishes and interior furnishings.
Coreq: IDE120 and IDE122

IDE122 DESIGN THEORY II 2 HRS
Introduction to environment, behavior, and psycho-sociological theories as they apply to interior design. Emphasis: Perceptions, color theory, effects of light, and environments/behavior theories as they apply to the design of interior environments.
Pre: A grade of C or better in IDE131
Coreq: IDE120 and IDE121

IDE131 DESIGN THEORY I 2 HRS
Introduction to tasks and responsibilities of an interior designer. Emphasis: Design theories relating to principles and elements: space, proportion and scale, space planning and the design process.

IDE175/198/379 SPECIAL TOPICS 1/1/1 HRS
An experimental course designed to investigate specific topics of concern in specialization areas.
Pre: Department permission

IDE188 INTRODUCTION TO BASIC DESIGN 3 HRS
Application of the basic principles and concepts of design as they pertain to the relationship between contemporary human needs and environmental needs. Color theory: functional and creative interior design. Non-majors only.

IDE189 INTERIOR DESIGN STUDIO III 4 HRS
Introduction to interior design process. Emphasis: creativity, programming, concept development, space planning, design development, and communication skills for introductory-level residential and non-residential design.

IDE190 INTERIOR DESIGN STUDIO IV 4 HRS
Execution of design problems using design processes to integrate both physiological and socio-psychological user needs with the creative and functional design of interior environments. Emphasis on analysis, synthesis, creativity, and presentation of three-dimensional solutions to interior environments.
Pre: A grade of C or better in IDE120
Coreq: IDE122 and IDE124

IDE224 INTERIOR BUILDING CODES AND ADA 2 HRS
Examination of the codes and laws affecting the interior designer and the built environment. Introduction to the code check process and review of ADA guidelines.
Pre: A grade of C or better in IDE120

IDE238 HISTORY OF INTERIORS: 800–PRESENT 2 HRS
Chronological survey of interior design from the mid-19th century through the present. Emphasis on design, function, construction and evolution of interior environments and the sociological, psychological and cultural factors that influenced interior environments.
Pre: A grade of C or better in IDE120

IDE272/278/379 SPECIAL TOPICS 1/1/1 HRS
An experimental course designed to investigate specific topics of concern in specialization areas.
Pre: Department permission

IDE310 INTERIOR DESIGN STUDIO V 4 HRS
Application of the design process to medium scale project focusing on physiological, socio-psychological, functional and aesthetic elements and their relationship to user needs.
Pre: Must meet criteria for enrollment in 200-level interior design studio courses; department permission
Coreq: IDE314

IDE344 COMPUTERS FOR INTERIOR DESIGN II 2 HRS
Advanced computer-aided design techniques. Emphasis: three-dimensional drawing, graphics, and presentation software.
Pre: Department permission
Coreq: IDE310

IDE357 LIGHTING FOR INTERIORS 2 HRS
Introduction to lighting design for interior environments. Emphasis on lighting design fundamentals, lighting design principles and theories of lighting design, the lighting design process and methods and familiarity of light sources and energy considerations.

IDE360 INTERIOR DESIGN STUDIO VI 4 HRS
Application of the interior design process to medium scale project focusing on physiological, socio-psychological, functional and aesthetic elements and their relationship to user needs.
Pre: A grade of C or better in IDE310
Coreq: IDE321 and IDE322

IDE362 INTERIOR DESIGN SPACE PLANNING AND SPECIFICATION 2 HRS
Space planning and specification techniques for interiors. Emphasis: Space planning and specification of non-residential environments and the integration of space planning with electrical, acoustical, mechanical, and lighting systems within the built environment.
Pre: A grade of C or better in IDE310
Coreq: IDE320 and IDE321

IDE363 HUMAN FACTORS IN OFFICE DESIGN 2 HRS
Pre: IDE310 Coreq: IDE320 and IDE322

IDE377/378/379 SPECIAL TOPICS 1/1/1 HRS
An experimental course designed to investigate specific topics of concern in specialization areas.
Pre: Department permission

IDE390 INTERIOR DESIGN STUDIO VII 4 HRS
Application of the interior design process to solving a large scale project focusing on historic preservation, restoration and adaptive reuse. Emphasis on the physiological, socio-psychological, functional and aesthetic elements to their relationship to user needs.
Pre: A grade of C or better in IDE320
Coreq: IDE411

IDE411 INTERNSHIP IN INTERIOR DESIGN 1 HRS
Supervised work experience in the interior design field. Emphasis: Professional competency, professional ethics, and self-evaluation.
Pre: A grade of C or better in IDE320
Coreq: IDE410

IDE420 INTERIOR DESIGN STUDIO VIII 4 HRS
Application of the interior design process to solving a comprehensive large scale and complex interior design project focusing on physiological, socio-psychological, functional and aesthetic elements and their relationship to user needs.
Pre: A grade of C or better in IDE410
Coreq: IDE422
COLLEGE OF HEALTH AND HUMAN SERVICES COURSES

IHS114/178/479 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

IHS226 COMPUTERS FOR HEALTH AND HUMAN SERVICES 3 HRS
This interdisciplinary computer literacy course will introduce students to computers and their applications in health and human services. Students will learn about computers and computer language. This course will include applications of computer technology to direct services for clients as well as the use of computers to manage work.

IHS260 AGING TO INSTANCIA: A LIFECOURSE RETROSPECTIVE 3 HRS
The life course perspective calls attention to human development and aging as a life long process, the role of human agency, timing and interdependence of lives and their historical time and place. Ethnicity, gender, social orientation, socioeconomic issues and the spheres of education, work and leisure are also considered.

IHS277/478/479 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

IHS377/478/479 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

IHS477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

IHS479/478/479 Independent Study 1/2/3 HRS
Advanced study on an individual basis in areas in which the department does not offer a formal course.

INTERDISCIPLINARY TECHNOLOGY COURSES

INDT101 INTRODUCTION TO AIR TRANSPORTATION 3 HRS
This course is designed to provide a basic understanding of the operational categories within civil aviation and the functions of state and federal government in its control and regulation. The history, scope, and diverse nature of aviation will be discussed, together with some of the many occupational opportunities available.

INDT104 INTRODUCTION TO COMMUNICATION TECHNOLOGY 2 HRS
An introduction to the field of communication technology. Communication theory and the graphic and telecommunication industries. Lecture: two hours per week.

INDT105 AIRCRAFT MAINTENANCE I 3 HRS
The functions and role of maintenance personnel in an aviation maintenance organization. Lecture: three hours per week.

INDT106 FLIGHT OPERATIONS I 3 HRS
The role of aviation in general aviation and the interface with regulatory agencies and parent organizations. Lecture: three hours per week.

INDT107 GRAPHIC COMMUNICATION 3 HRS
Preparation and design of graphic media. The theory and application of effective communications. Information collection, analysis and dissemination: survey of the graphic communication industry. Lecture: three hours per week.

INDT108 INTRODUCTION TO TECHNOLOGY MANAGEMENT 3 HRS
This course will provide the student with an understanding of technology management issues and introduce them to the necessary aspects required to manage a technological enterprise.

INDT109 UNDERSTANDING TECHNOLOGY 3 HRS
A course to develop basic technological literacy by providing an introduction to technological concepts and problems and to the technology literature. Several concrete technological systems and their dynamics, particularly as they relate to society will be examined.

INDT110 AVIATION GROUND INSTRUCTION 3 HRS
Basic ground instruction in aerodynamics, navigation, federal aviation regulations, meteorology, and flight procedures directed toward preparation for the private pilot written examination.

INDT170 MICROCOMPUTER APPLICATIONS IN TECHNOLOGY 3 HRS
An introduction to microcomputers and their applications in technology. The course contains an introduction to word processing, spreadsheets, database management, and their applications.

INDT207 PHOTOGRAPHIC COMMUNICATION 3 HRS
Basic functions, principles and applications of photography in graphic communication. Lecture: two hours per week. Laboratory: two hours per week. Students must furnish their own camera and photo materials.

INDT208 PHOTO-TECHNOLOGY 3 HRS
The techniques of high sensitive materials used in industry: includes photo-charging and photofabrication. Lecture: one hour per week. Laboratory: two hours per week.

INDT247 PHOTOGRAPHIC REPRODUCTION 3 HRS
Study and laboratory work in photomechanics, stripping and photography as applied to offset presswork. Includes the preparation of layout materials for prepress. Lecture: one hour per week. Laboratory: two hours per week.

INDT280 AVIATION HUMAN FACTORS 3 HRS
A course designed to provide the student with an introduction to human factors as applied in aviation. Topics include human error, fatigue, visual illusions, attitudes, training, displays and controls, biological factors, psychological factors, and social factors.

INDT301 AIRCRAFT MAINTENANCE II 3 HRS
The functions and organization of an aircraft maintenance facility and role of the supervisor within that structure. Lecture: three hours per week.

Per: IND1710
an aviation operation within the guidelines of international and federal aviation industry regulations together with the influence of local and state requirements will be presented.

INDT344 A SOCIO-TECHNICAL SYSTEMS APPROACH TO PROCESS IMPROVEMENT 3 HRS
The purpose of this course is to describe an approach to process improvement that integrates technical aspects of industrial engineering with social psychological dimensions of work processes. The course will delineate ideas for strategically incorporating technology levers into plans for improving work processes on an individual and group level.

Prep: Coreq. INDT120

INDT355 AIRPORT MANAGEMENT 3 HRS
The major elements in the process of planning and managing airports are presented including the Federal Airport Policy, the airport master-plan process, capacity analysis, site selection and funding. The historical development of and current practices in airport administration, operations management, maintenance and safety will be presented.

Prep: IND T120

INDT358 GRAPHIC ARTS WORKSHOP 3 HRS
Selected topics in the field of graphic arts technology, such as composition, press work, screen process and advanced photomechanics. May be repeated for additional credit.

Prep: IND T120

INDT359 AVIATION SAFETY 3 HRS
In-depth study of aviation safety (flight and ground accident prevention, accident investigation and personnel training.

Prep: IND T120

INDT361 COCKPIT AND CREW RESOURCE MANAGEMENT 3 HRS
The major elements in the process of planning and managing cockpit and crew resources are presented. This course will present an introduction to the theories and concepts that make up the elements of Cockpit and Crew Resource Management (CRM). Topics including aviation human factors, high integrity flight teams, stress and performance, situational awareness and assessment, decision making, conflict resolution and problem solving will be explored.

Prep: IND T120

INDT360 RELATIONSHIPS IN WHOLESALEING 3 HRS
Analysis of major industries and professional trade associations, and their interaction within the marketing channel. Emphasis will be placed on the relationship between trade associations and industry, elements of the marketing channel (manufacturers, distributors, customers, and the employer and employee).

Prep: IND T120

INDT364 INSTRUMENT GROUND INSTRUCTION 2 HRS
Advanced ground instruction in flight instrument systems, attitude instrument flying, instrument navigation, weather, Air Traffic control systems, and Federal Aviation Regulations directed toward preparation for the FAA instrument written and practical examinations.

Prep: IND T170

INDT347 COMMERCIAL GROUND INSTRUCTION 2 HRS
Advanced ground instruction will be presented to include aerodynamics, airports and aircraft operations, Federal Aviation Regulations, meteorology, weather reports, aircraft performance, aircraft systems, weights and balances, and commercial pilot operations. Restricted to Aviation Flight Technology Majors (all concentrations) and aviation only.

Prep: IND T341

INDT345 INDUSTRIAL DIRECT RESPONSE 3 HRS
The course focuses on strategies, processes, and techniques used to elicit industrial sales and develop markets by distributors. Students will examine the tools various "key" industry leaders use to penetrate the industrial market. Through case study and field experience, the students will be able to problem solve and provide cost effective solutions to industry concerns.

Prep: IND T346

INDT346 INDUSTRIAL CLIMATE 3 HRS
Focus will be on various "key" industries that make-up the wholesale market. Manufacturing and the tiered supply base, HVAC, electrical, electronic, abrasives and cutting tools, food power, fasteners, safety and security equipment, paper, sporting goods, doughing etc. will be areas of concentration with emphasis on the role distributors play in the process.

Prep: IND T340

INDT30 WIRE TECHNOLOGY II 3 HRS
An intermediate course designed to study contemporary concepts and practices of wire manufacturing.

Prep: IND T250 or approval of instructor

INDT353 ADVANCED FLIGHT I 2 HRS
The student will receive instruction in basic attitude flying, partial panel operations, VOR/ NDB orientation and tracking, departures, arrivals, instrument approaches, holding patterns and IFR cross-country planning and operations. The course will prepare the student for the FAA instrument pilot written and oral examinations.

Prep: IND T271

INDT361 ADVANCED FLIGHT II 2 HRS
The student will receive dual instruction to introduce commercial flight operations. The student will also complete extensive cross-country flights towards the minimum qualifications for the FAA Commercial Pilot Certificate.

Prep: IND T351

INDT371 ADVANCED FLIGHT III 2 HRS
The student will complete the dual instruction and solo practice in all phases of flight training specified by the Federal Aviation Administration for the insurance of the Commercial Pilot Certificate and the instrument rating. The student will complete the oral examinations and flight tests required for this certificate and rating.

Prep: IND T361

INDT377/378/379 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than one, provided different topics are studied.

Prep: department permission

INDT380 PLANNING AND DECISION-MAKING FOR PUBLIC SAFETY 3 HRS
The study of planning and decision-making techniques as applied to public safety operations includes attention to concepts, e.g. the process of change in organizations, as well as particular skills and techniques, e.g. PERT, decision trees.

Prep: IND T381

INDT382 PUBLIC RELATIONS AND PUBLIC SAFETY 3 HRS
An examination of the relationship between public safety agencies and the larger community, with particular emphasis on administrative and policy dimensions: the role of public safety agencies, the community's involvement in establishing that role, police-community relations programs, relationships with the media, and professional training and accreditation movements in public safety agencies are addressed.

Prep: IND T384

INDT384 MULTI-ENGINE AIRCRAFT SYSTEMS GROUND INSTRUCTION 3 HRS
A course designed to prepare the student to meet Federal Aviation Administration requirements for the FAA Flight Instructor Certificate for an airplane category rating and single-engine land class rating. Theory of instruction, the learning process, instructor responsibilities and authority will be presented.

Prep: IND T360 or permission

INDT387 COOPERATIVE EDUCATION IN INTERDISCIPLINARY TECHNOLOGY 3 HRS
A minimum of three to four months of full-time employment in a business or industry that provides experiences directly related to the major area of study. Work sites must be approved in advance by the Interdisciplinary Technology Department. Regular employee benefits may be received during the employment period.

Prep: department permission

INDT391 WHOLESALE ACCOUNT DEVELOPMENT 3 HRS
An in-depth study into the processes and techniques involved in acquiring and developing industrial customer accounts from the distributor's and the manufacturer's point of view. The course will develop practical and effective skills in the area of advanced industrial wholesale account development. Guest lectures by manufacturers' representatives and from purchasing agents will augment the course.
INDT400 Polymers and Coatings  
Technology I  
Introduction to synthesis, film formation, structure, and properties of polymers commonly used in coatings. Polymer systems to be covered include acrylics, vinyls, polyesters, alkyls, oils, epoxies, epoxies, alkyd, unsaturated, silicones, phenolics, hydrocarbons, celluloses.  
Prereq: CHEM371/372

INDT401 Polymers and Coatings  
Technology I Laboratory  
Synthesis, characterization and identification of polymers used in coatings. The synthesis of solution acrylic, vinyl, acrylic emulsion, polyesters, epoxies, epoxies, melamine formaldehyde and urethane polymers with extensive use of physical techniques such as G Karl, GP and colorimetry.  
Coreq: IND400

INDT402 Polymers and Coatings  
Technology II  
Formulation in oil-based and waterborne coatings covering the use of solvents, pigments and additives. Principles of adhesion and corrosion, and the use of conversion coatings. Safety, health, government regulations and paint production techniques.  
Prereq: IND400

INDT403 Polymers and Coatings  
Technology II Laboratory  
Practical formulation in oil-based and waterborne systems including the preparation and evaluation of various topcoats and primers currently used in the coatings industry (e.g., oil-based air-dry enamel, thermosetting coating, epoxies, primers, two-package urethane, acrylic latex and ED primer).  
Coreq: IND402

INDT404 Photo Communication  
Workshop  
Selected topics in photo communications, such as commercial and industrial photography, photojournalism, scannography and photography, and photo processing. The class schedule describes the specific topic being offered during a given semester. May be repeated for credit.  
Prereq: IND404

INDT405 Coating Processes I  
3 HRS  
Development of expertise in industrial coating processes. Substance preparation, principles of adhesion, corrosion control, industrial coating materials, industrial coating systems, and regulatory compliance in the coating industry.  
Prereq: IND405 or IND400 or department permission

INDT406 Coating Processes II  
3 HRS  
Process and equipment for coatings applications, economic analysis of coating operations, paint deflection and line design for productivity and energy conservation.  
Prereq: IND405 or department permission

INDT408 Telephone Technology  
3 HRS  
This class will cover an introduction to telecommunications theory and practice. The course content will include both traditional private branch exchanges (PBXs) and voice over Internet protocol (VoIP) systems. The administration of these systems, their configuration, and the testing of the hardware and software components will be covered. Lecture/lab course.  
Prereq: IND405

INDT409 Emerging Technologies in Storage and Retrieval  
3 HRS  
Conventional as well as emerging technologies of information storage and retrieval. Lecture and laboratory.  

INDT411 Organizational Behavior for Public Safety Managers  
3 HRS  
This course examines the evolution of Public Safety Organizations, Modern American Police and Fire Leaders, and the impact that various forces have had on the evolution and development of Public Safety Administration. A distinction between Management and Administration is presented within the context of organizational behavior.  
Prereq: IND400 or department permission

INDT415 Senior Seminar in Technology Management  
3 HRS  
This course will allow students to synthesize the structure and procedures of strategic management and project management. The course will integrate the ideas and information presented in other courses within the Technology Management concentration. Students will demonstrate their ability to integrate information acquired from previous classes within a capstone project.  
Prereq: IND410

INDT416 Water-Based Coatings  
3 HRS  
A course to present the technology involved in preparing and utilizing water-based coatings (solvent-based, powder, and others) are presented. The requirements for polymers and other ingredients of water-based coatings formulations are taught.  
Prereq: IND410; Coreq: IND400

INDT419 High Airspeed Aerodynamics/High Altitude Flight  
3 HRS  
A course designed to meet the Federal Aviation Administration ground training requirements for pilots who will conduct flight operations above 25,000 feet. The course will cover aerodynamic and physiological considerations for high altitude flight.  
Prereq: IND419

INDT420 Women and Technology  
3 HRS  
This course surveys gender issues surrounding technology development, transfer and use. We will examine these issues from historical, contemporary and global perspectives.  

INDT421 Web Publishing Technology  
3 HRS  
An introduction to HTML coding. Web page design, Web page editors, graphics, sound files and multimedia. Also included will be an introduction to online services, servers and ongoing maintenance of the Web site. Not available to students in Converting Education.  
Prereq: IND420

INDT422 Senior Seminar in Aviation Management  
3 HRS  
Current issues in aviation management will be explored using group and individual projects and analysis of case studies. Research, analysis, and application of skills and knowledge acquired in other course work will be stressed.  
Prereq: department permission

INDT423 Communication Technology and Social Change  
3 HRS  
The social implications of recent and future developments in communication technology. The effects upon education, research and scientific knowledge, business and entertainment.  

INDT424 Advanced Flight IV: Multi-Engine  
2 HRS  
This course consists of the flight training requirements to meet the FAA multi-engine class rating. This course is conducted off campus by an approved flight training provider.  
Prereq: IND421; Coreq: IND424

INDT425 Advanced Flight V: Certified Flight Instructor-Airplane  
2 HRS  
This course consists of the flight training requirements for the student to meet Federal Aviation Administration standards for the rating of Certified Flight Instructor-Airplane.  
Prereq: IND412

INDT426 Advanced Flight VI: Certified Flight Instructor- Instrument  
2 HRS  
This course consists of the flight training requirements for the student to meet Federal Aviation Administration standards for the rating of Certified Flight Instructor-Instrument.  
Prereq: IND422

INDT427 Advanced Flight VII: Certified Flight Instructor-Multi-engine  
2 HRS  
This course consists of the flight training requirements for the student to meet Federal Aviation Administration standards for the rating of Certified Flight Instructor-Multi-engine.  
Prereq: IND424

INDT428 Aviation Investigation  
3 HRS  
An examination of the nature and causes of suspicious and incendiary fires, their detection and investigation, involves classroom lecture and field training. Students will conduct fire scene investigations, collect evidence, document findings, and participate in a mock trial. Assumes no previous experience in fire investigation. Students must provide their own 35mm cameras, safety shoes, gloves and hard hats.  
Prereq: CHEM1171118 or ENTR221

INDT429 Hazardous Materials  
3 HRS  
An examination of hazardous material incidents from the perspective of the public safety officer.
INDT443 INCIDENT COMMAND 3 HRS
The study of complex fire situations, including analysis of fire protection, developing a command post, and effective management of complex fireground operations. Emphasizes the study of multiple company response and the efficient utilization of available and compatible resources in handling major fires.
Prep: PLSC450 or department permission.

INDT446 ELECTRONIC PUBLISHING TECHNOLOGY 3 HRS
The application of electronic design and layout principles to publication and presentation documents. Develop skills in graphics, type, file creation and manipulation, word processing interface, and output of paginated, camera-ready copy through several software packages.

INDT447 SCHOOL SAFETY—EMERGENCY PLANNING/INCIDENT COMMAND 3 HRS
Course provides analysis and strategies for educators in their response capabilities to school safety. Technical and Natural Disaster preparation, Incident Command System for Educators, techniques for home searching, preparation for weapons of mass destruction, and school shootings will be covered. Site security analysis will be applied.

INDT448 PERSONNEL FOR PUBLIC SAFETY MANAGERS 3 HRS
This course is concerned with issues of personnel management that are problematic or unaddressed. Emphasis will be placed on the development of strategies for personnel management for police/fire/EMD personnel administration often a confusing matter to the public because of constraints from other governmental bodies, courts, and union contracts.
Prep: PLSC354 or department permission.

INDT449 BUDGETING FOR PUBLIC SAFETY MANAGERS 3 HRS
To prepare students for proficiency with the budget/fund/EMD budgetary perspective. Accounting terms and budgetary models will be presented including line item, zero based and programmed. Microsoft Excel will be utilized.
Prep: PLSC354 or department permission.

INDT450 INVENTORY STRATEGIES IN DISTRIBUTION 3 HRS
An examination of the wholesale inventory management problem. The interrelationship between physical inventory, profitability and customer service will be explored.
Prep: IND720

INDT451 FOREIGN and DOMESTIC TERRORISM FOR FIRST RESPONDERS 3 HRS
This is a technical course that provides for the preparation and response to a foreign or domestic act of terrorism. Students will explore the technology of weapons of mass destruction, how to prepare their communities, respond to the incident, and mitigate the effects of a terrorist act.

INDT444 QUALITY PLANNING IN DISTRIBUTION 3 HRS
Wholesale distributions are moving toward a total commitment to the philosophy of continuous improvement with zero errors as their ultimate goal. The course explores the quality assurance movement as it applies to wholesalers.

INDT448 WAREHOUSE POLICY AND DISTRIBUTION 3 HRS
Warehousing policies used to support supply integration from the manufacturers to the end users will be examined. The balance of power between the manufacturers and distributors has changed significantly. This course will examine these changes and the effect they have on today's economy through an analysis of sound policies.
Prep: IND490

INDT450 ADVANCED COATINGS Topics III 3 HRS
Advanced wire technology, in-depth study of wires in manufactured products.
Prep: IND7350 or permission of instructor.

INDT455 CURRENT TRENDS IN EMERGENCY MANAGEMENT 3 HRS
This course was designed to provide students with the knowledge of emergency management and the philosophy of emergency planning for community, business, and industry. Students will develop a management perspective on issues, concerns and constraints to emergency responders as they become part of the current management dialogue.
Prep: IND725

INDT455 MANAGEMENT PROCESS FOR PUBLIC SAFETY MANAGERS 3 HRS
Analysis of public safety management; elements, including planning, organizing, leading, controlling, and communicating, presented in the context of and applied to internal police/fire/emergency management administration. Equivalent to PLSC450.
Prep: IND7380 or department permission.

INDT454 ISSUES AND SKILLS FOR SENIOR ADMINISTRATORS 3 HRS
This course deals with issues facing the senior commander. It provides an analysis of the various positions within an organization, and the best way to accomplish organizational objectives. Methods for assessing control, how to use time, and how to manage stress are the major topics presented. Equivalent to PLSC451.
Prep: IND7452 or department permission.

INDT455 ADVANCED COATINGS Topics IV 3 HRS
Development of in-depth formulation skills new technology areas in coatings and polymers.
Prep: IND7452, IND7453 or department permission.

INDT470 SENIOR SEMINAR IN COMMUNICATION TECHNOLOGY 2 HRS
Guest speakers and/or site visits will be used to illustrate the application of new communication technologies common to business, industrial or governmental environments.

INDT475 MANAGING CORRECTIONAL AGENCIES AND FACILITIES 3 HRS
A study of administrative practices in correctional agencies and facilities, including attention to organization structure, management problems, financing, safety of offenders, intervention strategies, and community-based programs.
Prep: PLSC450 or department permission.

INDT477/478/479 SPECIAL TOPICS 1/2/3 HRS
An examination of topics in interdisciplinary technology not covered in other departmental offerings. Students may elect those courses more than once, provided different topics are studied.
Prep: department permission.

INDT495 TECHNOLOGY, VALUES, AND THE FUTURE 3 HRS
The development of modern technological societies require major breakthroughs in the physical and life sciences, the influence of some of these breakthroughs on technological development, the consequent shaping of new world views and, hence, values in contemporary and future societies, the relationships between new technology and the political and sociological and environmental settings, the relationship between technology and values.

INDT497/498/499 INDEPENDENT STUDY 1/2/3 HRS
Individual work in some area of interdisciplinary technology under the direction of a faculty member. Preliminary draft of proposed study must be approved by the department prior to enrollment. May be elected more than once, after re-submission and approval.
Prep: department permission.

INSURANCE COURSES

INS572/573/575 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission.

INS772/778/779 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may
15.1 System Design

The design of the system must be based on the requirements and specifications outlined in the business requirements document. The design should include detailed planning for hardware, software, and networking components, as well as for the user interface and data storage. The design should also incorporate security considerations to protect the system from unauthorized access and data breaches.

15.2 Hardware Selection

The hardware selection process is critical to the success of the system. The appropriate selection of hardware components will ensure that the system can meet the performance requirements and scale as needed. The hardware selection should be based on costs, scalability, and existing infrastructure.

15.3 Network Configuration

A robust network configuration is essential for the efficient operation of the system. The network should be designed to ensure high availability, fault tolerance, and security. The network design should also take into account the need for future expansion and growth.

15.4 Software Selection

The selection of software components is critical to the operation of the system. The software should be selected based on cost, functionality, and compatibility with existing systems. The software should also be selected based on the need for future expansion and growth.

15.5 Data Storage

Data storage is an essential component of any system. The data storage solution should be selected based on cost, scalability, and security. The storage solution should also take into account the need for future expansion and growth.

15.6 User Interface Design

The user interface design should be simple and intuitive, allowing users to easily access and use the system. The design should also take into account the needs of different user groups, such as administrators, end users, and technical staff.

15.7 Security Considerations

Security considerations must be integrated into the system design from the outset. The system should be designed to protect against threats such as unauthorized access, data breaches, and malware attacks. The system should also be designed to comply with all relevant laws and regulations.

15.8 Performance Testing

Performance testing is an essential part of the system design process. The system should be tested to ensure that it meets the performance requirements specified in the business requirements document. The testing should be done using realistic workloads and scenarios.

15.9 Quality Assurance

Quality assurance is a critical component of the system design process. The system should be tested to ensure that it meets the quality standards specified in the business requirements document. The testing should be done using realistic workloads and scenarios.

15.10 System Integration

System integration is an essential part of the system design process. The system should be integrated with other systems, such as databases, applications, and networks, to ensure that it functions as intended.

15.11 System Deployment

System deployment is an essential part of the system design process. The system should be deployed in a controlled and systematic manner to ensure that it functions as intended.

15.12 System Monitoring and Maintenance

System monitoring and maintenance are essential components of the system design process. The system should be monitored to ensure that it functions as intended, and it should be maintained to ensure that it remains current and relevant.

15.13 System Retirement

System retirement is an essential part of the system design process. The system should be retired in a controlled and systematic manner to ensure that it is no longer required and that any associated costs are minimized.

15.14 Change Management

Change management is an essential part of the system design process. The system should be managed in a systematic and controlled manner to ensure that changes are implemented as intended and that the system remains robust and efficient.

15.15 System Lifecycle Management

System lifecycle management is an essential part of the system design process. The system should be managed throughout its lifecycle to ensure that it meets the needs of the organization and that it remains relevant and efficient.

15.16 System Closure

System closure is an essential part of the system design process. The system should be closed in a controlled and systematic manner to ensure that it is no longer required and that any associated costs are minimized.

15.17 System Reuse

System reuse is an essential part of the system design process. The system should be reused in a controlled and systematic manner to ensure that it remains robust and efficient.

15.18 System Retention

System retention is an essential part of the system design process. The system should be retained in a controlled and systematic manner to ensure that it remains relevant and efficient.
JPNE 444 ADVANCED JAPANESE
Communication 3 hrs.
The course aims to develop advanced conversational fluency. Students are expected to participate actively in group discussion. Instruction includes extensive vocabulary building for discussing a variety of subjects. In Japanese. Prereq: JPNE 345 or department permission.

JPNE 446 BUSINESS JAPANESE I 3 hrs.
The course aims to increase proficiency in business communication in Japanese and to develop knowledge of Japanese business, industry and foreign trade. Excessive work on the vocabulary and idiom of Japanese economy and business. In Japanese. Prereq: JPNE 361 and JPNE 444 or department permission

JPNE 447 BUSINESS JAPANESE II 3 hrs.
The course provides an overview of the system of organization, managerial style, and personnel relations of Japanese companies. Study of business communication focuses on business correspondence and translation. In Japanese. Prereq: JPNE 446 or department permission.

JPNE 477/478/479 SPECIAL TOPICS 1/2/3 hrs.
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. Prereq: department permission.

JPNE 495/498/499 INDEPENDENT STUDY 1/2/3 hrs.
Advanced study on an individual research basis in areas not covered in formal course work. Prereq: department permission

JRN 215 NEWS WRITING AND REPORTING 3 hrs.
An introduction to newspaper reporting. Learning to gather information and to write in an approved journalistic style. Course offers practical instruction and writing exercises in interviewing, news story development, lead writing and editing skills. Substantial use of computers lab.

JRN 277/278/279 SPECIAL TOPICS 1/2/3 hrs.
An examination of topics in journalism not covered in other departmental offerings. Students may elect this course more than once, provided different topics are studied. Prereq: sophomore standing.

JRN 301 EDITORIAL COLUMN, AND REVIEW WRITING 3 hrs.
Writing of interpretive articles, editorials, reviews, and columns. Aimed at developing the student's critical faculties, it includes the study of public opinion and efforts to change it, the principles of argument and persuasion, and the aesthetic principles guiding cultural criticism. Prereq: JRN 215.

JRN 306 FEATURE WRITING 3 hrs.
Writing of feature and interpretive articles for newspapers and magazines. Emphasis is on idea generation, research, interviewing, narrative technique, and organization of longer articles. Prereq: JRN 215.

JRN 307 COPY EDITING 3 hrs.
Editing news articles for publication. Students learn style (Associated Press) and grammar in detail. Also study techniques for improving stories by tightening, checking accuracy, and presenting against legal and ethical problems. Includes headline writing. Prereq: JRN 215.

JRN 414 NEWSPAPER LAYOUT AND DESIGN 3 hrs.
Hands-on study of newspaper layout, design, pagination, and production. Emphasis is on presentation of the written word, photographs, and graphics, using current newspaper publishing standards and software. Prereq: JRN 215.

JRN 415 INTRODUCTION TO PUBLIC RELATIONS 3 hrs.
Definition, historic aspects, evolution and ethics of public relations; the practical use of public relations by corporations, non-profit organizations, businesses, institutions and government; correlation of written, oral and visual skills. Prereq: JRN 215 and CTAS 212 or CTAS 224.

JRN 416 HISTORY OF AMERICAN JOURNALISM 3 hrs.
A survey of the evolution of journalism in the United States and how journalism both has influenced and been influenced by the larger history of America. Emphasis is placed on the history of newspapers and magazine journalism and on key journalists of enduring importance. Prereq: sophomore standing.

JRN 417 WRITING FOR PUBLIC RELATIONS 3 hrs.
Practical experience in writing press releases, broadcast announcements, speeches and scripts to present a project or product; preparing brochures, newsletters, annual reports, brochures and proposals; implementing public relations campaigns. Prereq: JRN 217.

JRN 477/478/479 SPECIAL TOPICS 1/2/3 hrs.
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. Prereq: department permission

JRN 478 COOPERATIVE EDUCATION IN JOURNALISM/PUBLIC RELATIONS 3 hrs.
Employment for pay in the print media, public relations or publishing fields to provide practical experience for skills learned in the classroom. Work experiences generally are alternated with full-time attendance at the University. Prereq: junior or senior standing; admittance by application to the Cooperative Education Office and recommendation approval by a journalism professor.

JRN 480 CASE STUDIES IN PUBLIC RELATIONS 3 hrs.
Solving problems and managing controversy in the day-to-day pursuit of public relations; legal considerations; crisis communication; professionalism and public responsibility in public relations. Prereq: JRN 214.

JRN 423 MAGAZINE ARTICLE WRITING 3 hrs.
A writing course to develop skills in researching, writing and marketing fiction articles longer and more complex than newspaper feature stories. Emphasis is on individual completion of articles of professional quality. Prereq: ENG 320 or JRN 306.

JRN 433 ADVANCED REPORTING 3 hrs.
Researching and writing news stories dealing with complex topics including courts, politics, government, finance, labor and education. Emphasis is on journalistic initiative and investigative reporting. Prereq: JRN 215.

JRN 454 CONTEMPORARY PROBLEMS IN JOURNALISM 3 hrs.
Emphasis on student investigation, reporting and writing on selected ethical problems in the media industry, such as conflicts between advertising and editorial content and actual or perceived conflicts of interest between journalists and people they cover. Emphasis on conducting in-depth studies of major social issues and quality of media coverage. Prereq: junior standing.

JRN 455 JOURNALISM AND THE LAW 3 hrs.
An advanced professional course exploring issues of defamation of character, invasion of privacy, copyright, conflicts between the press and the courts, hate speech, obscenity, access to
restricted government records, broadcast regulation, and various forms of censorship.  
Perm: junior standing.

JRN147/148/147 Special Topics 1/2/3 HRS  
An examination of topics in journalism not covered in other departmental offerings. Students may elect this course more than once, provided different topics are studied. 
Perm: junior standing and department permission.

JRN147: COOPERATIVE EDUCATION IN JOURNALISM/Public Relations 3 HRS  
Employment for pay in the print media, public relations or publishing fields to provide practical experience for skills learned in the classroom. Work experiences generally are alternated with full-time attendance in the classroom. 
Perm: junior or senior standing, admittance by application to the Cooperative Education Office and recommendation approved by a journalism professor.

JRN148/149/149 INTERNSHIP IN JOURNALISM/Public Relations 1/2/3 HRS  
Optional, practical on-the-job work experience for recommended students electing an opportunity provided by the department or finding an appropriate outside opportunity subsequently approved by the intern supervisor. Students may elect more than once, provided different topics are studied. 
Perm: junior standing and recommendation of journalism professor.

JRN149/48/490 INDEPENDENT STUDY 1/2/3 HRS  
Study of topics not offered in the regular curriculum, the particular topic to be determined (and credit hours) by the instructor and student, subject to approval by the curriculum committee. Restricted to students taking majors or minors in the English Language and Literature Department. 
Perm: none based on the appropriate major or minor.

LATIN COURSES

LATN101 BEGINNING LATIN I 3 HRS  
This course introduces students to the basic vocabulary, grammar, and syntax of the Latin language with a view to the reading of Roman literature. Satisfies the general education foreign language composition requirement, Area I.

LATN102 BEGINNING LATIN II 3 HRS  
As a follow-up to LATN101, this course will continue a general introduction to the basic vocabulary, grammar, and syntax of the Latin language with a view to the reading of Roman literature. Satisfies the general education foreign language composition requirement, Area I. 
Perm: LATN101

LATN201 INTERMEDIATE LATIN I 3 HRS  
As a follow-up to LATN101-102, this course will cover a full survey of the elements of Latin grammar and syntax. It will also introduce students to the reading of original passages of major authors, especially prose writers such as Cicero, Caesar, Sallust, and Livy. 
Perm: LATN102

LATN202 INTERMEDIATE LATIN II 3 HRS  
As a follow-up to LATN201, this course will review basic and finer points of the grammar and syntax of ancient Latin during the reading of major authors such as Lucan, Catullus, Vergil, Cicero, Seneca, Tacitus, and Juvenal. 
Perm: LATN201

LATN277/278/279 SPECIAL TOPICS 1/2/3 HRS  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. 
Perm: department permission.

LATN377/378/379 SPECIAL TOPICS 1/2/3 HRS  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. 
Perm: department permission.

LATN477/478/479 SPECIAL TOPICS 1/2/3 HRS  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. 
Perm: department permission.

LATN497/498/499 INDEPENDENT STUDY 1/2/3 HRS  
Advanced study on an individual research basis in areas not covered in formal course work. 
Perm: department permission.

LAW COURSES

LAW193 LEGAL ENVIRONMENT OF BUSINESS 3 HRS  
The judicial system and legal procedure, crimes and torts, commercial arrangements, sales of goods, and other transactions under the Uniform Commercial Code. 
LAW195 LEGAL RESEARCH 3 HRS  
The performance of research on several actual legal problems. 
Perm: LAW293

LAW490 INTERNATIONAL BUSINESS LAW 3 HRS  
The course will focus on international business law applicable to international business transactions. Topics covered will include: 1) international sales, transport, credit and commercial agreements; 2) legal problems of the world using contracts; 3) regional free trade areas; 4) regulation of the marketplace including licensing, patent, advertising, sales representation, foreign investment, and business factions. 
Perm: LAW293 or Law Practice Technology.

LAW492 LAW OF BUSINESS ENTERPRISES 3 HRS  
The law of forms of business enterprise and negotiable instruments. Agency, partnerships, corporations and negotiable instruments. 
Perm: LAW293 or department permission.

LAW493 EMPLOYMENT LAW 3 HRS  
The legal framework within which business (or public) managers must make employment and labor relations decisions; includes basic employment law, due process, human rights, and labor relations. 
Perm: LAW293 or department permission.

LAW496 LAW OF ECONOMIC INSTITUTIONS 3 HRS  
The legal framework within which business (or public) managers must make employment and labor relations decisions. 
Perm: LAW293 or department permission.

LEGAL ASSISTANT (PARALEGAL) COURSES

LEGAL197/198/199 SPECIAL TOPICS 1/2/3 HRS  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. 
Perm: department permission.

LEGAL297/298/299 INDEPENDENT STUDY 1/2/3 HRS  
Directed study of a problem in business law not otherwise treated in department courses. 
Perm: department permission.

LEGAL397/398/399 INDEPENDENT STUDY 1/2/3 HRS  
Directed study of a problem in business law not otherwise treated in department courses. 
Perm: department permission.

LEGAL497/498/499 INDEPENDENT STUDY 1/2/3 HRS  
Directed study of a problem in business law not otherwise treated in department courses. 
Perm: department permission.
LING377/378/379 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

LING400 Introduction to Linguistic Science 3 hrs
An introduction to linguistic theory and analytical procedures. Students will apply theoretical principles to problems of phonological and syntactic analysis.
Prep: LING201 or LING223

LING402 Modern English Grammar 3 hrs
An introduction to the grammar of modern English: problems in the description and analysis of English grammar.
Prep: junior standing

LING405 Women and Language 3 hrs
This course analyzes the way that gender is reflected in language structure and linguistic behavior in both English and other languages. It will consider such topics as gender-related vocabulary and morphology, gender differences in discourse styles, and the question of whether gender-related language differences have neurological correlates or are exclusively social in origin.
Prep: a 200-, 300- or 400-level LING course

LING420 Introduction to Phonetics and Phonology 3 hrs
An introduction to articulatory and acoustic phonetics and to the basic principles and methodology of phonological analysis.
Prep: LING401

LING421 The History of the English Language 3 hrs
A study of the development of the language from its earliest stages to the present with attention to social influences as well as maturity of sound, word formation and sentence structure.
Prep: LING201 or LING401

LING422 Introduction to Syntax 3 hrs
The development of a base in syntactic theory, learning both the mechanisms of a transformational grammar and the argumentation used in syntactic analysis.
Prep: LING401

LING424 Topics in Linguistics 1-3 hrs
Advanced study in specific areas of linguistics for which the department does not regularly offer a course. The area to be studied will vary and will be determined by the field of specialization of the staff member or by student interest. This course may be taken more than once, provided the topics are different.
Prep: a 200-, 300- or 400-level LING course

LING434 The Linguistic Analysis of Literature 3 hrs
Examination of the linguistic knowledge which allows readers to recognize certain literary effects. Consideration of point of view shift, foreshadowing, narrative time movement, personification, and other aspects of literary interpretation.
Prep: a 200-, 300- or 400-level LING course

LING477/478/479 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

LING497/498/499 Independent Study 1/2/3 hrs
Study of topics not offered in the regular curriculum, the particular topic to be defined (and credit hours set) by the instructor and student, subject to approval by the curriculum committee. Restricted to students taking majors or minors in the English Language and Literature Department.
Prep: nine hours in the appropriate major or minor

LITERATURE COURSES

LITR100 The Reading of Literature 3 hrs
An introduction to the techniques of critical reading and emphasis on prose fiction, poetry and drama. Development of a fundamental understanding and enjoyment of reading.
Prep: one 100- or 200-level LITR course

LITR101 The Reading of Literature: Fiction 3 hrs
Reading and critical analysis of prose fiction intended to deepen the student's understanding and enjoyment of prose fiction.

LITR102 The Reading of Literature: Poetry 3 hrs
Reading and critical analysis of poetry intended to deepen the student's understanding and enjoyment of poetry.

LITR103 The Reading of Literature: Drama 3 hrs
Reading and critical analysis of drama intended to deepen the student's understanding and enjoyment of drama.

LITR626CLASSIC Rome and America 6 hrs
A comparison of the people and culture of ancient Rome and modern America, considering individual hopes and ideals, religious beliefs, law and order, death, government, morality, love and sex. Taught by a member of the English Department and a classical.
These courses must be taken concurrently and satisfy two literature requirements. Note: see honors Humanities courses.

LITR100 HUMANITY AND TECHNOLOGY 3 hrs
A brief study of distinctive and influential perceptions of the impact of technology on human values just after the first Industrial Revolution, with critical emphasis on problems concerning the use of special, refined technologies. Primary readings from Thomas, Mark Twain, Henry Adams, Aldous Huxley, Lewis Mumford, and Garrett Hardin. This course satisfies one literature requirement. Note: see honors Humanities courses.

LITR117/118/119 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

LITR128 The Legacy of Greece 3 hrs
An introduction to Greek epic, drama, poetry, history and philosophy, illustrating the influence of the Greek tradition on western civilization. The literature is read in English translation. Representative examples of Greek architecture and sculpture also are examined. Teams taught by a classicist and/or a member of the English Department. This course satisfies one literature requirement. Note: see honors Humanities courses.

LITR204 Native American Literature 3 hrs
Study of the written and oral literature of the Native Americans, with emphasis upon the authored poetry, fiction, autobiography and essay of the nineteenth century.
Prep: one 100- or 200-level LITR course
LITR207 INTRODUCTION TO CHILDREN'S LITERATURE 3 HRS
A concentrated reading course designed to impart the knowledge necessary for an appreciation and understanding of children's literature and its use in the schools. In addition to reading the classics and the critically acclaimed works of both fiction and nonfiction by modern writers, students will study poetry, folklore, and mythology and examine the relationship between illustration and text. Does not count toward a major or minor in curricula for teachers in junior and senior high school.
Pre-req: sophomore standing and one 100-level LITR course

LITR208 MULTICULTURAL CHILDREN'S LITERATURE 3 HRS
Introduction to literature for children and young adults by and about African Americans, Asian Americans, Latinos, and Native Americans, including history of multicultural writing for the young; major issues of multiculturalism: historical and cultural background of each group; and critical apparatus for the selection, interpretation, and evaluation of such literature.
Pre-req: one 100-level LITR course

LITR212 INTRODUCTION TO SHAKESPEARE 3 HRS
An introduction to at least five of Shakespeare's plays with emphasis upon the tragedies.
Pre-req: one 100- or 200-level LITR course

LITR213 THE BIBLE AS LITERATURE 3 HRS
Introduction to the literary study of the Bible. The Old Testament is represented chiefly by specimens of narrative and prophetic writings; the New Testament by selected incidents, parables and sayings from the life of Jesus as portrayed in the synoptic gospels. Discussion of Biblical influences on English and American literature.
Pre-req: one 100- or 200-level LITR course

LITR220 AFRICAN AMERICAN LITERATURE 3 HRS
Representative American literature by black writers with emphasis upon the 20th century. Readings in poetry, fiction, drama, autobiography and the essay.
Pre-req: one 100- or 200-level LITR course

LITR227/327/329 SPECIAL TOPICS 1/2/3 HRS
An examination of topics in literature not covered in other departmental offerings. Students may elect this course more than once, provided different topics are studied.
Pre-req: one 100- or 200-level LITR course

LITR240 NARRATIVE IN LITERATURE AND FILM 3 HRS
A study of the archetypal parallels in narrative technique between certain prose forms (novel, novella, romance, satire) and film as a means of enhancing verbal and visual literacy.
Pre-req: one 200-level LITR course

LITR250 THE DEVELOPMENT OF AMERICAN LITERATURE 3 HRS
A study of American literature from colonial times to 1890, including such writers as Beech, Franklin, Hawthorne, Melville, Thoreau, Emerson, Whitman, Dickinson, Twain and James.
Pre-req: one 200-level LITR course

LITR255 MODERN AMERICAN LITERATURE 3 HRS
A study of American literature from 1890 to the present, including such writers as Crane, Frost, Cather, Elliott, O'Neill, Fitzgerald, Faulkner, Hemingway, Bellow, Baldwin, O'Connor and Updike.
Pre-req: one 200-level LITR course

LITR257 ENGLISH LITERATURE IN THE MIDDLE AGES 3 HRS
A survey of Old and Middle English literature from Beowulf to Malory, tracing the themes, genres and literary techniques of early English literature.
Pre-req: one 200-level LITR course

LITR258 ENGLISH RENAISSANCE PROSE AND POETRY 1500-1660 3 HRS
Major writers from the age of Shakespeare to the close of the Renaissance, including the humanists, lyric poets, Spenser, Bacon, Donne and the metaphysicals, and Milton.
Pre-req: one 200-level LITR course

LITR259 LITERATURE OF THE NEO-CLASSICAL PERIOD 1660-1798 3 HRS
A study of English literature from the Restoration of Charles II through the second half of the 18th century: Dryden, Swift, Pope, Johnson, Goldsmith, Gay, Collatte and others.
Pre-req: one 200-level LITR course

LITR260 ROMANTIC REBELLION IN BRITAIN 1798-1842 3 HRS
A study of the shift in literary emphasis in Britain from reason to the emotions, imagination and individualism in the works of Wordsworth, Coleridge, Lamb, DeQuincey, Hazlitt, Byron, Shelley and Keats.
Pre-req: one 200-level LITR course

LITR270 VICTORIAN AND EDWARDIAN LITERATURE 1833-1914 3 HRS
A study of prose and poetry of such authors as Carlyle, Mill, Tennyson, Browning, Ruskin, Arnold, Hopkins, Swinburne, Hardy, Pater, Wilde, Kipling and others.
Pre-req: one 200-level LITR course

LITR275 WORLD MYTHOLOGY 3 HRS
A study of the mythological traditions that have most significantly influenced western civilization. The myths are discussed as literature and as people's attempts to understand themselves, their society and their physical environment.
Pre-req: any 200-level LITR course

LITR277 FOLK LITERATURE: BALLADS AND FOLK TALES 3 HRS
A reading course in the traditional ballads and folk tales of Europe and North America with emphasis on those that appear in children's literature. Applies toward minor in children's literature only, but may be taken as a free elective.
Pre-req: any 200-level LITR course

LITR280 RECENT TRENDS IN BRITISH AND AMERICAN LITERATURE 3 HRS
A study of innovations in recent British and American poetry, fiction, or drama. The particular focus of the course to be taught in a given semester will be announced in the class schedule bulletin.
Pre-req: one 200-level LITR course

LITR377/378/379 SPECIAL TOPICS 1/2/3 HRS
An exploitation and study of topics not covered in usual departmental offerings. Students may elect more than once, provided different topics are studied.
Pre-req: department permission

LITR393 SHAKESPEARE 3 HRS
A study of at least eight of the principal plays.
Pre-req: ENGL227 and one 300-level LITR course

LITR394 STUDIES IN EPIC AND ROMANCE 3 HRS
A critical reading of foreign (in translation) and English epic and romance (and their sources). The treatment will be both historical and comparative.
Pre-req: ENGL227 and one 300-level LITR course

LITR395 THE POETRY OF CHAUCER 3 HRS
An introduction to the major works of Chaucer: a close reading of representative poetry.
Pre-req: ENGL227 and one 300-level LITR course

LITR407 STUDIES IN THE BRITISH NOVEL 3 HRS
This course will explore the emergence and development of the novel as a popular genre in English literature, with special emphasis on the cultural, political and historical conditions that it both reflects and helps to construct.
Pre-req: ENGL227 and one 300-level LITR course

LITR408 STUDIES IN THE AMERICAN NOVEL 3 HRS
A study of the American novel from its beginnings in the 19th century to the present, with particular emphasis on its development over time.
Pre-req: ENGL227 and one 300-level LITR course

LITR420 STUDIES IN THE NOVEL IN GLOBAL PERSPECTIVE 3 HRS
A study of the novel outside England and the United States, with particular emphasis on genetic variations that reflect political and social forces within specific contexts.
Pre-req: ENGL227 and one 300-level LITR course

LITR439 STUDIES IN DRAMA 3 HRS
A study of drama as it develops over time and is shaped by changing literary and social practices, including but not limited to the early British drama, Restoration comedy, modern drama and English theater in a global perspective.
Pre-req: ENGL227 and one 300-level LITR course

LITR440 GENRE STUDIES 3 HRS
A study of the characteristics of a particular literary genre, independent of chronology, theme or author.
Pre-req: ENGL227 and one 300-level LITR course
LANGUAGE COURSES

LINGE13 Etymology 3 HRS
Greek and Latin words and roots that are current in English forms are studied in order to enlarge the vocabulary and to produce a more discriminating use of words.
Pre-req: ENGL227 and one 300-level LIT course

LINGE22 Introduction to Language 3 HRS
The basic principles of linguistic structure as they apply to the western European languages taught in the department.
Pre-req: department permission

LINGE27/277/377 Special Topics 1/1.5/3 HRS
An exploration and study of topics not covered in other department offerings. Students may elect more than once, provided different topics are studied.
Pre-req: department permission

LINGE27/277/377 Special Topics 1/1.5/3 HRS
An exploration and study of topics not covered in other department offerings. Students may elect more than once, provided different topics are studied.
Pre-req: department permission

LINGE45 Second Language Acquisition 3 HRS
Examines the nature of learning a second language simultaneously with or subsequent to one's first language. Linguistic, cognitive, affective, cultural and social factors influencing the acquisition of another language will be explored. Focus will be on birth through ten years, with particular attention paid to language used in English-medium elementary and secondary schools.
Pre-req: LINGE227

LINGE27/277/377 Special Topics 1/1.5/3 HRS
An exploration and study of topics not covered in other department offerings. Students may elect more than once, provided different topics are studied.
Pre-req: department permission

LINGE497/498/499 Independent Study 1/1.5/3 HRS
Advanced study on an individual research basis in areas not covered in formal course work.
Pre-req: department permission

MATHEMATICS COURSES

MATH207 Pre-College Mathematical Concepts 3 HRS
A mastery-based developmental mathematics course designed to prepare students to succeed in a college-level mathematics course. Covers beginning algebra concepts and skill development in a supportive but structured setting. Includes help with math study skills and reducing math anxiety. Credit for this course will not count toward graduation.
Pre-req: program placement

MATH208 Pre-College Mathematical Concepts - Part II 3 HRS
The second part of a mastery-based developmental mathematics course designed to prepare students for a developmental algebra course. Covers beginning algebra concepts and skill development in a supportive but structured setting. Includes help with math study skills and reducing math anxiety. Credit for this course will not count toward graduation.
Pre-req: MATH207 or program placement

MATH209 Pre-College Algebra Concepts - Part I 3 HRS
A mastery-based developmental mathematics course designed to prepare students to succeed in a college-level mathematics course. Covers beginning algebra concepts and skill development in a supportive but structured setting. Includes help with math study skills and reducing math anxiety. Credit for this course will not count toward graduation.
Pre-req: MATH207 or MATH208 or placement

MATH210 Pre-College Intermediate Algebra 3 HRS
A review of elementary algebra and a continu-
to review these subjects. Emphasis will be on topics from college algebra and trigonometry that are used in calculus. Some knowledge of trigonometry is assumed.

**Math105 College Algebra** 3 hrs
Properties of the real numbers; equations and inequalities; functions; sequences; mathematical induction; polynomial, rational, exponential and logarithmic functions; introduction to probability.

PreReq: placement or at least a C in MATH098 or MATH098b

**Math107 Plane Trigonometry** 2 hrs
An elementary course in plane trigonometry. Students who have good records in high school courses including trigonometric identities, trigonometric equations, and oblique triangles should not take the course.

PreReq: placement or at least a C in MATH104 (B or better strongly recommended), or MATH105, MATH119 or MATH210

**Math108 Mathematics for Elementary Teachers I** 3 hrs
The first of a two-course sequence that examines topics in the elementary school mathematics curriculum from an advanced standpoint, with an emphasis on concepts and problem solving. Topics include number theory, real number systems and their properties, algebra concepts, and functions. Required of all students in elementary and later elementary curricula. Open only to prospective elementary teachers.

PreReq: placement or at least a C in either MATH098 or MATH098b, or MATH105, MATH112 or MATH120

**Math109 Mathematics for Elementary Teachers II** 3 hrs
The second of a two-course sequence that examines topics in the elementary school mathematics curriculum from an advanced standpoint, with an emphasis on concepts and problem solving. Topics include: elementary probability including both experimental and theoretical; elementary statistics including exploratory data analysis, descriptive statistics, and an introduction to inferential statistics; informal geometry including symmetry, similarity and congruence, and measurement.

PreReq: MATH108

**Math110 Math Methods for Elementary Teachers** 3 hrs
An introduction to contemporary mathematical thinking for the non-specialist, with the aim of developing the capacity to engage in logical thinking and to read critically the technical information that is so prevalent in modern society. Topics include elementary logic, basic probability and statistics, and applications.

PreReq: placement or at least a C in MATH098 or MATH098b or MATH104, MATH105, MATH107, MATH119 or MATH210

**Math112 Topics in Precalculus Mathematics** 4 hrs
Provides a thorough preparation for calculus for students who are insufficiently prepared in college algebra and trigonometry, or who need

**Math115 Calculus Laboratory I** 1 hr
Computer laboratory class designed to reinforce the major concepts of first-semester calculus. PreReq: concurrent registration in MATH110

**Math116 Calculus Laboratory II** 1 hr
Computer laboratory class designed to reinforce the major concepts of second-semester calculus. PreReq: concurrent registration in MATH111

**Math170 Elementary Statistics** 3 hrs
An introduction to standard methods in statistics, emphasizing the rationale behind them and their application to problems in a variety of fields. Data summary and representation, measures of center and dispersion, correlation and regression, basic probability, point and interval estimation, and hypothesis testing.

PreReq: placement or at least a C in MATH098 or MATH098b or MATH104, MATH105, MATH107, MATH119 or MATH120

**Math177/178/179 Special Topics 1/1/1.5 hrs**
These special topics courses will be used to teach some aspects of mathematics at an elementary level that would not be regularly offered. Each course does not count on a regular major or minor in mathematics.

PreReq: department permission

**Math210 Mathematical Structures for Computer Science** 4 hrs
Propositional and predicate logic; sets and operations, discrete functions, sequences, finite state machines, elementary number theory; matrices and applications, proof techniques, elementary combinatorics, discrete probability, relations.

PreReq: MATH120

**Math211 Introduction to Mathematical Proof** 3 hrs
A transition to upper-level mathematics courses. This course highlights various types of mathematical thinking including direct, indirect and inductive proofs with careful treatment of quantified statements. Topics include sets, number theory and relations. Development of ability to write a precise mathematical proof is the primary goal.

PreReq: MATH121 and MATH122

**Math231 Multivariable Calculus** 4 hrs
Vector products, lines and planes in three-dimensional space, quadric surfaces, cylindrical and spherical coordinates. Differential calculus of vector functions of a single variable: velocity and acceleration vectors, curvature. Partial differentiation, gradient, chain rule, directional derivatives, tangent planes, application to optimization. Multiple integration, change of coordinates, applications. Taylor’s Theorem for Functions of Several Variables, line and surface integrals, Stokes’ Theorem, Gauss’ Theorem.

PreReq: at least a C in MATH211 and MATH212

**Math233 Calculus Laboratory III** 1 hr
Computer laboratory class designed to reinforce the major concepts of third-semester calculus. PreReq: concurrent registration in MATH231
MATH 340 Geometry for Elementary Teachers 3 HRS
Informal geometry of the plane and space, congruence and measurement, elementary theorems and proofs, and plane coordinate geometry. Open only to prospective elementary teachers. Prereq: MATH 100.

MATH 377/387/379 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. Prereq: department permission.

MATH 391 Advanced Topics in Elementary Mathematics 3 HRS
Acquires prospective elementary teachers with new topics in the elementary mathematics curriculum such as algebraic systems, conic sections, trigonometry, statistical procedures and topics in number theory. Prereq: MATH 100 or MATH 210 or MATH 240.

MATH 404 Middle School Mathematics: Methods and Content 3 HRS
Consideration of the mathematics program in middle school and junior high school, in organization and content, methods of teaching and learning. Not open to freshmen, sophomores or students on academic probation. Prereq: MATH 240 or MATH 260.

MATH 406 Teaching of High School Mathematics 3 HRS
Consideration of the mathematics program in the high school, in organization and content, methods of teaching and learning. Not open to freshmen, sophomores or students on academic probation. Prereq: MATH 240 and CURR 305.

MATH 409 Mathematical Modeling 3 HRS
The modeling process, model building and evaluation, techniques of modeling, model fitting and models requiring optimization: empirical model construction, experimental models, dimensional analysis, simulation models, dynamic models, use of derivatives in the modeling process, single and multivariable dynamic models. Prereq: MATH 240 and MATH 122.

MATH 414 Differential Equations 3 HRS
First and second order differential equations with applications, linear differential equations, power series solutions, Laplace transforms. Prereq: MATH 222 and MATH 122.

MATH 415 College Geometry 3 HRS
An introduction to several geometries such as affine, projective, space-time and non-Euclidean. Prereq: MATH 211.

MATH 418 Explorations of Space and Symmetry 3 HRS
Introduction to the use of mathematics to investigate properties of space and symmetry. A broad spectrum of techniques and tools of an algebraic, geometric and topological nature will be presented. Applications to computer graphics, physics and other disciplines will be incorporated according to the interests of the students and instructor. Prereq: MATH 210.

MATH 460 Statistical Methods 3 HRS
A comprehensive overview of statistical methods and analysis with applications. Topics include descriptive statistics, probability theory, random variables and probability distributions, sampling distributions, estimation and testing hypotheses, correlation and regression, introduction to computer-aided statistical analysis. A statistical software package (SAS) is used. Prereq: MATH 121.

MATH 492 Probability and Statistics I 3 HRS
Basic concepts of probability, expectation, variance, covariance distribution functions and their application to statistical tests of hypothesis, binomial, marginal and conditional distributions, treatment of experimental data. Applications to problems in science and social science are emphasized. Prereq: MATH 223.

MATH 493 Problems in Actuarial Studies 1 2 HRS
Applications of mathematics to actuarial science. Particular attention paid to subject matter not covered in the regular mathematics curriculum and to special techniques of problem solving appropriate to actuarial science. This course can be used in preparing for the Actuarial Examination, Part I-General Mathematics. Prereq: MATH 223; a minimum GPA in mathematics of 3.4 is strongly recommended.

MATH 477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. Prereq: department permission.

MATH 481 The Teaching of Mathematics, K-6 3 HRS
Learning to teach children in the elementary grades (K-6) the understanding processes of mathematics. Attention is focused on learning objectives in mathematics, effective use of learning aids, required of all students in early elementary and later elementary curricula. Not open to students on academic probation. Prereq: MATH 109 and CURR 304.

MATH 483 Calculators and Microcomputers in Elementary Mathematics Education 3 HRS
A survey of the uses of calculators and microcomputers, with specific emphasis on their use in the elementary classroom. Emphasis will be placed on problem-solving. A calculator will be required. Prereq: MATH 210.

MATH 487 Cooperative Education in Mathematics 3 HRS
Four to six months of full-time employment at an industrial firm specially chosen to provide practical experience in mathematics. The program is designed to fulfill the requirements of the Cooperative Experience program (MATH 188/487) alternating with full-time attendance at the University. Six or mathematics major subjects in department permission. Graded on a credit/no-credit basis. Prereq: junior or senior majoring in mathematics. MATH 223, admittance to program by applicant's department permission.

MATH 494 History and Development of Mathematics 3 HRS
The course presents topics in the evolution of mathematics — the historical development of algebra, geometry and calculus provides the major focus. Problems will be assigned that reflect the content and methods of this development. Prereq: MATH 221/222.

MATH 495 Mathematics and Its History for Elementary Teachers 3 HRS
Topics in the evolution of mathematics from ancient times through the present, with an emphasis on connections with the elementary school curriculum. Development of numeration systems, algebra, different geometries, calculus, including the contributions of different cultures in the development of mathematics. Prereq: MATH 110/115.

MATH 497 Current Research in Elementary Mathematics 3 HRS
A brief history of mathematics education, 1899 to present. Special emphasis on important recent research studies. Consideration of various textbook series, use and evaluation of supplementary materials, the place and value of teaching aids. Professional journals will be utilized throughout the course. Prereq: MATH 245.

MATH 499 Introduction to Computer Science 3 HRS
Computable functions, register machines, recursion, minimization, Church's thesis, Turing machines, diagonal methods, universal programs, decidability, recursive and recursively enumerable sets, undecidability, applications to computer science and the foundations of mathematics. Prereq: MATH 223.

MATH 500 Elementary Number Theory 3 HRS
Primes, Euclid's algorithm, and prime factorization, congruences, multiplicative functions, quadratic residues and reciprocity, continued fractions, Diophantine equations, possible applications to cryptography and/or primality testing. Prereq: MATH 211.

MATH 511 Abstract Algebra 3 HRS
An introduction to the theory and concepts of abstract algebra. Topics from group theory: subgroups, cosets, Lagrange's Theorem, homomorphisms. Also selected topics from ring theory.
MATH 12 Introduction to Numerical Analysis 3 HRS
Introduces the theory and application of numeric methods using the digital computer as a tool; finite differences, polynomial approximation, numeric integration, solution of equations and nonlinear systems, numeric solution of differential equations, error analysis.
Prereq: MATH 121/122 and one of: COSC 145, COSC 111 or COSC 265

MATH 14 Differential Geometry with an Introduction to General Relativity 3 HRS
Curve and surface theory in three-dimensional space; introduction to special and general relativity; not open to students with credit in MATH 548 Introduction to Differential Geometry.
Prereq: MATH 223 and MATH 205

MATH 20 Survey Sampling 3 HRS
A course in principles of sampling for assessment of data in business, social sciences or natural resource management: Sampling problem, selection of samples, designing questionnaires, estimation of means and variances, ratio, regression and difference methods, simple and stratified random sampling, systematic sampling, cluster sampling, probability proportional to size sampling. A special survey software package is used.
Prereq: MATH 360 or MATH 370

MATH 46 Linear Regression Analysis 3 HRS
Topics include modeling a response as a simple or multiple regression model, validation of assumptions, using models for estimation and prediction, multicollinearity, autocorrelation of error terms, residual analysis, and stepwise regression. A statistical software package (SAS) is used extensively.
Prereq: MATH 122/250 or MATH 370

MATH 52 Design and Analysis of Experiments 3 HRS
A basic course in principles of experimental design and analysis: randomized blocks and Latin squares, nested experiments, experimental and sampling errors, fixed and random effects models, factorial and fractional designs. A statistical software package (SAS) is used extensively.
Prereq: MATH 360 or MATH 370 or equivalent

MATH 37 Probability and Statistics II 3 HRS
Nature of statistics; distributions, measures of central value and dispersion; sampling; statistical inference, estimation and tests of hypothesis. Methods of computation, applications and data analysis will be stressed. Nonparametric statistics; sequential tests, analysis of variance.
Prereq: MATH 370

MATH 471 Problems in Actuarial Studies II 2 HRS
Applications of probability and statistics to actuarial science. Particular attention paid to subject matter not covered in the regular mathematics curriculum and to special techniques of problem solving appropriate to actuarial science. (This course can be useful in preparing for the Actuarial Examination, Part II—Probability and Statistics.)
Prereq/Coreq: MATH 371: a minimum GPA in mathematics of 3.4 is strongly recommended

MATH 147 Applied Statistics 3 HRS
This course stresses the empirical approach to statistics: Monte Carlo methods to generate samples and to model distributions; tests of fit, and goodness of fit, nonparametric methods, correlation, linear regression, analysis of variance, and nonparametric statistics; demonstration of basic theorems; randomization and independence.
Prereq: MATH 1360 or MATH 370

MATH 147F/147S/147G Special Topics 1/2/3 HRS
A senior-level course in a specific area of mathematics. The area to be studied will be determined by the field of specialization of the staff member teaching the course and the interest of the students enrolled.
Prereq: undergraduate grade point average in mathematics 3.0 or above and department permission

MATH 147H Cooperative Education in Mathematics 3 HRS
Four to six months of full-time employment at an industrial firm specially chosen to provide practical experience in mathematics. The program consists of two work experiences (MATH 147H 1 and 2) alternating with full-time attendance at the University. The student must complete a minimum of 12 credits of mathematics in one academic year. Requires permission. Graded on a cumulative basis.
Prereq: junior or senior majoring in mathematics, admission to program by application only, MATH 370, department permission

MATH 147K/147L Independent Study 1/2/3 HRS
A report on an approved subject in the field of mathematics under the guidance of the Mathematics Department staff.
Prereq: undergraduate grade point average in mathematics 3.0 or above and department permission

MECHANICAL ENGINEERING TECHNOLOGY COURSES

MATH 101 Statics 3 HRS
This course is an applied and analytical study of simple structures in static equilibrium with emphasis on engineering applications. Topics include forces, moments, trusses, frames, centroids, and moments of inertia.
Prereq: PHY 223

MATH 112 Applied Dynamics Principles 3 HRS
Fundamentals of the kinematics and kinetics of motion with emphasis on practical applications of engineering systems. Theory and application of Newton’s Laws of Motion, displacement, velocity, acceleration, rectilinear and curvilinear motion, forces, impulse and momentum. Lecture and laboratory course.
Prereq: MATH 120, PHY 223 and MATH 311
MET 103 APPLIED MECHANICS OF MATERIALS 3 HRS
Analysis and design of structural members subjected to external forces, considering stress, strain and deformation of classic solids. Study of beams, columns, pressure vessels, and machine members. Lecture and laboratory course.
Prereq: MATH 20, PHY 223 and MET 211.

MET 104 APPLIED THERMODYNAMICS AND HEAT TRANSFER 3 HRS
Prereq: MATH 20, PHY 223 and MET 211.

MET 119 FLUID MECHANICS 3 HRS
An analytical and mathematical study of fluids under all conditions of rest and motion. The emphasis is on physical concepts rather than mathematical manipulation. Topics include fluid statics, kinematics of fluid motion, compressible and incompressible flow, impulse-momentum principle, fluid flow in pipes and open channels, and fluid measurement.
Prereq: MET 211.

MET 120 MECHANICAL/MACHINE DESIGN 3 HRS
A study of the decision-making processes which mechanical engineers use in the formulation of plans for the physical realization of machines, devices, and systems. Topics include the phases of design, codes and standards, stress analysis, failure criteria, design for fatigue strength, and the design of mechanical elements.
Prereq: MET 124, COSC 111, MET 119 and MET 112.

MET 133 FINITE ELEMENT ANALYSIS FOR ENGINEERING APPLICATIONS 3 HRS
Finite Element Analysis (FEA) is an engineering tool used by industries to analyze many practical problems during the design phase. Basic concepts of this technique will be introduced and the students will have hands-on experiences to analyze truss, beams, stress and strain problems using commercial software packages.
Prereq: CADM 122 and MET 113.

MET 137 KINEMATICS OF MACHINES 3 HRS
Static, kinematic and dynamic analysis of plane motion. A study of instantaneous centers, velocities, accelerations and forces in mechanisms and machine design. Development and analysis by analytical and graphical methods.
Prereq: MET 119 and MET 112.

MET 140 MECHANICAL VIBRATIONS 3 HRS
Prereq: MET 112.

MET 145 SENIOR DESIGN PROJECTS I 3 HRS
The first term of a two-semester, comprehensive, captive, open-ended design project. Establishment and development of the design process with special emphasis placed on teamwork towards the initial Design Proposal. Written and oral reports.
Prereq: ENGL 24, MET 111, MET 113, MET 174 and MET 175.

MET 146 SENIOR DESIGN PROJECTS II 3 HRS
The concluding term of a two-semester, comprehensive, captive, open-ended design project. Generation and conclusive development of the final design with consideration for design reviews, prototype requirements, scheduling, expenses, safety and environmental constraints. A written report and oral defense of the project is required.
Prereq: MET 145.

MANUFACTURING COURSES

MFG 101 INTRODUCTION TO AUTOMATION 3 HRS
An introduction to the technology of discrete parts manufacturing. Topics include the contemporary manufacturing environment, new and emerging technologies, human-machine interfaces and human resource issues. Course includes field trips.
Prereq: MET 124.

MFG 103 MATERIALS 3 HRS
This course introduces students to the major categories of engineering materials. It focuses on selection, failure and degradation of metals, polymers, ceramics and composites.
Prereq: MET 124.

MFG 104 PLASTICS 3 HRS
A study of the plastics industry, material properties and classification, processing techniques, and application of design to product manufacture. Lecture and laboratory course.
Prereq: MET 124.

MFG 106 MANUFACTURING PROCESSES AND METHODS I 3 HRS
An introduction and survey of manufacturing processes and materials. Lecture, laboratory, and outside study assignments are an essential part of this course and are related to heat treating, properties of materials, casting, forming and joining. Lecture and laboratory course.
Prereq: MET 124.

MFG 107 MANUFACTURING PROCESSES AND METHODS II 3 HRS
An introduction and survey of machines, tools, processes, and materials of industry. Includes conventional and nonconventional machining, theory of metal removal, cutting tool geometry and materials, fixtureing, and measuring devices. Lecture and laboratory course.
Prereq: MATH 107 or Level 4 math placement.

MFG 105 SCIENCE, TECHNOLOGY, AND PEOPLE 3 HRS
This course will help students understand the complementary relationship between science and technology in (a) creating technical devices, services and systems; and (b) solving problems.
Prereq: department permission.

MFG 110 INDUSTRIAL OPERATION 3 HRS
A survey course in the practices of manufacturing. Units include career, regulatory agencies, facility management, group technology, problem solving and quality assurance and quality control.
Prereq: MFG 105.

MFG 111 MACHINE TOOL AND METHODS 3 HRS
Machine tools and metalworking processes including turning, drilling, shaping, milling and grinding. Principles of tooling, precision measurement and identification of metals. Lecture and laboratory course.
Prereq: department permission.

MFG 112 MATERIAL ANALYSIS AND TESTING 3 HRS
Study of the structure, characteristics, and testing of selected material. Lecture and laboratory course.
Prereq: department permission.

MFG 113 SPECIAL TOPICS 3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

MFG 114 GEOMETRIC DIMENSIONING & TOLERANCING AND METROLOGY 3 HRS
Introduction to metrology and geometric dimensioning and tolerancing concepts. Practical applications of metrology including geometric dimensioning and tolerancing will be focused on through lecture and laboratory experiences.
Prereq: CADM 122 and MFG 112.

MFG 116 PLASTIC PROCESSING 3 HRS
A study of high polymers, plastic materials, their application to moulding and fabrication process. Analysis of design and physical properties, quality design and problems of production, experimentation, and testing required. Lecture and laboratory course.
Prereq: MFG 111.

MFG 118 DESIGN FOR MANUFACTURING AND TOOLLING 3 HRS
A study of manufacturing tooling and design principles, utilizing concurrent engineering methods. Students from various programs will work together in integrated teams and utilize complementary tools and skills to solve design
Course Descriptions

MANUFACTURING COURSES

MGMT 177/178/179 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
PreReq: MGMT 177/178/179

MGMT 180/181/182 Cooperative Education in Management 1/2/3 hrs
An introduction to the management field through participation in an off-campus work experience. Students will receive academic credit for work performed. Credit is appropriate for defined job-related experiences. Course work complements the work experience. PreReq: MGMT 180/181/182

MGMT 300 Human Resource Management 3 hrs
Students majoring in human resource management are prepared for careers in human resource management. PreReq: MGMT 203

MGMT 301 Organizational Behavior and Theory 3 hrs
The study of behavioral problems in administration. PreReq: MGMT 205

MGMT 302 Business Communication 3 hrs
Study of principles, elements and practices underlying effective business communication. PreReq: MGMT 205

MANAGEMENT COURSES

MGMT 177/178/179 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
PreReq: MGMT 177/178/179

MGMT 180/181/182 Cooperative Education in Management 1/2/3 hrs
An introduction to the management field through participation in an off-campus work experience. Students will receive academic credit for work performed. Credit is appropriate for defined job-related experiences. Course work complements the work experience. PreReq: MGMT 180/181/182

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MGMT 300 Human Resource Management 3 hrs
Students majoring in human resource management are prepared for careers in human resource management. PreReq: MGMT 203

MGMT 301 Organizational Behavior and Theory 3 hrs
The study of behavioral problems in administration. PreReq: MGMT 205
MGMT 388 Introduction to
Entrepreneurship 3 HRS
This course emphasizes the role of the entre-
preneur in making integral managerial and
growth decisions for a start-up enterprise.
The focus will be on developing a business plan for
a new venture.

MGMT 482 Business Report Writing 3 HRS
Study of principles and practices of business
report writing in business, industry, education
and government. Concepts, their illustrations,
and applications. The creative and functional
aspects in understanding the problem, gather-
ing and organizing data, and presenting reports
for management, employees and the public.
Prereq: MGMT 202

MGMT 401 Managerial Communication:
Theory and Application 3 HRS
A theoretical framework of key managerial com-
munication concepts: skills used to diagnose
communication problems and to communicate
corporate policies.
Prereq: MGMT 202, MGMT 385 or department
permission

MGMT 402 Leadership Theories and
Practice 3 HRS
Leadership theories and practice will provide
students with knowledge of the theories of
leadership as well as practice in the theories of
leadership and management. Several diagnostic
techniques will be used to help students understand
their own leadership strengths and areas to be
developed.

MGMT 407 The Meranti Corporate
Ethics Seminar 3 HRS
The Meranti Seminar seeks to provide future
business leaders (in part through case studies
and mentoring from practitioners) with the
advanced knowledge and business skills needed
to identify, analyze and resolve pressing contem-
porary issues in corporate social responsibility
effectively.
Prereq: department permission is required

MGMT 450 Management Skills 3 HRS
This course will provide students with extensive
practice in critical management skills such as
group facilitation, project management, super-
vising employees and individual career manage-
ment. Multiple participative techniques will be
used such as case study, exercises, group projects
and student presentations.
Prereq: MGMT 384 and MGMT 385

MGMT 471/472/473/475 Special Topics
1-3 HRS
An exploration and study of topics not covered
in other departmental offerings. Students may
elect more than once, provided different topics
are studied.

MGMT 484 Management Responsibility
and Ethics 3 HRS
Social, legal, and moral pressures of external
and community groups on business operations;
management's role of responsibility and leader-
ship in interacting with these forces, and reduc-
ing and resolving conflicts with them.
Prereq: junior standing or department permission

MGMT 486 Organizational Change
and Team Building 3 HRS
A practical approach to creating the organi-
zational changes necessary for effective team-
based, continual-improvement work systems.
Students learn how to manage change effec-
tively, providing a foundation for learning
how to build teams and work effectively within
these. The course provides knowledge and
critical skills needed for initiating and managing
change and for building effective teams.
Prereq: MGMT 386 or department permission

MGMT 487 Cooperative Education
in Management 1-3 HRS
Four months of full-time employment at a busi-
ess or public organization in a management
position chosen for imparting practical experi-
ce in management. Use on a management ma-
or minor not permitted. Offered on a credit-
card basis. Admission by application only.
Prereq: MGMT 387, department permission

MGMT 488 Field Studies in
Entrepreneurship 3 HRS
This course gives students an opportunity to
to observe and analyze the problems of a small
business. A comprehensive final report to the firm
is required.
Prereq: junior standing or department permission

MGMT 490 Business Policy 3 HRS
Integration and analytical application of funda-
mentals areas of business and public policy.
Practicum issues in the identification and solution
of problem situations.
Prereq: senior standing or senior standing
permission (junior standing
permission limited to completion of the College of Business Core
FIN 350, MKT 362, MGMT 385, POM 374)

MGMT 492 International Business
Communication 3 HRS
This course focuses on such issues as global
management in a cultural context, breaking
down international business barriers, motivat-
ing in a global context, management of culture
shock, international conflict management,
management and cultural synergy, and busi-
ness communication practice and traditions in
specific national settings.
Prereq: MGMT 202 or department permission

MGMT 493 International
Management 3 HRS
Comparisons of management concepts, pro-
cesses, and principles in various countries with
their differing educational, societal, legal,
political, and cultural environments. The evolution
of management, and the transfer of managerial
philosophy and practices to other countries.
Prereq: MGMT 366 or department permission

MGMT 496 Current Issues in Human
Resource Management 3 HRS
A practical application of HR management
practices in current business issues; specially
designed workshop-type seminars for prospective
managers, supervisors and personnel specialists.
Prereq: MGMT 381

MGMT 497/498/499 Independent Study
1-3/1-3/1-3 HRS
Directed study of a problem in management
not otherwise treated in department courses.
Prereq: department permission
Microbiology Courses

MICR377/378/379 Special Topics 1/2/3 hrs
An examination of topics in microbiology not covered in other departmental offerings. Students may elect this course more than once, provided different topics are studied.
Pre-req: department permission

MICR377/378/379 Special Topics 1/2/3 hrs
An examination of topics in microbiology not covered in other departmental offerings. Students may elect this course more than once, provided different topics are studied.
Pre-req: department permission

MICR328 Introductory Microbiology 3 hrs
Introduction to the biology of bacteria and other micro-organisms, transmission of infectious diseases, and principles of control of, and immunity to, infectious diseases. A lecture/laboratory course. Does not apply on the curriculum in clinical laboratory sciences or on microbiology concentrations in biology major, but will count as elective on general biology concentration or biology minor.
Pre-req: BIOL105 and CHEM120, or ZOO120 and BIO120 (or BOTN130 and ZOO140)

MICR329 General Microbiology 3 hrs
A lecture and laboratory course on the nature and biology of bacteria and other microbes, their physiological relationships in natural and controlled environments, and their interactions of pathogenic microorganisms with their hosts. Laboratory includes an introduction to techniques of isolating, culturing, and identifying bacteria and other microbes, and their physiological, chemical, and pathological properties. Not open to those who take MICR328. CHEM451 is highly recommended.
Pre-req: BIOL301 and CHEM270 or CHEM372

MICR331 Principles of Immunology 3 hrs
A lecture course presenting the theory and basic principles of immunology and serology including antigen-antibody reactions, immunoglobulin production, cellular immunity, and hypersensitivity.
Pre-req: MICR329 or BIOL305/506

MICR333 Immunology and Serology Laboratory 2 hrs
A laboratory course designed to accompany the following MICR333. Theory and practice in serological techniques with emphasis on antigen-antibody reactions such as precipitation, agglutination, viral neutralization, complement fixation. Not open to those with credit in CLSC335.
Pre-req: MICR333 (if taken concurrently students must register for MICR333 first)

MICR415 Basic Virology 3 hrs
A basic lecture and laboratory course on physiological-chemical-biological nature of bacteriophages and viruses causing diseases in animals and plants, including their transmission, infection, replication (both transcription/ translation of either DNA or RNA), cultivation in vitro, titration, host-virus interaction and control.
Pre-req: MICR329

MICR377/378/379 Special Topics 1/2/3 hrs
An examination of topics in microbiology not covered in other departmental offerings. Students may elect this course more than once, provided different topics are studied.
Pre-req: department permission

MICR387 Cooperative Education in Microbiology 3 hrs
Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educational experience in microbiology or technology. The program consists of two work experiences (MICR387/487) alternating with full-time attendance at the University. Graded on a credit/no-credit basis. Pre-req: MICR329 and junior standing; admittance to program by application only.

MICR441 Microbial Ecology 3 hrs
Interaction among microbes (fungi, bacteria, and algae) and their environment, with emphasis on parasitism, symbiosis, commensalism and biogeochemical recycling of matter. Includes both laboratory and field exercises.
Pre-req: MICR329

MICR444 Microbial Physiology 3 hrs
A lecture and laboratory course of physiological studies on bacteria and fungi. Emphasis will be placed on nutrition, metabolism, fermentation, physiology of parasitism, and biosynthesis of polymers by microbes. CHEM451 and CHEM453 are highly recommended.
Pre-req: MICR329

MICR455 Bacterial Pathogenesis 3 hrs
A lecture course that examines the mechanisms of bacterial pathogenesis. Emphasis will be placed on host-bacterial interactions that lead toward bacterial infection.
Pre-req: MICR329

MICR477/478/479 Special Topics 1/2/3 hrs
An examination of topics in microbiology not covered in other departmental offerings. Students may elect this course more than once, provided different topics are studied.
Pre-req: department permission

MICR487 Cooperative Education in Microbiology 3 hrs
Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educational experience in microbiology or technology. The program consists of two work experiences (MICR387/487) alternating with full-time attendance at the University. Graded on a credit/no-credit basis.
Pre-req: MICR387

MICR497/498/499 Special Problems 1/2/3 hrs
Individual work in an area of microbiology under direction of a staff member. Preliminary draft of proposed study must be approved by the department prior to enrollment. May be elected more than once, after resubmission and approval.
Pre-req: department permission

Marketing Courses

MKTG177/178/179 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

MKTG261 Contemporary Selling 3 hrs
Introduction of the basic principles of personal selling, as used in profit and nonprofit organizations. Included are small case analyses, evaluation of sales presentations, and skill development using video recorded role-plays.

MKTG377/378/379 Special Topics 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

MKTG385/386/388 Cooperative Education 3 hrs
Employment at a business or public organization in a marketing position. General electives credits only. Offered on a credit/no-credit basis.

MKTG396 Principles of Marketing 3 hrs
Marketplace exchanges: the relationship between marketing activities of the organization and the consumer.

MKTG363 Retailing 3 hrs
The practices of retail store management: store location, layout, organization, buying systems, sales promotion activities, customer services, and store operating expenses.
Pre-req: MKTG360

MKTG364 Logistics and Materials Management 3 hrs
Concepts and systems designed to facilitate and control the movement of materials and parts through the procurement, production and distribution processes until they reach the final user. Transportation, inventory control, materials handling, warehousing, customer service, order processing, planning and control.
Pre-req: MKTG360

MKTG355 Consumer Behavior 3 hrs
The study of the basic factors influencing consumer behavior, including the roles of affect, cognition, behavior and the environment. Models designed to explain consumer behavior will be explored, as well as implications for public policy and the development of marketing strategies.
Pre-req: MKTG360 and PSY101
MKTG 408 Marketing Strategy 3 HRS
Advanced policies and practices in marketing. Case analysis of marketing problems pertinent to product, price, promotion, and channels of distribution policies.
Prereq: MKTG 360 and ACC 240.

MKTG 469 Advertising 3 HRS
Advertising as a communication tool in marketing management. The role of advertising in the marketing mix and in society. Emphasis on problem-based decision making including the appropriate use of research in establishing advertising objectives, allocating advertising budgets, determining target audiences, developing creative strategies, selecting media and determining advertising effectiveness.
Prereq: MKTG 360.

MKTG 474 Business to Business Marketing 3 HRS
Concepts, procedures, and problems encountered when one business markets its products or services to another company. Emphasizes the marketing practices employed by industrial organizations. Topics include: market analysis, organizational buying behavior, purchasing procedures, pricing and negotiation, selling and marketing planning.
Prereq: MKTG 360.

MKTG 475 International Business Transactions 3 HRS
How goods and services are moved internationally. Transportation, exchange rates, foreign banking, risk, international marketing, and the shipping scene. Various documents needed to expedite the international movement of goods.
Prereq: MKTG 360.

MKTG 477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

MKTG 485/486/487 Cooperative Education 1/2/3 HRS
Employment at a business or public organization in a marketing position. General elective credit only. Offered on a credit/no-credit basis.
Prereq: department permission.

MKTG 490 Sports and Event Marketing 3 HRS
This course includes topics germane to marketing activities associated with sports and a variety of events. It looks at the marketing of spectator and participation sports as well as events such as the arts, local festivals, and charity events. The course also examines the use of such events as marketing tools. This component will look at issues such as endorsements, licensing, naming rights, and sponsorship linkages.
Prereq: MKTG 360.

MKTG 490 International Marketing 3 HRS
International marketing and its role in the multinational corporation. Assessing international opportunities; product, price, promotion and distribution policies; foreign marketing environments.
Prereq: MKTG 360.

MKTG 461 Personnel and Planning 3 HRS
Planning, organizing, directing and controlling the sales force. Recruiting, selecting, training, evaluating, compensating and supervising.
Prereq: MKTG 360 and MKTG 430.

MKTG 462 Sales Management 3 HRS
Management of the supply and purchasing functions. Determining the right price, quality, assurance, selection of suppliers, negotiation, supplier consultation and training, and the legal and environmental aspects of purchasing and supply.
Prereq: MKTG 360.

MKTG 463 Supply Chain Management 3 HRS
Management of the supply and purchasing functions. Determining the right price, quality, delivery, selection of suppliers, negotiation, supplier consultation and training, and the legal and environmental aspects of purchasing and supply.
Prereq: MKTG 360 and DS 263.

MKTG 476 Marketing and Product Innovation 3 HRS
Prereq: MKTG 360.

MKTG 474 Promotional Strategy 3 HRS
Problems of advertising and other promotional tools in the context of the Total Marketing Communications Theory. Topics include integrated communications, direct marketing promotions, sales promotions and public relations. Emphasis on problem-based decision making and development of promotional campaigns.
Prereq: MKTG 360.

MKTG 475 Marketing Planning and Management 3 HRS
Integration of concepts from previous marketing courses and planning the marketing program.
Prereq: MKTG 368 and Marketing major with senior standing or department permission.

MKTG 477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: MKTG 360.

MKTG 485/486/487 Cooperative Education in Marketing 1/2/3 HRS
Employment at a business or public organization in a marketing position. General elective credit only. Offered on a credit/no-credit basis.
Prereq: MKTG 360 and department permission.

MKTG 445 Internship Program 3 HRS
Internship arranged with business or nonprofit organization.
Prereq: marketing major and department permission.

MKTG 401/498/499 Independent Study 1/2/3 HRS
Directed study of a problem or group of problems in production systems or management science.
Prereq: department permission.

MILITARY SCIENCE AND LEADERSHIP COURSES

MSLI 101 Foundations of Officership 2 HRS
Introduces students to issues and competencies that are central to a commissioned officer's responsibilities. Establishes framework for understanding officership, leadership, and Army values. Includes "life skills" such as physical fitness training, time management, stress management, group dynamics and briefing skills.
Prereq: MSLI 101 or department permission.

MSLI 102 Basic Leadership 2 HRS
Establishes foundation of basic leadership fundamentals such as problem solving; communications; briefings; writing; goal setting; techniques for improving leadership and speaking skills; an introduction to counseling; additional physical fitness training; and time management training.
Prereq: MSLI 101 or department permission.

MSLI 104 Individual Leadership Studies 2 HRS
Students identify successful leadership characteristics through observation of others and self-through experimental learning exercises. Students record observed traits (good and bad) in a dimensional leadership journal and discuss observations in small group settings; additional physical fitness training and additional time management training.
Prereq: MSLI 101 and MSLI 102 or department permission.

MSLI 202 Leadership and Teamwork 2 HRS
Students examine how to build successful teams, various methods for influencing action, effective communication in setting and achieving goals, the importance of time in the decision, creativity in the problem solving process, and obtaining team buy-in through immediate feedback and additional physical fitness training.
Prereq: MSLI 101, MSLI 102, MSLI 201 or department permission.

MSLI 201 Leadership and Problem Solving 3 HRS
Students develop self-assessment of leadership style, develop personal fitness regimen, and learn to plan and conduct individual/small unit tactical training while testing reasoning and problem-solving techniques. Students receive direct feedback on leadership abilities.
Prereq: MSLI 101, MSLI 102, MSLI 201, MSLI 202 or department permission.
MSL202 LEADERSHIP AND ETHICS 3 HRS
Examines the role of communications, values and ethics in leadership. Topics include ethical decision-making, consideration of others, spirituality in the military and survey of leadership doctrine. Emphasis on developing oral and written communication abilities, as well as, additional physical fitness training. 
Prereq: MSL101, MSL102, MSL201, MSL202, MSL301 or department permission

MSL201 LEADERSHIP AND MANAGEMENT 3 HRS
Develops student proficiency in planning and executing complex operations, functioning as a member of a staff and mentoring subordinates. Students explore training management, methods of effective staff collaboration and developmental counseling techniques along with additional physical fitness training. This course is designed to transition the student/cadet to service as a second lieutenant in the Army for government service, i.e., U.S. Army history. 
Prereq: MSL101, MSL102, MSL201, MSL202, MSL301, MSL302, MSL401 or department permission

MSL202 Officership 3 HRS
Study includes case study analysis of military law and practical exercises on establishing an ethical command climate. Students must complete a semester-long Senior Leadership Project that requires them to plan, organize, analyze, demonstrate, lead and manage leadership skills and critical thinking as well as physical fitness training. This course is designed to transition the student/cadet to service as a second lieutenant in the Army for government service, i.e., U.S. Army history. 
Prereq: MSL101, MSL102, MSL201, MSL202, MSL301, MSL302, MSL401 or department permission

MSL497/498-499 INDEPENDENT STUDY 1-3 HRS
Intensive study or project approved by the department head. Study or project is directly related to a military subject. 
Prereq: department permission

Music Courses

MUSC201 INTRODUCTION TO MUSIC 3 HRS
Designed for the nonmusic major. A preparatory course for MUSC101 for the music major or minor deficient in music theory. The basic elements of music: notation of pitch and rhythm, scales, intervals, tonality, beginning sight-singing and dictation.

MUSC201 Music Theory I 3 HRS
Integrated theory course dealing with perception, writing, analysis and performance of basic musical materials, stylistic comprehension of music of all periods. For music majors and minors. Taken concurrently with MUSC118 and MUSC119. 
Prereq: department permission

MUSC102 Music Theory II 3 HRS
Continuation of MUSC101. For music majors and minors. Taken concurrently with MUSC129.

MUSC101 (with a grade of C or better) and MUSC119 Coreq: MUSC102

MUSC103 INTRODUCTION TO MUSIC THERAPY 2 HRS
An orientation to music therapy. Introduces the philosophy of creative arts and the role of music therapy in the healing process. 
Prereq: department permission

MUSC104 ELEMENTS OF MUSIC 2 HRS
Singing, music reading, and theory experience in the elements of music for the elementary classroom teacher. Concepts of rhythm and melody. 
Prereq: department permission

MUSC105 INTRODUCTION TO THE PERFORMING ARTS 3 HRS
A survey of the arts of dance, theatre and music, developing an understanding and appreciation of representative works in the three fields; the place of these arts in contemporary society and their contribution to a richer life. Attendance required at specified off-campus performances. 
Nonmusic majors only.

MUSC107 MUSIC APPRECIATION 2 HRS
Guides the student in listening to and understanding various types, forms and styles of instrumental and vocal music of the world. Representative works of all periods and cultures, including contemporary developments, will be studied. Attendance at some concerts and recitals required. 
Nonmusic majors only.

MUSC118 Music Literature I 1 HRS
Stylistic analysis and musical presentation of select classical masterworks in the history of western music from the medieval period through the classic period. Objectives of the course parallel and relate to those of MUSC101. Taken concurrently with MUSC101 and MUSC119. 
Prereq: department permission

MUSC109 AURAL SKILLS I 1 HRS
Development of fundamental sight-singing techniques as well as skills in notating performed melodic and harmonic musical examples. Objectives of the course parallel and relate to those of MUSC101. Taken concurrently with MUSC101 and MUSC118. 
Prereq: department permission

MUSC128 Music Literature II 1 HRS
A continuation of MUSC118. Stylistic analysis and musical presentation of select classical masterworks in the history of western music from the classic period through the 20th century. Objectives of the course parallel and relate to those of MUSC101. Taken concurrently with MUSC101 and MUSC118. 
Prereq: department permission

MUSC209 AURAL SKILLS II 1 HRS
A continuation of MUSC109. Development of intermediate sight-singing techniques as well as skills in notating performed melodic and harmonic musical examples. Objectives of the course parallel those of MUSC102. For music majors and minors. Taken concurrently with MUSC102. 
Prereq: MUSC101 and MUSC119 (with a grade of C or better) Coreq: MUSC102.

MUSC211 UNIVERSITY CHOIR 1 HRS
An ensemble of advanced singers. Open to all students in the University. 
Prereq: department permission

MUSC214 UNIVERSITY WOMEN'S CHOIR 1 HRS
Open to all women students. 
Prereq: department permission

MUSC215 UNIVERSITY MEN'S CHOIR 1 HRS
Open to all men students. 
Prereq: department permission

MUSC216 CHAMBER CHOIR 1 HRS
Chamber music for mixed voices. Open to all students. 
Prereq: department permission

MUSC219 ATHLETIC BAND 1 HRS
The Athletic Band rehearses music and performs for a schedule determined by the instructor. The Band also performs at football and basketball games. 
Prereq: department permission

MUSC231 CLASS PIANO 2 HRS
Group instruction in piano for students with no previous keyboard experience. Provides the necessary skills for carrying on a music program in the elementary classroom. 
Nonmusic majors only.

MUSC232 CLASS PIANO 2 HRS
Continuation of MUSC231. 
Prereq: MUSC231, MUSC232.

MUSC237/238/239 SPECIAL TOPICS 1/1/1 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than one course, provided different topics are studied. 
Prereq: department permission

MUSC241 MUSIC THEORY III 3 HRS
Continuation of MUSC201, with emphasis on the functional aspects of piano playing and elementary piano literature. For students not specializing in music and with not more than one year of previous keyboard experience. 
Prereq: MUSC231, MUSC232.

MUSC242 MUSIC THEORY IV 3 HRS
Continuation of MUSC211 with emphasis on the functional aspects of piano playing and elementary piano literature. For students not specializing in music and with not more than one year of previous keyboard experience. 
Prereq: MUSC231, MUSC232.
MUSC22: Music Theory IV 3 HRS
Coursework of MUSC210. For music majors and minors. Taken concurrently with MUSC229.
Prereq: MUSC201 with a grade of C or better and MUSC219. Coreq: MUSC229.

MUSC23 Basic Brass Class 1 HRS
The playing and playing of trumpet and trombone. Majors and minors only.

MUSC24 Brass Class 1 HRS
The playing and playing of French horn, euphonium and tuba. Majors and minors only.

MUSC25 Music Literature I 1 HRS
Analytical analysis and interpretation of musical masterworks of the history of Western music from the Early Baroque period through the Renaissance period. Prereq: MUSC201 and MUSC219. Coreq: MUSC229.

MUSC26 Methodology and Materials in Music Therapy 2 HRS
Study of resources available in music therapy and their systematic application to meet the treatment needs of children and adults with various disabilities. Presentation of specific therapy goals. Prereq: MUSC222.

MUSC27 Preclinical Training Practice in Music Therapy I 1 HRS
Introductory fieldwork experience in music therapy. Observation and experience of music therapy sessions in clinical or educational settings. Prereq: MUSC102, MUSC103.

MUSC28 Preclinical Training Practice in Music Therapy II 1 HRS
Continuation of MUSC222. Leadership or co-leadership of music therapy sessions. Prereq: MUSC222.

MUSC29 Music Literature IV 1 HRS

MUSC29 Aural Skills IV 1 HRS

MUSC30 Vocal Class 1 HRS
Improving the singing and speaking voice through the study of basic technique, tone production and dictation. Not open to students with voice as a principal instrument. Prereq: the ability to read music in the style appropriate to student's voice classification.

MUSC31 Dictation in Singing 5 HRS
The physiological descriptions and laboratory practice of dictation as used in singing English, French, German, Italian and Latin.

MUSC34 Percussion 1 HRS
The playing and playing of snare drum, timpani and keyboard percussion with emphasis on group selection techniques; survey of accessory instruments; introduction of methodologies. Basic language and use of the percussion ensemble. Majors and minors only.

MUSC34 Percussion Ensemble 1 HRS
Performance class designed to develop the percussionist's technical and musical skills in an ensemble setting. Not open to the rehearsal and performance of the best in 20th-century percussion ensemble literature in a variety of styles. Prereq: permission from major or minor's department permission.

MUSC34 Jazz Ensemble 1 HRS
Performance class dealing with the elements of jazz arrangement, improvisation, and ensemble techniques with special emphasis on the function of jazz in music education. Prereq: permission from major or minor's department permission.

MUSC34 Spring Ensemble 1 HRS
Chamber music for strings. Prereq: permission from major or minor's department permission.

MUSC34 Woodwind Ensemble 1 HRS
Chamber music for woodwinds. Prereq: permission from major or minor's department permission.

MUSC34 Orchestra 1 HRS
Open to all students in the University.

MUSC34 Band 1 HRS
MUSC34 Band includes Concert Band, Symphonic Band and Marching Band. Open to all students of the University. Enrollment in MUSC34 requires attendance for the entire semester. Students desiring MUSC34 may also elect PEGN140 for one credit.

MUSC34 Functional Piano 1 HRS
Required for all music majors and minors with no previous piano experience. This includes keyboard skills necessary both for accompaniment of simple music and for developing musical understanding basic to all course work in music. Prereq: Majors or minors only.

MUSC34 Functional Piano 1 HRS
Continuation of MUSC261. Prereq: MUSC261 or equivalent: majors or minors only.

MUSC34 Functional Piano 1 HRS
Continuation of MUSC251. Prereq: MUSC251 or equivalent: majors or minors only.

MUSC34 Functional Piano 1 HRS
Continuation of MUSC241. Additional non-music training experience: keyboard harmony, improvisation, piano literature and technique. Prereq: MUSC241, majors or minors only.

MUSC34 Functional Piano 1 HRS
Continuation of MUSC231. Additional non-music training experience: keyboard harmony, improvisation, piano literature and technique. Any break in the continuity of Functional Piano courses will require an audition before resumption of study. Prereq: MUSC231 or equivalent: majors or minors only.

MUSC34 String Class: Violin 1 HRS
The playing and playing of the violin from a pedagogical approach. Designed primarily for music education majors and minors. Prereq: MUSC261.

MUSC34 String Class: Double Bass 1 HRS
The playing and playing of the double bass. Majors and minors only. Prereq: MUSC261.

MUSC34 String Class: Viola 1 HRS
Continuation of MUSC261: playing and playing of viola. Majors and minors only. Prereq: MUSC261.

MUSC34 String Class: Cello 1 HRS
The playing and playing of the cello and double bass. Majors and minors only.
MUSC377/378/379 Special Topics 3 Hrs.
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission.

MUSC381 Basic Woodwind Class 1 Hr.
The teaching and playing of clarinet, majors and minors only.

MUSC382 Woodwind Class 1 Hr.
The teaching and playing of flute and saxophone. Majors and minors only.

MUSC383 Woodwind Class 1 Hr.
The teaching and playing of oboe and bassoon. Majors and minors only.

MUSC384 History of Music 3 Hrs.
A chronological study of western music in its historical and cultural setting. Recognition of idioms, changing sound, styles and forms of music in medieval, Renaissance and Baroque periods, approximately through 1750. Students survey the history of their instruments.
Prep: MUSC202

MUSC385 History of Music 3 Hrs.
A continued chronological study of western music in its historical and cultural setting, beginning about 1750. Emphasis similar to MUSC381 but with a strong concentration in contemporary music. Covers classical, Romantic and present periods.
Prep: MUSC381

MUSC386 Music Therapy Principles 1 4 Hrs.
Examination of the research literature dealing specifically with the influence of music on behavior, including neurophysiological effects. In-depth study of diagnostic categories and systematic application of music therapy techniques to people within these categories. Laboratory experience is required in which music therapy treatment is provided to individuals with various dysfunctions.
Prep: admission to music therapy program. PSY101 or PSY102 and MUSC221

MUSC387 Music Therapy Principles II 4 Hrs.
Continuation of MUSC386. Exploration of professional skills needed by a music therapist in a variety of clinical settings. Includes in-depth examination of music therapy literature, various psychological theories and their relationships to music therapy. Laboratory experience is required.
Prep: MUSC386

MUSC388 Keyboard Skills 1 Hr.
Sight reading, harmonization, transposition, improvisation and score reading.
Prep: MUSC102 and MUSC254 or department permission; majors or minors only

MUSC389 Music Composition 1 Hr.
Original writing and analysis of music, beginning with the smaller forms. May be repeated for credit.
Prep: MUSC202 and department permission

MUSC390 Elementary Music Education 2 Hrs.
A study of materials and teaching techniques in relation to the interests, characteristics, and needs of children in elementary and special education classroom. Non-majors only.
Prep: MUSC104 and junior standing

MUSC391 Conducting 2 Hrs.
Fundamentals of baton technique, score reading, and interpretation of instrumental and vocal music.
Prep: junior standing; majors or minors only

MUSC392 Conducting 2 Hrs.
A practical course in instrumental conducting, score preparation, baroque technique, study of technical and musical problems in conducting traditional and contemporary works.
Prep: MUSC386

MUSC393 Conducting 2 Hrs.
A practical course in choral conducting, baroque technique, score analysis, study of technical and musical problems in conducting traditional and contemporary works.
Prep: MUSC386

MUSC394 Music Education in the Elementary School 3 Hrs.
Organization, planning and teaching of elementary music. Examination, evaluation and preparation of materials. Music curriculum based on child growth and development and development principles. Concurrent placement in schools for observation and student teaching experience. Open to music education majors and minors only.
Prep: junior standing; completion of MUSC254 and Applied Music Course 1141151516 or Applied Music Course 11051106 and Applied Music Course 134135136; MUSC202, admission to the College of Education; Coreq: MUSC386

MUSC395 Music Education in the Secondary School 3 Hrs.
Care and treatment of adolescent voices; classification and training of voices; sung interpretation; organization and administration of all types of choral ensembles; theory, history and literature of music classes; evaluation of numerous materials suitable for choral organization and other classes in the secondary school; psychology and philosophy of music education. Open to music education majors only.
Prep: junior standing; satisfactory completion of MUSC386 proficiency in piano and voice; Coreq: MUSC384

MUSC396 Instrumental Music in the Public Schools 3 Hrs.
Designed to prepare students to teach instrumental music programs; covers organization of beginning classes, special problems of strings, selection of oboe materials; techniques of teaching, public relations, and other areas of interest in the development of orchestral and bands. Special emphasis placed on music for grades four through nine. Open only to instrumental music education majors and minors. No students on academic probation.
Prep: junior standing and admission to the College of Education

MUSC397 Orchestral Methods 3 Hrs.
Designed to assist students in their preparation as orchestra directors; special problems relevant to the string orchestra, string ensembles, and the string curriculum in the secondary schools. Open only to instrumental music majors. No students on academic probation.
Prep: MUSC382 and junior standing

MUSC398 Band Methods 3 Hrs.
Designed to assist students in their preparation as band directors in secondary schools; charting and drills for marching bands; rehearsal procedures and selection of suitable materials for the concert band. Open only to instrumental music education majors. No students on academic probation.
Prep: MUSC382 and junior standing

MUSC399 ContraPuntal Techniques 2 Hrs.
Writing in polyphonic forms with contrapuntal analysis.
Prep: MUSC202

MUSC400 College Music 1 Hr.
Various ensembles of soloists - instrumental, vocal and mixed. Opportunity to perform old and new music infrequently heard. Open to all qualified students.

MUSC401 Music for Piano Instruction 1 Hr.
Study of method books and materials suitable for use with beginning- and intermediate-level students. Prep: junior standing

MUSC402 Music for Piano Instruction 1 Hr.
Study of method books and materials suitable for use with beginning- and intermediate-level students. Prep: junior standing

MUSC403 Music for Piano Instruction 1 Hr.
Study of method books and materials suitable for use with beginning- and intermediate-level students. Prep: junior standing

MUSC404 Music Theory Literature V 3 Hrs.
Integration of previous studies in theory-literature and music history; continued study and analysis of music from all periods: original, creative composition with special emphasis on contemporary style.
Prep: MUSC202

MUSC405 Music Theory-Literature VI 3 Hrs.
Continuation of MUSC401.
Prep: MUSC401
MUSC 404 PSYCHOLOGY OF MUSIC I  2 HRS
Study of the functional uses, psychological attributes, aesthetic effects and psycho-acoustical properties of music. Introduction to statistical analysis and evaluation of research in the field. Examination of the continued need for investigation and documentation.
Prereq: MUSC 404

MUSC 405 PSYCHOLOGY OF MUSIC II  2 HRS
Continuation of MUSC 404. In-depth exploration of empirical research in the field, with opportunities to conduct individual investigation of select topics.
Prereq: MUSC 404

MUSC 415 ORCHESTRATION  2 HRS
Practical work in setting compositions for full orchestra and various other instrumental ensembles.
Prereq: MUSC 302

MUSC 424 BAND ARRANGING  2 HRS
Arranging for band: transcription from other media; original composition; analysis of representative work.
Prereq: MUSC 413 and senior standing

MUSC 425 PRECLINICAL TRAINING
Practicum in Music Therapy III  1.5 HRS
Fieldwork experience in clinical or educational setting under supervision of a registered music therapist. Taken concurrently with MUSC 404.
Prereq: senior standing in music therapy program; MUSC 404

MUSC 426 PRECLINICAL TRAINING
Practicum in Music Therapy IV  1.5 HRS
Fieldwork experience continued. Taken concurrently with MUSC 405.
Prereq: MUSC 426

MUSC 448/449 OPERA WORKSHOP  1.5 HRS
A laboratory-performance course that deals with performance of opera scenes and, when feasible, complete works. Musical and dramatic aspects of production.
Prereq: department permission

MUSC 475 CHAMBER MUSIC PERFORMANCE  2 HRS
Study and performance of literature for small chamber groups. May be repeated for credit.
Prereq: department permission

MUSC 497/498/499 SPECIAL TOPICS  1-3 HRS
An exploration and study of topics not covered in other department offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

MUSC 488 CLINICAL TRAINING IN MUSIC THERAPY  2 HRS
Six months of supervised training in a hospital, clinical or educational setting affiliated with the National Association for Music Therapy.
Prereq: MUSC 425; senior standing; completion of all Music Therapy curriculum requirements and successful completion of piano, keyboard and voice competency examinations.

MUSC 490/495 HONORS COURSE IN MUSIC  2-4 HRS
Provides superior students with the opportunity for an intensive program of independent study, original composition, performance of research.
Prereq: senior standing; cumulative average of 3.5 in music, 3.2 in general studies; regulations governing honors courses must be followed (see page 27)

MUSC 497/498/499 INDEPENDENT STUDY  1-3 HRS
Independent study, under the supervision of a department member, in areas in which the department does not offer a course.
Prereq: department permission

Applied Music Courses

AXXX101/102/103/104 APPLIED MUSIC COURSE  1 HRS
For elective study. May be repeated for credit.

AXXX105/106 APPLIED MUSIC COURSE  2 HRS
Prerequisites: applied music. For the student who requires additional preparation in his or her principal instrument before entering regular freshman level work. Cannot apply toward graduation requirements in any music major curriculum.

AXXX111/112/113/114/115/116/117/118/119/120/121/122/123/124/125 APPLIED MUSIC COURSE  2 HRS
For music minors. May be repeated for credit.

AXXX120/121/122/123/124 APPLIED MUSIC COURSE  2 HRS
Lower-level work for music majors (BA, BS, BME, BMV, BMT) only. May be repeated for credit.

AXXX140/141/142/143/144/145/146/147/148 APPLIED MUSIC COURSE  4 HRS
Lower-level work for music majors (BM) only. May be repeated for credit.

AXXX150/151/152/153/154/155/156/157/158 APPLIED MUSIC COURSE  2 HRS
Upper-level work for music majors (BA, BS, BME, BMV, BMT) only. May be repeated for credit.

AXXX160/161/162/163/164 APPLIED MUSIC COURSE  4 HRS
Upper-level work for music majors (BM) only. May be repeated for credit.

Note: Students must take applied music courses for a principal instrument. For a list of principal instruments available, see Music Courses.

Nursing Courses

NURS10 INTRODUCTION TO PROFESSIONAL NURSING  3 HRS
This introductory course explores professional nursing. Students examine independent and interdependent aspects of care and the influence of laws, ethics, and policies on nursing practice. Students will learn the use of research and nursing process in clinical setting.

NURS177/178/179 SPECIAL TOPICS  1-5 HRS
An exploration and study of topics not covered in other department offerings. Students may elect more than once, provided different topics are studied.

NURS208 THE ART AND SCIENCE OF NURSING I  3 HRS
This introductory course uses Gordon's eleven health patterns and the nursing process to examine health, illness, and health promotion. Nursing is presented as a unique healing function that addresses important differences in health, health promotion, and illness prevention based on age, gender, culture, ethnicity, and socio-economic status.
Prereq: admission to the nursing program

NURS209 THE ART AND SCIENCE OF NURSING I LABORATORY  1 HRS
This course provides the laboratory experience for the beginning nursing student. In the clinical setting, students must develop knowledge and skills necessary for basic nursing care to adult patients with chronic illness.

Prereq: admission to the nursing program. Coreq: NURS10, NURS210 and NURS226 and NURS275 and NURS226

NURS210 HEALTH ASSESSMENT  3 HRS
This 2 credit hour course with 1 hour lecture and 2 hours of laboratory per week is designed to cover the skills necessary to complete a basic health assessment of clients across the lifespan. The student will develop the skills necessary for interviewing, physical examination and documentation of the health history and physical examination. The course is composed of lectures, discussions, demonstrations and laboratory-based skills practice. This course prepares the student to complete a holistic health history and physical examination.
Prereq: admission to the nursing program; RNI BSN students may register for this course prior to admission to the program

NURS240 THE ART AND SCIENCE OF NURSING II  3 HRS
The course continues exploration and application of issues in professional nursing and the development of knowledge and skills foundational to nursing care of adults in health and illness.
Emphasis will be placed on the effects of aging on health and illness and nursing care of adults in the context of family and culture.

Prereq: MICR329, NURS275, NURS298, NURS209, NURS220. Correq: NURS251, NURS260, NURS270

NURS252 Tee ART AND SCIENCE OF NURSING II LABORATORY 3 HRS

In this course students apply the concepts learned in theory and laboratory in providing nursing care to adults in various health and illness states with an emphasis on the illness yet stable individual in the acute care setting. The course continues exploration and application of cognitive, psychomotor and affective skill development in the care of these clients.

Prereq: MICR329, NURS275, NURS298, NURS209, NURS220

NURS260 PATHOPHYSIOLOGY 4 HRS

The course will concentrate on how physiologic functions are modified by disease processes and stress. All major physiologic functions will be presented. However, disease prototypes for a system will receive greater emphasis in the lecture. Knowledge gained from this course will provide the students with rational for clinical decision making and action in related nursing courses. The teaching methodology for the class is the lecture.

Prereq: admission to the nursing program/permission of the department

NURS270 PHARMACOLOGY 3 HRS

This course is designed to provide the student with the basic concepts of pharmacology. The role and responsibility of the nurse for safe, legal, ethical and therapeutic drug therapy is developed. Theories of drug actions and variables affecting drug actions are examined. Psychological and cultural aspects of drug therapy and self-medication are explored. The appointment of the nursing process relative to prescribed drug regimen is emphasized throughout this course.

Prereq: admission to the nursing program/permission of the department

NURS277 ESSENTIALS OF PROFESSIONAL NURSING PRACTICE I 3 HRS

This course introduces the BSN student to the foundational elements of professional nursing as identified by the American Association of Colleges of Nursing. Active learning strategies are incorporated throughout the course to engage the student in exploration of professional values, core competencies, core knowledge and role development. Nursing (BSN) majors only.

Correq: NURS208/209/220

NURS277/278/279 SPECIAL TOPICS 1/2/1 HRS

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

Prereq: department permission

NURS204 NURSING CARE OF CHILDREN/FAMILIES 2 HRS

Nursing 204 focuses on maternal-newborn nursing within a family-centered approach. The course encompasses the entire childbearing process, from preconception planning through pregnancy, birth, and the postpartum period. Students use the nursing process with a focus on critical thinking, liberal arts, and sciences in the care of childbearing families.

Prereq: completion of sophomore-level nursing courses, MICR328 and DTC203; Correq: NURS205

NURS205 NURSING CARE OF CHILDREN/FAMILIES LABORATORY 2 HRS

This course focuses on the application of childbearing and family theory in the care of selected childbearing families. Clinical experiences will occur in prenatal clinics and inpatient and postpartum settings of community hospitals.

Prereq: completion of sophomore-level nursing courses, MICR328 and DTC203

NURS206 CHILD/FAMILY HEALTH NURSING 2 HRS

This course is designed to provide theoretical and practical knowledge in the nursing care of children and families in wellness and illness states. Health promotion, maintenance and restoration are stressed to promote physical, psychosocial, mental and spiritual wellness. Competent nursing care flows from this knowledge and is facilitated by an understanding of child development, family dynamics and communication skills.

Prereq: completion of sophomore-level nursing courses, MICR328 and DTC203; Correq: NURS207

NURS207 CHILD/FAMILY HEALTH NURSING LABORATORY 3 HRS

This course is designed to provide a variety of clinical experiences with healthy and ill children in acute care and community settings. Nursing skills based on safe nursing practice standards will be adapted to meet the child's health needs, developmental level and practice setting. These experiences are designed to facilitate sound clinical judgments and the development of leadership, collaboration, organization and management skills in clinical practice.

Prereq: completion of sophomore-level nursing courses, MICR328 and DTC203

NURS290 ADULT HEALTH NURSING I 2 HRS

This course focuses on the nursing care of adult clients and families who have chronic illnesses. Content is presented in a nursing process format via lecture, discussion and independent student study. With a focus on student critical thinking, the course emphasizes the application, analysis and synthesis of nursing, liberal arts and science knowledge in the care of diverse adult populations with chronic illnesses. These professional role components are strongly emphasized: teamwork, planning, interdisciplinary collaboration, client advocacy and coordination of care.

Prereq: completion of sophomore-level nursing courses, MICR328. Coreq: NURS331

NURS291 ADULT HEALTH NURSING II LABORATORY 3 HRS

This clinical course is focused on caring for adult clients with chronic illnesses. In most cases, clients are experiencing acute exacerbations of their chronic conditions. The needs of clients and family members (persons identified by the client as "family") are addressed so that nurses practice primarily in inpatient settings. Special focus is placed on client teaching and on evidence-based interventions.

Prereq: completion of sophomore-level nursing courses

NURS330 PSYCHIATRIC/MENTAL HEALTH NURSING 2 HRS

NURS330 is designed in a lecture/discussion format to provide a foundation in professional psychiatric mental health nursing. Emphasis is placed on gaining knowledge of preventive interventions appropriate for provision of evidence-based, holistic nursing care to emotionally and mentally ill client(s) from across the life span. The legal, ethical and cultural considerations required to provide nursing care are addressed as well as concepts of primary mental health care, outpatient and community care.

Prereq: completion of sophomore-level nursing courses; Coreq: NURS331

NURS331 PSYCHIATRIC/MENTAL HEALTH NURSING LABORATORY 3 HRS

Students collaborate with patients, faculty, and professional health care providers primarily in public and private inpatient psychiatric hospitals. Students learn traditional and nontraditional treatment approaches; use the nursing process and evidence-based research to provide holistic, culturally competent direct care and have opportunities to observe the legal aspects of mental health care in function and have opportunities to observe legal aspects of mental health care.

Prereq: completion of sophomore-level nursing courses

NURS372 NURSING RESEARCH 2 HRS

In this course students will examine nursing research as it relates to nursing practice. Nursing research literature and the importance of evidence based nursing practice will be examined. Ethical issues involved in nursing research, adequacy of existing research, and application of nursing research will be explored.

Prereq: All level II BSN Courses: NURS275, 208, 209, 220, 250, 251, 260, and 270 or department permission

NURS375 ESSENTIALS OF PROFESSIONAL NURSING PRACTICE II 3 HRS

This second of a three course sequence builds knowledge of essential elements of professional nursing. Students explore ethical dilemmas of health care, leadership and management, communication and critical thinking, health policy, economics, global health care, spiritual/cultural issues, and legal aspects of nursing through active learning strategies. Nursing (BSN) majors only.

Prereq: All level II BSN Courses: NURS275, 208, 209, 220, 250, 251, 260, and 270 or department permission

329
COURSES IN OCCUPATIONAL THERAPY

The courses listed below are a selection of the programs offered in occupational therapy. Further information can be obtained from the respective institutions or organizations.

**Occupational Therapy**

The courses listed below are a selection of the programs offered in occupational therapy. Further information can be obtained from the respective institutions or organizations.

**Nursing Assistant Training**

The courses listed below are a selection of the programs offered in nursing assistant training. Further information can be obtained from the respective institutions or organizations.
for case-based learning and allows students to
2 critically analyze, evaluate and synthesize in-
sertions and skills developed through the
curriculum.

OGTH477/478/479/480 Specialty Topics
1/2/3/4 HRS
Experimental courses or special topics in oc-
upational therapy may be offered.
Prereq: department permission.

OGTH488/489 OT Fieldwork (Full-time)
6 HRS EACH
A full-time, three-month experience in a select
health services agency, in which the student will
gain in-depth experience in evaluation and pro-
gramming for occupational therapy interven-
tion. Credit/no-credit.
Prereq: department permission; completion of all
courses in major.

OGTH619 Neurological Foundations of
Human Occupation 3 HRS
Students will pursue knowledge in the neurosci-
ences related to function and dysfunction of
the central nervous system. Emphasis is placed on
integrated brain function impacting daily living
and occupational performance. Related clini-
cal conditions will be correlated with research
investigations that support appropriate and cur-
rent interventions in occupational therapy.
Prereq: ZOO1417; EDPS325 or KIN250
OGTH649/650 Independent Study
1/2/3 HRS
Independent work following an approved plan
to develop knowledge in specialized areas.
Prereq: department permission.

GENERAL ACTIVITY COURSES

PEGN101 Weight Control and
Fitness 2 HRS
The purpose of the course is to relate pertinent
information about effects of exercise and nutri-
tion upon the human organism, its structure,
function, capabilities and limitations, and expe-
rience some of the effects.

PEGN102 Aerobic Dance 1 HRS
A course in which the student can experience
physical conditioning and fitness, utilizing
dance and music as the medium for aerobic
exercise.

PEGN104 Cardio Kickboxing 1 HRS
A non-contact aerobic workout with the dy-
amic punching and kicking of the Martial Arts
and boxing. Cardio Kick movements are very
easy to follow and are choreographed to music.

PEGN108 Basketball 1 HRS
The course is designed for the novice skilled
player. The purpose is to learn the basics of
individual and team play with emphasis on
fundamentals.

PEGN110 Beginning Tai Kwon Do 1 HRS
An introductory course showing the various
techniques used in the art of self-defense.
Students learn discipline, self-confidence and a
vigorous physical activity.

PEGN111 Volleyball 1 HRS
This course will provide opportunities to
develop/improve basic volleyball skills, strate-
gies, and concepts via lecture, demonstration
and laboratory experiences. The course is de-
signed to enhance the student's performance and
increase the enjoyment of participation.

PEGN115 Karate 1 HRS
This is a beginner's course in the art of self-de-
defensive movements. The aim of self defense is to
protect oneself from attack to the point where
escape is possible. The student will be intro-
duced to a variety of defensive movement.

PEGN119 Women's Gymnastics 1 HRS
An introductory course in the understanding of
and participation in the various tumbling rou-
tines and apparatus used by women. Em-
phasis is on the ability to develop new skills and
provide an increase in physical fitness of those
performing.

PEGN122 Men's Gymnastics 1
This is a basic men's gymnastic skills class, and
an introduction to the sport of gymnastics.

PEGN124 Fitness Walking 1 HRS
This course is designed to provide students with
basic knowledge of physical fitness and healthy
lifestyle principles. Power walking is a program
that trains muscular strength and endurance,
flexibility, cardiovascular endurance and pro-
moses total body health.

PEGN126 Conditioning Activities 1 HRS
A beginning course designed for students with
limited or no experience in physical fitness con-
ditioning activities. A variety of activities will be
used to promote the skills and knowledge for
individual use.

PEGN128 Judo 1 HRS
A beginning course in the martial arts of Judo.
Students will learn its history, as well as being
able to demonstrate the various techniques.

PEGN130 Assault and Rape Prevention 1 HRS
A course designed to develop skills that will
help a person to (1) recognize possible dangers
to property and self, (2) identify alternatives to
physical aggression, and (3) use appropriate self
defense techniques when physical aggression
cannot be avoided.

PEGN135 Marching Band 1 HRS
A class taken by Permission Only from the
Music and Dance Department. These accepted
will be part of the EMU Marching Band and
are expected to be available for practices and
performances.

PEGN142 Racquetball and Paddlesball 1 HRS
Students will learn the fundamental skills of
forehand, backhand, and serving. The student
will also be responsible for learning the basic
rules, strategies and scoring before given an op-
portunity to compete with fellow classmates.

PEGN143 Fencing 1 HRS
An introductory course in the history of fencing
and the fundamental skills and techniques for
use of the foil. Emphasis is placed on the indi-
vidual body movements and skills for a novice.

PEGN145 Cross Country Skiing 1 HRS
A course to give the student fundamental
knowledge of cross-country skiing, covering:
equipment, basic skills, waxing techniques
proper dress and survival. Students furnish
their own equipment, or rental from the rec-
reation area.

PEGN146 Beginning Snow Skiing 1 HRS
A class designed to provide instruction in the
basic fundamentals of downhill snow skiing at
a recreational level.

PEGN148 Tennis 1 HRS
This course is designed to promote skill de-
velopment in the basic tennis strokes and to
promote an understanding of rules, etiquette,
serving, strategies, and singles and doubles play.

PEGN149 Badminton 1 HRS
A beginning course in badminton to develop
sufficient skill and knowledge to permit a per-
son to enjoy it as a recreational sport. Students
will learn the basic badminton strokes, scoring
procedures, rules and etiquette.

PEGN150 Golf 1 HRS
An introductory course focusing on basic in-
srtion on the golf swing, woods and iron
play, chipping, putting, and playing from the
sand. The course also covers golf etiquette and
discusses different types of equipment used in
today's game. The commercial establishment
charges an extra fee.

PEGN151 Bowling 1 HRS
This course is designed for the beginning bow-
ler. The student will learn basic knowledge of all
aspects of bowling to include: rules, scoring,
strategies, and common conversions. The
commercial establishment charges an extra fee.

PEGN152 Sailing 1 HRS
This course is designed for the novice/beginning
sailor. The course will provide opportunities to
develop basic sailing skills via lecture, demon-
stration, and practical experience.

PEGN153 Swimming 1 HRS
A course for those who cannot swim or are nov-
ice swimmers, to enhance their ability to enjoy
water and its recreational fitness. The student
will learn to practice safe habits and increase
their knowledge and ability to swim using a
variety of elementary strokes.

PEGN177/178/179 Specialty Topics 1/2/3 HRS
A one-, two- or three-hour experimental course
of study to be listed by title.
PEGN2090 YOGA 1 HR
This course is designed to teach the student the five key elements of Yoga. It will include exercises, breathing, relaxation and meditation techniques.

PEGN290 EXTRAMURAL CLUB SPORTS 1 HR
The purpose of this course is to promote physical and healthy participation in Extramural Club Sports recognized by Campus Life, and the Rec/Int Department. Students will be required to attend all practices and club organized competitions throughout the semester.

PEGN291 SWING DANCE I 1 HR
This course is designed to teach students the theory, technique and beginning patterns in triple time and double time swing in the Lindy hop.

PEGN292 FITNESS ACTIVITIES 1 HR
This course is designed to provide students with a background in physical fitness, exercise and health principles and practices. These principles will be applied to personal exercise and health programs through activities such as target heart rate monitoring, body measurements, posture analysis, energy intake and expenditure assessments.

PEGN294 LATINO DANCE 1 HR
This course is designed to provide students with the technical foundations in Latin dance. This is a beginning level course.

PEGN296 LIFETIME WELLNESS AND FITNESS 2 HRS
A lecture course covering the essential elements of wellness and fitness. The course is geared toward entering freshmen and is a graduation requirement.

PEGN297 INTERMEDIATE VOLLEYBALL 1 HR
An advanced course designed to develop and increase the student's ability to perform specific skills necessary for participation in the game of volleyball. The intermediate skills plus offensive and defensive strategies will be emphasized.

PEGN299 TAI CHI 1 HR
This course is designed to teach students the simplified 24-form Tai Chi Chuan which was standardized in China and has been popularized around the world.

PEGN390 VARSITY RIFLE TEAM 1 HR
This course is a rifle team. The course of instruction will cover the fundamentals of rifle marksmanship and firearms safety. It will focus on the National Rifle Association (NRA) Basic Rifle Course, NCAA Rifle Team guidelines, and the NRA Small Bore Rifle Rules for competition. The team practices and competes using three positions, which are the prone, standing (off-hand), and kneeling positions. Throughout the course, safety and the proper use of equipment are reinforced. The majority of competitions are held on campus.

PEGN394 Men's GYMNASTICS II 1 HR
This is a continuation of the knowledge and skills learned in Gymnastics I, and applied to more advanced routines on the different apparatus.

PEGN394 JOGGING 1 HR
A course designed to provide the student with endurance training experience through jogging. The student will need to maintain a log of their daily jogging program and submit to the instructor for review.

PEGN394 WEIGHT TRAINING 1 HR
A beginning course for the student to gain knowledge and skills that will permit a novice to organize a personal weight training program and measure the effects of such a program on his/her physical fitness components.

PEGN397 VARSITY SOCCER 1 HR
A planned program to teach and develop the advanced skills and strategies necessary for participation in the collegiate level competition of soccer. Permission required.

PEGN398 VARSITY CROSS COUNTRY 1 HR
A planned program to teach and develop the advanced skills and strategies necessary for participation in the collegiate level competition of Cross Country. Permission required.

PEGN399 VARSITY FOOTBALL 1 HR
A planned program to teach and develop the advanced skills and strategies necessary for participation in the collegiate level competition of football. Permission required.

PEGN395 VARSITY BASKETBALL 1 HR
A planned program to teach and develop the advanced skills and strategies necessary for participation in the collegiate level competition of basketball. Permission required.

PEGN396 VARSITY SWIMMING 1 HR
A planned program to teach and develop the advanced skills and strategies necessary for participation in the collegiate level competition of swimming. Permission required.

PEGN397 VARSITY GYMNASTICS 1 HR
A planned program to teach and develop the advanced skills and strategies necessary for participation in the collegiate level competition of gymnastics. Permission required.

PEGN398 VARSITY WRESTLING 1 HR
A planned program to teach and develop the advanced skills and strategies necessary for participation in the collegiate level competition of wrestling. Permission required.

PEGN399 VARSITY TRACK 1 HR
A planned program to teach and develop the advanced skills and strategies necessary for participation in the collegiate level competition of track. Permission required.

PEGN400 VARSITY BASEBALL 1 HR
A planned program to teach and develop the advanced skills and strategies necessary for participation in the collegiate level competition of baseball. Permission required.

PEGN401 VARSITY GOLF 1 HR
A planned program to teach and develop the advanced skills and strategies necessary for participation in the collegiate level competition of golf. Permission required.

PEGN402 VARSITY TENNIS 1 HR
A planned program to teach and develop the advanced skills and strategies necessary for participation in the collegiate level competition of tennis. Permission required.

PEGN403 VARSITY VOLLEYBALL 1 HR
A planned program to teach and develop the advanced skills and strategies necessary for participation in the collegiate level competition of volleyball. Permission required.

PEGN404 VARSITY SOFTBALL 1 HR
A planned program to teach and develop the advanced skills and strategies necessary for participation in the collegiate level competition of softball. Permission required.

PEGN405 BASIC RIVER KAYAK 1 HR
The Basic River Kayak course is a program emphasizing safety, enjoyment and skill acquisition for entry level through intermediate levels for individuals in public, private and commercial settings.

PEGN406/407/408 SPECIAL TOPICS 1/1.5/2 HRS
Three one- or two- or three-hour experimental courses of a subject to be listed by title.

PEGN409/410/411 INTERMEDIATE Taekwondo 1 HR
A continuation of the beginning Taekwondo course designed for students who have mastered the initial skills and wish to advance their knowledge and skills towards a higher TKD ability class belt.

PEGN404/406/408 BASIC SCUBA DIVING 1 HR
This course will provide the student with the knowledge and skills to safely enjoy and gain limited experience in the diving environment under normal water and diving conditions. The course prepares students for Open Water Scuba Diving Certification by the Professional Associate of Diving Instructors.

PEGN404/406/408/410 SPECIAL TOPICS 1-1.5 HRS
Several one-, two- or three-hour experimental courses of a subject to be listed by title.

PEGN404/406/408/410 DIRECTED STUDY 1-1.5 HRS
Directed study in areas not covered in other course offerings, or greater depth of study in areas in which the student has a continuing interest. Students and instructors must agree to select faculty members for direction, consultation, and evaluation of the completed study or project. Open only to department majors or minors who have attained junior standing, with a grade point average of 3.0 or above, and who have
PHYSICAL EDUCATION COURSES

PHED100 HISTORY AND FOUNDATIONS OF PHYSICAL EDUCATION 2 HRS
A lecture and discussion course in the history and foundation of physical education. This course is an examination of the influence of selected cultures, peoples, and events that have contributed to the development of the physical education discipline.

PHED177/178/179 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereg: department permission

PHED200 ANATOMY AND PHYSIOLOGY 5 HRS
A textbook course, supplemented by lectures and demonstrations, on the structure and functions of the bones, joints, and muscles of the digestive, respiratory and circulatory systems.

PHED204 KINESIOLOGY (BIOMECHANICS OF PHYSICAL ACTIVITY) 3 HRS
A required class for sport medicine and physical education majors/minors who scientifically analyze the techniques involved in the performance of human movement skills.
Prereg: PHED200 or SPMD201/202

PHED209 BIO-FITNESS 2 HRS
Individual biological needs and how those needs are related to daily habits. Students will complete an individual fitness profile that will be the basis for understanding how desirable changes in fitness are achieved.

PHED215 METHODS OF TEACHING INDIVIDUAL SPORTS 3 HRS
A required class for physical education majors/minors who are preparing to teach individual sports in the elementary and secondary schools. Instruction in the teaching, performance, analysis, and evaluation of selected fundamental badminton, golf and tennis skills will be presented.

PHED217 METHODS OF TEACHING TEAM SPORTS 3 HRS
A required class for physical education majors/minors who are preparing to teach in elementary and secondary schools. Instruction in the teaching, performance, analysis, and evaluation of fundamental basketball, softball, and volleyball skills will be presented.

PHED239 METHODS OF TEACHING RHYTHMIC ACTIVITIES, FUNDAMENTAL MOVEMENT AND MOVEMENT EDUCATION 3 HRS
A required class for physical education majors/minors who are preparing to teach in elementary and secondary schools. Instruction will focus on the teaching, performance, analysis and evaluation of fundamental rhythmic, social dance, locomotor, non-locomotor and manipulative skills and creative movement activities.

PHED231 SERVICE TEACHING 1 HR
This is an individual program under the direction of a qualified faculty member, to enhance the student's ability to gain additional professional experience. Permission required.

PHED233 SERVICE TEACHING 1 HR
For qualified students an additional opportunity to undertake an individualized program under the direction of a qualified faculty member. Permission required.

PHED237 PHYSICAL EDUCATION FOR THE CLASSROOM TEACHER 2 HRS
A methods and materials course in which the prospective classroom teacher gains knowledge in organizing and implementing a physical education program. Not intended for students majoring in physical education.

PHED260 MOTOR DEVELOPMENT 2 HRS
A required course for physical education majors and minors. The course will focus on the principles of motor development, with implications for learning and teaching motor skills. Emphasis will be given to the factors and conditions that influence motor proficiency in children and adolescents.

PHED277/278/279 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereg: department permission

PHED282 PERCEPTUAL-MOTOR TRAINING 1 HR
Planning and conducting perceptive motor training programs for students with neurological dysfunction. Assessment procedures and activity sequences. Supervised field experiences required.

PHED287 COOPERATIVE EDUCATION 3 HRS
One semester of supervised work in a concentrate area. An evaluation is required at the end of the employment period.
Prereg: nine credit hours in concentration, approval by Cooperative Education Office and department permission

PHED290 PSYCHOLOGY OF EXERCISE 3 HRS
A lecture/laboratory course concerned with human responses and adaptations to muscular activity. The enhancement of health and physical fitness for the general population, optimizing performance in the various types and levels of competitive athletics.
Prereg: PHED200 or SPMD201/202

PHED301 PRACTICAL CONCEPTS OF CONDITIONING 3 HRS
A practical experience in applying the concepts and theories of conditioning to in-class situations as well as coaching. Programs such as intramural training will be designed and experienced by the student for use in a particular situation.

PHED311 ATHLETIC TRAINING AND PHYSIOTHERAPY 2 HRS
For prospective coaches and physical educators. Principles and skills of athletic training and physiotherapy. Lectures, demonstration, and practice of managing, bandaging, taping, and therapeutic measures as applied to athletic activities and injuries.

PHED315 METHODS OF TEACHING CONDITIONING ACTIVITIES 2 HRS
A required lecture/labatory class for physical education majors/minors who are preparing to teach in elementary and secondary schools. Instruction will focus on the practical application of physical fitness and wellness concepts.
Prereg: PHED300

PHED316 FOUNDATIONS OF COACHING 2 HRS
Practical and scientific information necessary for the implementation of a successful coaching program.

PHED317 METHODS OF TEACHING ELEMENTARY PHYSICAL EDUCATION 2 HRS
A required course for physical education majors who are preparing to teach in a physical education program for elementary school children. The course focuses on theory and practical experience in physical education in the elementary school program. It presents a variety of activities and teaching styles needed to meet the needs of children in the elementary school years.
Prereg: PHED260

PHED319 METHODS OF TEACHING AQUATICS 2 HRS
An elective course for physical education majors/minors. Aquatics covers the teaching of the four competitive swimming strokes, front crawl, back crawl, breast stroke, and butterfly. In addition, life saving strokes, side-stroke, and elementary backstroke are studied to prepare students to teach swimming in physical education classes.

PHED320 ADAPTIVE PHYSICAL EDUCATION 3 HRS
A lecture and participation course covering the philosophy and goals of adaptive physical education, the relationship of adaptive physical education to the general physical education program, the needs and characteristics of the students with disabilities, and the designing of exemplary adapted physical education programs. Supervised fieldwork required.
Prereg: PHED260

PHED323 SERVICE TEACHING 1 HR
Provides additional individual opportunities at an advanced level. Permission required.

PHED332 SERVICE TEACHING 1 HR
For the advanced student who has shown some interest in undertaking a research project for professional development. Permission required.
PHED335 AMERICAN RED CROSS
LIFEGUARDING 3 HRS
American Red Cross (ARC). This course covers CPR for the professional rescuer (CPR-PR), first aid, and in-water rescue skills. ARC lifesaving certificates are awarded upon successful course completion.

PHED360 MOTOR LEARNING 3 HRS
A required course for physical education majors, instruction will focus on learning the processes underlying skill performance, how skill performances are learned, and how to apply the principles of skill performance and learning in teaching and coaching situations. Prereq: PHED260 or instructor permission.

PHED420 PHYSICAL EDUCATION APPLIED TECHNOLOGIES 2 HRS
This required course provides an overview of how technology can be integrated into the physical education and coaching professions. Through the use of the World Wide Web, lectures, demonstrations, and hands-on experiences, students will learn and evaluate a variety of software applicable to school and non-school settings.

PHED477/478/479 SPECIAL TOPICS 1/1/1 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. Prereq: department permission.

PHED352 MOTOR DEVELOPMENT OF THE YOUNG CHILD 3 HRS
A course designed specifically for early childhood majors and others interested in young children. A study of the sequential development of motor skills during early childhood. Emphasis is on the development of Gross Motor Skills, fine motor skills, coordination, and balance.

PHED427 COOPERATIVE EDUCATION IN PHYSICAL EDUCATION 3 HRS
One semester of supervised work in concentration area. An evaluation is required at the end of the employment period. Prereq: nine credit hours in concentration, approved by Cooperative Education Office and department permission.

PHED428 ASSESSMENT IN ADAPTED PHYSICAL EDUCATION 1 HRS
A study of the process of assessing gross motor functioning of students who exhibit a variety of disabilities. Investigation of the legislative mandates requiring assessment and application of the latest assessment instruments for students with disabilities. Fieldwork required. Prereq: PHED230.

PHED389 SPORT AND ACTIVITY FOR THE DISABLED 1 HR
A course designed to investigate sports organizations that serve people with disabilities. Topics to be explored include the role of the United States Olympic Committee, Group II members of the USOC and Committee on Sports for the Disabled, classification of athletes for competition, roles of the National Governing Bodies in promoting sports, and ways people with disabilities can access sports and non-competitive opportunities.

PHED420 PHILOSOPHICAL ASPECTS OF PHYSICAL EDUCATION AND SPORT 2 HRS
This course challenges students to discuss the nature of physical education and sports throughout history. Students will examine why we play what we value, who we are, how we know, through physical education. This lecture/discussion course is required for physical education majors. Prereq: PHED100 and junior or senior standing.

PHED445 WOMEN IN SPORT 3 HRS
Patterns, problems, and conditions associated with women's sports involvement in selected world cultures, the sportswoman in American society.

PHED425 CURRICULUM AND INSTRUCTION IN PHYSICAL EDUCATION 3 HRS
Methods and use of materials in the teaching of activities in the elementary and secondary grades. Unit and lesson planning, classroom management, audio-visual aids, Observations of physical education classes at different levels required. Entry into College of Education required. Prereq: PHED260.

PHED421 LEGAL ASPECTS OF SPORT, PHYSICAL EDUCATION, AND RECREATION 2 HRS
Individual rights, due process, selected legal concepts and principles, liability, safe environment, risk management, contracts, insurance, and other selected topics. Prereq: senior standing.

PHED444 ADAPTED PRESCHOOL PHYSICAL EDUCATION 1 HR
This course presents instructional strategies and curricular models of instruction for preschool-aged children (age three to five) with special needs or who are at-risk for disabilities and school failure. Planning and executing gross motor activity programs, assessment procedures, and activity sequences will be emphasized. Legislative mandates and rationale for the development of preschool motor activity programs will be discussed. Supervised field experience required. Prereq: PHED354.

PHED453 AMERICAN RED CROSS WATER SAFETY AND LIFEGUARD INSTRUCTOR 3 HRS
This course offers students American Red Cross (AR) Certification in instructor candidate training (IT), water safety instructor (WSI), lifeguarding instructor (LCI), waterfront lifeguarding instructor (WFI), and head lifeguarding instructor (HGI). Demonstration, explanation, analysis, and practice of teaching skills. Use of manuals and videos are used to implement the course content.

PHED477/478/479 SPECIAL TOPICS 1/1/1 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. Prereq: department permission.

PHIL104 COOPERATIVE EDUCATION IN PHYSICAL EDUCATION 3 HRS
One semester of supervised work in concentration area. An evaluation is required at the end of the employment period. Prereq: nine credit hours in concentration, approved by Cooperative Education Office and department permission.

PHED490 FIELD EXPERIENCE IN ADAPTIVE PHYSICAL EDUCATION 4 HRS
Required course for teachers of physical education for handicapped individuals. Approval of a directed 15-week field experience in teaching physical education to handicapped persons in a school setting. Prereq: department permission.

PHED495 SENIOR SEMINAR 1 HR
A synthesis of educational theories presented in the undergraduate physical education program and the student teaching experience. Concurrent registration in EDUC496 and EDUC498 is required.

PHED477/478/479 DIRECTED STUDY 1/1/1 HRS
Directed study in areas not covered in other course offerings, or greater depth of study, in areas in which the student has a continuing interest. Students will be assigned to select faculty members for direction, consultation, and evaluation of the completed study or project. Open only to department majors and minors who have attained junior standing with a grade point average of 3.0 or above, and who have completed the appropriate prerequisite coursework. Prereq: department permission.

PHILOSOPHY COURSES

PHIL105 INTRODUCTION TO PHILOSOPHY 3 HRS
An introduction to philosophy by the study of important philosophical thinkers, problems and methodologies.

PHIL106 PHILOSOPHIES OF LIFE 3 HRS
An introduction to differing accounts of what constitutes a meaningful life and how an in-
PHIL 120 Introduction to Critical Reasoning 3 HRS
An introduction to the techniques of identifying and evaluating arguments. The emphasis will be on the enhancement of reasoning skills through the study of arguments in their natural setting in newspapers, political speeches, advertising, etc. The course also may include such related topics as fallacies, inductive reasoning and the logic of explanation in the social sciences.

PHIL 130 Introduction to Logic 3 HRS
An introduction to the analysis of arguments using the theory and techniques of formal logic. The theory underlies most formal systems, including computer applications. Students learn such concepts as deduction and induction and how to prove that arguments are valid or invalid.

PHIL 177/178/179 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

PHIL 212 Philosophy of Art 3 HRS
Can "art" be defined? Do artists owe a responsibility to society? Should works of art be primarily analyzed as "significant form" or as an expression of the artist's personality? Can we isolate a uniquely "esthetic" attitude? Through considering such questions, the course introduces the student to philosophical reasoning and analysis.

PHIL 224 Philosophy of Religion 3 HRS
A philosophical study of the nature, goals and proper function of religion. Some possible topics are traditional arguments for the existence of God, grounds for disbelief in God, immortality, religious experience, the nature of religious language, the relation of science to religion, the role of faith and revelation, the connection between religion and ethics.

PHIL 220 Ethics 3 HRS
An introduction to the major problems of ethical theory such as the nature of value, the justification of ethical decisions, the idea of obligation, and the application of ethical theory to specific ethical problems, which may concern both personal relationships and important public issues — e.g., abortion, euthanasia, medical experimentation, privacy and surveillance.

PHIL 231 History of Philosophy: Ancient 3 HRS
A study of important philosophical developments in western thought from the pre-Socratics through Aristotle. Covers the pre-Socratics, Socrates, Plato and Aristotle.

PHIL 232 History of Philosophy: Modern 3 HRS

PHIL 233 History of Philosophy: 19th Century 3 HRS
An introduction to the major philosophical themes of the 19th century that dominated 20th century European thought. The themes include the collapse of German Idealism and Romanticism, the death of God, the nature of historical process, evolutionary theory, and the implications of these themes for the concept of human freedom.

PHIL 234 Existentialism 3 HRS
An examination of contemporary existentialist thought about the nature of reality and human existence as reflected in the works of such philosophers as Marx, Heidegger, Sartre, and Camus and the sources of existentialism as found in the works of Kierkegaard and Nietzsche.

PHIL 235 Political Philosophy 3 HRS
Examines the philosophical bases of political ideology and theory through analysis of a variety of political theories, their component parts, and their basic assumptions. Examples may be taken from the works of such writers as Plato, Aristotle, Hobbes, Locke, Rousseau, Marx and Thomas.

PHIL 226/WMS 126 Feminist Theory 3 HRS
A consideration of philosophical issues concerning the nature and status of women. Readings from both traditional and contemporary sources are employed. Topics may include scientific and religious views of women, the ideal society and women's place in it, varieties of feminism, views on sexuality, family and reproduction, and work and the economy.

PHIL 230 History of Philosophy: Ancient 3 HRS
A study of important philosophical developments in western thought from the pre-Socratics through Aristotle. Covers the pre-Socratics, Socrates, Plato and Aristotle.

PHIL 231 History of Philosophy: Modern 3 HRS

PHIL 232 History of Philosophy: 19th Century 3 HRS
An introduction to the major philosophical themes of the 19th century that dominated 20th century European thought. The themes include the collapse of German Idealism and Romanticism, the death of God, the nature of historical process, evolutionary theory, and the implications of these themes for the concept of human freedom.

PHIL 233 History of Philosophy: 20th Century 3 HRS
An introduction to the major philosophical themes of the 20th century that dominated 21st century European thought. The themes include the collapse of German Idealism and French Idealism, the death of God, the nature of historical process, evolutionary theory, and the implications of these themes for the concept of human freedom.

PHIL 234 Existentialism 3 HRS
An examination of contemporary existentialist thought about the nature of reality and human existence as reflected in the works of such philosophers as Marx, Heidegger, Sartre, and Camus and the sources of existentialism as found in the works of Kierkegaard and Nietzsche.

PHIL 235 Political Philosophy 3 HRS
Examines the philosophical bases of political ideology and theory through analysis of a variety of political theories, their component parts, and their basic assumptions. Examples may be taken from the works of such writers as Plato, Aristotle, Hobbes, Locke, Rousseau, Marx and Thomas.

PHIL 226/WMS 126 Feminist Theory 3 HRS
A consideration of philosophical issues concerning the nature and status of women. Readings from both traditional and contemporary sources are employed. Topics may include scientific and religious views of women, the ideal society and women's place in it, varieties of feminism, views on sexuality, family and reproduction, and work and the economy.

PHIL 230 History of Philosophy: Ancient 3 HRS
A study of important philosophical developments in western thought from the pre-Socratics through Aristotle. Covers the pre-Socratics, Socrates, Plato and Aristotle.

PHIL 231 History of Philosophy: Modern 3 HRS

PHIL 232 History of Philosophy: 19th Century 3 HRS
An introduction to the major philosophical themes of the 19th century that dominated 20th century European thought. The themes include the collapse of German Idealism and Romanticism, the death of God, the nature of historical process, evolutionary theory, and the implications of these themes for the concept of human freedom.
PHIL 280 Philosophy of Science 3 HRS
A systematic examination of the main philosophical problems raised by the results and methods of the physical and social sciences. Topics include the problem of meaning, measurement, the interpretation of probability statements, the justification of induction, the concept of cause, the laws of nature, description and explanation, determinism and indeterminism.
Prereq: one course in philosophy other than PHIL 240 or PHIL 340 recommended. PHIL 325

PHIL 390 Phenomenology 3 HRS
The course attempts to trace the history and development of the phenomenological movement from its origins in the innate of phenomenology, beginning with the work of Edmund Husserl and continuing with the later "existential" developments in the field by such thinkers as Heidegger, Sartre, and Merleau-Ponty. The course will also study the impact of phenomenology on such varied fields as psychology, sociology, and literature.
Prereq: one course in philosophy other than PHIL 240 or PHIL 340 recommended. PHIL 280 or PHIL 360

PHIL 426/WMS 126 Topics in Gender and Philosophy 3 HRS
An examination of gender and its relationship to other issues from a philosophical perspective. Possible topics include rationality, sexuality, aesthetics, ethics and political theory.
Prereq: two courses in philosophy other than PHIL 240 or PHIL 340.

PHIL 441 Philosophy of Mind 3 HRS
A philosophical study of the nature of mind. Examines the logical relations among mental concepts such as consciousness, choice, intention, emotion, feeling, the unconscious, also treat human action, and the possibility and meaning of adequate explanation of psychological processes.
Prereq: two courses in philosophy other than PHIL 240 or PHIL 340.

PHIL 460 Philosophy of Language 3 HRS
An examination of the philosophically important aspects of language. Possible topics include theories of meaning, analysis of referring and predication, the relation between language and reality, analysis of vagueness and metaphor, the role of language in philosophical method, the relation between language and necessary truth.
Prereq: two courses in philosophy.

PHIL 470 Contemporary European Philosophy 3 HRS
An exploration of recent developments in European thought. Possible topics include post-structuralist evaluation of western institutions and ideas, post-Marxist critical theory, the hermeneutic effort to establish interpretation as the basis of philosophical understanding, and the effects of pre-modern thought on philosophy and literature.
Prereq: two courses in philosophy other than PHIL 240 or PHIL 340 recommended. PHIL 325, PHIL 260 or PHIL 390

PHIL 471 Contemporary British and American Philosophy 3 HRS
An examination of some of the major philosophical developments in England and the United States since approximately 1900. Considers logical atomism, logical positivism, pragmatism and ordinary language philosophy as reflected in the works of such philosophers as Russell, Carnap, Ayer, James, Dewey, Ryle, Austin and Quine.
Prereq: two courses in philosophy other than PHIL 240 or PHIL 340 recommended. PHIL 281

PHIL 474/474M Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than one, provided different topics are studied.
Prereq: department permission.

PHIL 475/475M Independent Study 1/2/3 HRS
Advanced study on an individual basis, in areas in which the department does not offer a formal course. Restricted to juniors and seniors majoring or minoring in philosophy.
Prereq: department permission.

PHYSICS COURSES

PHY 100 Physics for Elementary Teachers 3 HRS
Designed to stimulate interest in physics by the use of simple and inexpensive equipment to demonstrate scientific principles. Motion, forces, sound, light, heat, electricity and magnetism. Does not count toward a physics major or minor.
Open only to students pursuing any curriculum for elementary teachers.

PHY 201 Physical Science in the Arts 4 HRS
This course is designed to give students a general background in the basic principles of physics, as applied to art, music and dance, with an emphasis on exploring the nature of music and its production. Laboratory experiments complement the lecture by providing hands-on experiences to verify and demonstrate those principles. Three lecture hours and one two-hour laboratory per week. Does not count toward a physics major or minor.

PHY 250 Physical Science 4 HRS
Designed for the non-science major with little or no background in science or mathematics. Provides a more perceptive view of physical reality by introducing central ideas, principles and relationships of physical science that relate to one's everyday environment. Students in science, medicine or engineering should take physics courses PHY 221 and PHY 222, or PHY 223 and PHY 224. Does not count toward a physics major or minor.

PHY 277/277M Special Topics 1/2/3 HRS
This special topics course will be used to teach aspects of physics at an elementary level that would not be regularly offered. A new course may be taught on an experimental basis with this offering.
Prereq: department for prerequisites.

PHY 281 Mechanics, Sound and Heat 4 HRS
The first course of an introductory two-semester sequence in college-level physics. Topics include matter and energy, Newton's laws of motion, conservation laws, gravitation, rotation, harmonic motion, sound and thermodynamics. Laboratory: two consecutive hours, one day per week. All physics majors, minors, and pre-engineering students must elect PHY 223.
Prereq: MAT 105 or MAT 119 and MAT 116, with a C or better in each course or MAT 120 or MAT 120.

PHY 282 Electricity and Light 4 HRS
A continuation of PHY 221. Topics include electromagnetism, fields, potential, current, magnetism, DC and AC circuits, and geometrical and physical optics. Laboratory: two consecutive hours, one day per week. All physics majors, minors, and pre-engineering students must elect PHY 224.
Prereq: PHY 221 or PHY 223. (MAT 105 or MAT 119 and MAT 116, with a C or better in each course, or MAT 120 or MAT 120.

PHY 283 Mechanics and Sound 5 HRS
A basic, calculus-based course in physics for students majoring in physical science and those entering engineering curricula. Topics include kinematics, Newton's Laws, work and energy, conservation laws, natural motion, oscillations, and sound. Laboratory: two consecutive hours, one day per week.
Prereq: MAT 120.

PHY 284 Electricity and Light 5 HRS
A continuation of PHY 223. Static and current electricity, magnetism and light. Laboratory: two consecutive hours, one day per week.
Prereq: PHY 224. MAT 121.

PHY 285 Strength and Elasticity of Materials 4 HRS
Fundamental principles of mechanics applied to solids. Equilibrium, elasticity, stress and strain, generalization. Hookes' Law, tension, torsion, shear, bending, deflection of beams, theory of columns, and strain energy. Four lecture-recitation periods per week. Laboratory required.
Prereq: PHY 222, MAT 121.

PHY 286 Engineering Dynamics 4 HRS
Vector representation of physical quantities. Statics of rigid bodies. Friction, kinematics of particles and rigid bodies. Dynamics of particles and rigid bodies. Work and energy. Four lecture-recitation periods per week.
Prereq: PHY 223, MAT 121, MAT 122.

PHY 287/287M Special Topics 1/2/3 HRS
This special topics course will be used to teach aspects of physics at an intermediate level that would not be regularly offered. A new course may be taught on an experimental basis with this offering.
Prereq: department for prerequisites.
PHYS7/198/199 INDEPENDENT STUDY
1/2/1 HRS
An intensive study of a problem or group of problems under the direction of a department faculty member.
Prereq: approval by the faculty member and department permission.

PHYS7 Teaching Elementary Physical Science
3 HRS
Designed particularly for teachers in elementary science. An elementary study of motion, forces, energy, matter, heat, sound, light, magnetism and electricity. Focus is on simple experimental projects, followed by class discussions. Most of the apparatus will be made from materials available in the home or at a variety store. Offered only to Elementary Education students.
Prereq: PHYS100

PHYS2 Electricity and Magnetism
3 HRS
An introductory course dealing mainly with electrostatics and magnetostatics. The following topics will be covered: vector calculus, Coulomb's law, Gauss's and Ampere's law, electric and magnetic field potentials and potential energies, solution of Laplace's equation for rectangular, cylindrical, and spherical geometries in the presence of conductors, dielectrics, and magnetic materials; electric and magnetic susceptibilities; resistance; capacitance; inductance; electromotive forces and electromagnetic induction.

PHYS60 Heat and Thermodynamics 4 HRS
An intermediate course in the study of heat and thermodynamics. The course will include an introduction of the fundamental concepts followed by specific topics, including thermal expansion, specific heat, change of state, elementary kinetic theory, thermodynamics laws, entropy, and other thermodynamic functions. No prior knowledge of thermodynamics is presumed.
Prereq: PHYS224 or PHYS226; MATH223

PHYS70 Introduction to Modern Physics
3 HRS
An introduction to modern physics and relativity. The qualitative interpretation, according to the modern quantum theory, of experimental results in atomic and nuclear physics.
Prereq: MATH211; PHYS222 or PHYS224

PHYS72 Modern Physics Laboratory III
3 HRS
A laboratory course providing experimental studies in such areas as late classical, relativistic, quantum, and nuclear physics. Three hours of laboratory per week.
Prereq: Coreq: PHYS720

PHYS77/78/79 Special Topics
1/2/3 HRS
This special topics course will be used to teach some aspects of physics at an advanced level that would not be regularly offered. A new course may be taught on an experimental basis with this offering.
Prereq: see department for prerequisites

PHYS87 Cooperative Education in Physics
3 HRS
Four to six months of full-time employment at an industrial firm specially chosen for imparting a practical educational experience in physics. The program consists of two work experiences (PHYS87-887) alternating with full-time attendance at the University. It is intended for physics majors or seniors subject to department permission. Offered on a graded/cr/nc basis.
Prereq: junior standing; admittance by application only

PHYS90/91/99 Physics Project
3 HRS EACH
A suitable project in physics is to be done on an individual basis. Arrangements must be made with a physics faculty member before the beginning of the semester.
Prereq: department permission

PHYS97/98/99 Independent Study
1/2/3 HRS
An intensive study of a problem or group of problems under the direction of a department faculty member.
Prereq: approval by the faculty member and department permission

PHYS96 Ethical Issues in Physics
1 HRS
Ethical issues that a career physicist may encounter are studied and discussed. Historical accounts and essays are used to illustrate potential ethical conflicts associated with interactions within the scientific community as well as interactions between the scientific community and society at large.
Prereq: PHYS226

PHYS17 Undergraduate Research Laboratory
2 HRS
Laboratory work of a research nature done under the direction of a staff member working on a research problem. One problem will extend through the semester, with a comprehensive report required. Six hours are to be spent in the laboratory each week. Arrangements must be made with the department before the beginning of the semester.
Prereq: Open to seniors nearing completion of a physics major.

PHYS240 Capstone Project
3 HRS
This course provides the opportunity to synthesize knowledge of a wide range of physics and engineering topics into a research or design project, from concept development, through text and analysis, to final report. Assessment and development of concept knowledge and practical skills are integral to the course.
Prereq: PHYS230 or PHYS330, PHYS360 and PHYS370

PHYS32 Intermediate Mechanics II
3 HRS
A continuation of PHYS320. Mechanics of a rigid body, generalized coordinates, the Lagrangian and Hamiltonian functions, relative motion.
Preq: PHYS320, MATH223

PHYS36 Vibration and Sound
4 HRS
Detailed studies of vibration and wave motion with specific emphasis on acoustic waves in air and other media. Reflection, refraction and interference of sound; vibrating strings and air column; electroacoustic transducers; architectural acoustics. Laboratory required. Laboratory meets once per week for three hours.
Prereq: PHYS222 or PHYS224; PHYS322

PHYS440 Optics
3 HRS
An intensive course dealing with fundamentals of geometrical and physical optics. Reflection, refraction, lenses and optical instruments, spectrometers and spectra, interference, diffraction and polarization.
Prereq: PHYS222 or PHYS224; PHYS321

PHYS454 Optics Laboratory
1 HRS
A laboratory course providing experimental studies in geometrical, physical and quantum optics. Three hours of laboratory per week.
Prereq: Coreq: PHYS440

PHYS444 Applied Optics
3 HRS
A combined lecture/laboratory course covering applications of optics. Applications include, but
PHYS14 ELECTRICITY AND MAGNETISM II 3 HRS
A brief review of electronics and magnetism. The following topics will be covered: Faraday's Law, displacement current, Maxwell's equations. Binding vectors, plane wave solutions, polarization, wave propagation in dielectrics and conductors, dispersion, Friedel's equations, guided waves, demonstration, Liénard-Wiechert potentials, and radiation theory.
Prep: PHYS22 or PHYS23

PHYS32 ELECTRICAL MEASUREMENTS 4 HRS
An intermediate course in electricity. The fundamental principles involved in measuring electric and magnetic quantities, and methods of high-precision measurement. Topics include studies of galvanometers, Wheatstone bridges of various forms, potentiometers and standard cells, vacuum tubes, magnetic measurements and methods of measuring capacitance and inductance. Laboratory: four consecutive hours, one day per week.
Prep: PHYS22/PHYS23 and PHYS22 or PHYS24

PHYS46 ELECTRONICS FOR SCIENTISTS 4 HRS
Theory and application of passive and semiconductor circuit elements. Analog and digital circuit analysis and design problems. Laboratory: three hours per week. Laboratory: three hours per week.
Prep: PHYS22 or PHYS24 or MATH121

PHYS48 ELECTRONICS DEVICES FOR SCIENTISTS 4 HRS
Electronic devices used in electronic instruments: transistors, logic gates, and interface circuits. Interface techniques with applications to measurements. Lecture: three hours per week. Laboratory: three hours per week.
Prep: PHYS45

PHYS51 KINETIC THEORY AND STATISTICAL MECHANICS 3 HRS
An introduction to the kinetic theory of gases and statistical mechanics. For students concentrating in physics and those contemplating advanced study in related fields of science and engineering. Maxwell-Boltzmann distribution law, entropy and probability, transport phenomena, quantum statistics, Bose-Einstein and Fermi-Dirac statistics, the connection between statistical mechanics and thermodynamics, the equation of state, the elementary electron theory of metals, and statistical methods in nuclear physics.
Prep: PHYS22 or MATH123

PHYS71 ATOMIC AND NUCLEAR PHYSICS 3 HRS
Topics include basic nuclear structure, nuclear decay and radioactivity, nuclear reactions and particle physics.
Prep: PHYS30, MATH121

PHYS75 INTRODUCTION TO QUANTUM MECHANICS 3 HRS
The fundamental ideas of the quantum theory; the dual nature of matter, wave equations and wave packets, observable and linear operators, the application of the Schrödinger and Heisenberg equations to elementary systems. Pauli's exclusion principle.
Prep: PHYS30, MATH122

PHYS77/478/479 SPECIAL TOPICS 1/2/3 HRS
This special topics course will be used to teach aspects of physics at an advanced level that would not regularly be offered.
Prep: see department for prerequisites

PHYS81 MATHEMATICAL PHYSICS 3 HRS
Advanced mathematical tools for the physics student, with applications drawn from the field of physics. Vectors, matrices, tensors, partial differential equations, contour integration, calculus of variations, integral equations and functions, perturbation and group theory, special functions.
Prep: MATH123

PHYS83 FLUID DYNAMICS 3 HRS
An introduction to the study of the dynamics of real and ideal fluid properties of fluids, mathematical models, dimensional analysis, boundary layer theory, flow in pipes, compressible, incompressible, laminar and turbulent flow.
Prep: PHYS20 or PHYS33, PHYS60

PHYS87 COOPERATIVE EDUCATION IN PHYSICS 3 HRS EACH
Four to six months of full-time employment at an industrial firm specially chosen for imparting a practical, educational experience in physics. The program consists of two week experiences (PHYS37 and PHYS87) alternating with full-time employment at the University. The student is assigned to a physics major or minor subject in departmental permission. Offered on a graded-credit basis. Permission: PHYS37, administered by application only

PHYS90/491 SPECIAL PROBLEMS (HONORS COURSES) 2-3 HRS EACH
An original experimental or theoretical problem in some area of physics investigated on an individual basis. Arrangements must be made with a staff member before the beginning of the semester.
Prep: 20 hours of physics, A average in physics and department permission

PHYS94 READING IN PHYSICS (HONORS COURSE) 3 HRS
Designed to give individual students a planned intensive research program in some field of physics. The subject chosen is one that the student and the instructor agree upon. A part of this course will be the presentation of an hour-long talk in the chosen subject at an open meeting of the Department of Physics staff and students.
Prep: 20 hours of physics and department permission

PHYS95/496/497 INDEPENDENT STUDY - PHYSICS 1/2/3 HRS
An extensive study of a subject or problem under the direction of a department faculty member.
Prep: approved by the faculty member and department permission

POLITICAL SCIENCE COURSES

PLSC121 AMERICAN GOVERNMENT 3 HRS
A study of the institutions and processes of American national government. Includes critical comparisons with major foreign government systems. Satisfies the political science requirement of all curricula. Not open to those with credit in PLSC113.

PLSC253 AMERICAN GOVERNMENT HONORS 3 HRS
An enhanced approach to the study of the institutions and processes of American national government. Includes critical comparisons with major foreign government systems. Satisfies the political science requirement of all curricula. Not open to those with credit in PLSC121.

PLSC377/478/479 SPECIAL TOPICS 1/2/3 HRS
An examination of a topic in political science not normally covered in the curriculum, in which the distinctive concepts of political science are emphasized. Students may elect this course several times, provided different topics are studied, but it may be taken only twice for credit toward a major or minor in political science.

PLSC379/527 STATE AND LOCAL GOVERNMENT 3 HRS
A study of the forms and functions of state and local governments with special emphasis on the government of Michigan. Especially valuable for teachers of social studies in senior and junior high schools.
Prep: PLSC112 or department permission

PLSC380 INTRODUCTION TO POLITICAL ANALYSIS 3 HRS
A study of the conceptual and analytical basis of political science. Consideration is given to micro-level analysis of personality, attitudes, socialization, and roles; and to macro-level analysis of group theory, decision making, systems and communications.
Prep: PLSC121

PLSC386 INTRODUCTION TO COMPARATIVE GOVERNMENT 3 HRS
Using a comparative focus, identifies important similarities and differences in the structure and the behavior of foreign political systems, particularly but not exclusively, European.
Prep: PLSC121

PLSC387 INTRODUCTION TO INTERNATIONAL POLITICS 3 HRS
The fundamentals of great-power politics, the impact of efforts at international organization. Prep: PLSC121
PLSC213 INTRODUCTION TO POLITICAL THOUGHT
3 HRS
Selections from major theorists are used to examine different approaches to perennial issues such as justice, liberty, equality, legitimacy, and political order.
Prep: PLSC121/13

PLSC216 MUNICIPAL GOVERNMENT
3 HRS
A study of forms and functions of municipal government.
Prep: PLSC121/13

PLSC223 VIETNAM
3 HRS
This course will be a political-ordinary look at the Vietnam War from its beginnings in the 1960s to its climax in 1975. A brief look at the parallels with other wars (The Persian Gulf, etc.) and the aftermath will be included. The course will include the PBS videotapes of Vietnam: A History.
Prep: PLSC121/13

PLSC222 WAR AND PEACE IN THE NUCLEAR AGE
3 HRS
This course will be a study of the history of atomic weapons and the struggle to control them from 1945 to 1988. While concentrating most on the United States, it will include the Soviet Union, China, and Western Europe. It will also examine the personalities involved and attempts to assess the impact they had on the struggle for arms control.
Prep: PLSC121/13

AAS243/PLSC244 BLACK WOMEN POLITICAL AND RACIAL
An analysis of American politics as it relates to African American women. The course examines ways in which political issues affect Black women differently than African American men, white men and women. Considerable attention is given to the definition of the political realm as opposed to the non-political realm when discussing groups traditionally marginalized or excluded from political life.

PLSC270 PUBLIC ADMINISTRATION
3 HRS
This course examines the nature of public administration; problems connected therewith — direction and organizational recruitment, training, and promotion of personnel; maintenance of loyalty and efficiency.
Prep: PLSC121/13

PLSC277/278/279 SPECIAL TOPICS 1/2/3 HRS
An examination of a topic in political science not normally covered in the curriculum. In which the distinctive concerns of political science are emphasized. Students may elect this course several times, provided different topics are studied, but it may be taken only twice for credit toward a major or minor in political science.
Prep: PLSC121/13

PLSC297/298/299 INDEPENDENT STUDY 1/2/3 HRS
Approved study on an individual basis in areas in which the department does not offer formal courses.
Prep: PLSC121/13

PLSC301 THE AMERICAN LEGAL SYSTEM
3 HRS
A survey of various substantive components of the American system of law and its function in a democratic society. Special emphasis is placed upon problems of law enforcement, legal agencies, and the processes involved in the administration of criminal justice.
Prep: PLSC121/13

PLSC308 POLITICAL VIOLENCE AND REVOLUTION
3 HRS
A cross-national examination of political violence and revolution. Covers distinctions in types of political violence; examines ideological arguments on violence and revolution; examines case studies; and the impact of political, biological, psychological and sociological factors that have been associated with violent outbreaks cross-nationally.
Prep: PLSC121/13

PLSC310 METHODS OF POLITICAL RESEARCH
3 HRS
Continued exploration of political analysis techniques introduced in PLSC210. Attention is paid to data gathering and hypothesis testing, with an emphasis on applying these techniques to real-world political problems. Possible applications include doing applied research work for local municipalities or developing and implementing public opinion surveys.
Prep: PLSC121/13 and PLSC210

PLSC321 POLITICS OF THE DEVELOPING WORLD
3 HRS
This course is designed to increase student awareness and understanding of political development within developing nations. The colonial legacy and current sociopolitical conditions are investigated in order to determine how these forces influence public policy making.
Prep: PLSC121/13

PLSC322 AMERICAN CONSTITUTIONAL LAW I
3 HRS
The environment of judicial decision making will be illustrated through an investigation of the politics, procedures, and personalities of the Supreme Court. The impact of the court upon the development and operation of the American system of government will be assessed through an examination of leading court decisions. May be taken as a two-semester sequence, or elected independently.
Prep: PLSC121/13

PLSC323 AMERICAN CONSTITUTIONAL LAW II
3 HRS
The environment of judicial decision making will be illustrated through an investigation of the politics, procedures, and personalities of the Supreme Court. The impact of the court upon the development and operation of the American system of government will be assessed through an examination of leading court decisions. May be taken as a two-semester sequence, or elected independently.
Prep: PLSC121/13

PLSC327 AMERICAN FOREIGN POLICY
3 HRS
An introduction to the formulation and execution of American foreign policy, including consideration of the role of the public opinion, the press, interest groups, Congress, the president, deterrence theory, and decision making in crisis situations.
Prep: PLSC121/13

PLSC330 URBAN POLITICS
3 HRS
An examination of the urban political environment in the United States, structure, processes, power relationships, ethnic considerations, fiscal constraints, and selecting specific policy areas are considered.
Prep: PLSC121/13

PLSC331 INTERGOVERNMENTAL RELATIONS AND FEDERALISM
3 HRS
A study of intergovernmental relations in the United States focusing on current trends in the federal system. Examines significant developments and alternatives in shared governmental responsibilities, such as metropolitan reorganization, grant programs and regionalism.
Prep: PLSC121/13

PLSC334 PERSONNEL ADMINISTRATION
3 HRS
An examination of the basic personnel management practices of public bureaucracies. Topics include the development of the personnel system and the civil service, personnel requirements for hiring, promotion, pay, and benefits, discipline and grievance handling, development and impact of public sector collective bargaining.
Prep: PLSC121/13

PLSC335 LABOR IN AMERICAN POLITICS
3 HRS
An examination of the role played by American labor as a political pressure group and as an agent of social mobilization. American labor union patterns, the political impact of labor organizations on the civil service, and the role of political organizations in the civil service will be considered.
Prep: PLSC121/13

PLSC336 INTERNATIONAL LAW
3 HRS
An introduction to the principles and practices of public international law. The origin and development and the nature and sources of international law. Special emphasis will be placed upon the legal problems of peace, war, and the future perspectives of international law in the relations of nations.
Prep: PLSC121/13

PLSC337 INTERNATIONAL ORGANIZATIONS
3 HRS
The structure and functions of international organizations. Collective security, disarmament, and the pacific settlement of disputes will be examined. Organizations emphasized will be the League of Nations, the United Nations, the European Common Market and OPEC.
Prep: PLSC121/13

PLSC341 MODEL UNITED NATIONS
3 HRS
This course explores the structure and function
of the United Nations in a changing global context. The General Assembly, Security Council, and specialized UN agencies will be examined. Course includes a six-week internship in varying countries and their missions, aims, and role within the United Nations.

Prereq: PLSC211/121

PLSC211 POLITICAL SCIENCE

COURSES OF STUDY

BACON

3 HRS

An introduction to the social and political role of Black women in African American religious institutions. Particular attention will be placed on how African American religion has limited the power of women. Additionally, the course will examine the historical evolution of the various major black denominations in America and their political and social roles in African American communities.

Prereq: PLSC112/113

PLSC212 THE LEGISLATIVE PROCESS

3 HRS

A study of the agencies, procedures, and influences in the formation of public policy by Congress, state legislatures and administrative agencies.

Prereq: PLSC121/13

PLSC213 WOMEN AND POLITICS

3 HRS

A study of the role of women in American politics as voters, activists, and candidates, with consideration of how the political behavior of women relates to their economic, social and religious roles. Comparisons are made with select European and Asian political systems.

Prereq: PLSC112/113

PLSC214 LATIN AMERICAN POLITICS

3 HRS

A study of the governmental structure and the nature of political activity in select Latin American nations, with an emphasis on issues such as urbanization, military influence, students, labor and the development of political parties.

Prereq: PLSC112/113

PLSC215 GOVERNMENT AND POLITICS OF THE MIDDLE EAST

3 HRS

The Middle East as a case study in the field of comparative politics, European colonial policies, nationalist movements, and politics of independent states.

Prereq: PLSC112/113

PLSC216 GOVERNMENT AND POLITICS OF SUB-SAHARAN AFRICA

3 HRS

Africa as a case study in the field of comparative politics, tribal political systems, European colonial policies, nationalist movements, multilateral conflict, and politics of independent states in sub-Saharan Africa.

Prereq: PLSC112/113

PLSC217 ASIAN POLITICAL SYSTEMS

3 HRS

A study of the politics and government of China, Japan, the mainland Southeast Asian states, Indonesia and India.

Prereq: PLSC112/113

PLSC218 SPECIAL TOPICS

1,2,3 HRS

An examination of a topic in political science not normally covered in the curriculum, in which the distinctive concerns of political science are emphasized. Students may take one of this course several times, provided different topics are studied, but it may be repeated only twice for credit toward a major or minor in political science.

Prereq: PLSC112/113

PLSC219 BLACK POLITICAL SCIENCE

3 HRS

A study of executive power, emphasizing the contemporary presidential role, and how it has evolved, the politics of candidate choice, the personal qualities and political styles of recent presidents, and the array of formal and informal institutions constituting the modern presidency.

Prereq: PLSC112/113

PLSC220 PUBLIC POLICY ANALYSIS

3 HRS

An examination of the political and administrative processes of policy making and the techniques of analyzing policy issues such as welfare, education, crime, and economic development.

Prereq: PLSC112/113

PLSC221 POLITICAL SCIENCE AND THE 21ST CENTURY

3 HRS

A study of the political and public policy directions of the future. Consideration will be given to worldwide political developments and alternative political futures as affected by accelerating socio-political and technological change.

Prereq: PLSC112/113

PLSC222 JUDICIAL PROCESS AND BEHAVIOR

3 HRS

A study of the judicial process and behavior in the United States with emphasis on analysis of policy making by the courts. Federal judicial structure and functions, decision making procedures and political ideology and judicial review.

Prereq: PLSC112/113

PLSC223 COOPERATIVE EDUCATION IN POLITICAL SCIENCE

3 HRS

Four or six months of full-time employment in the public sector intended to provide practical experience in government, policy or administration. The program consists of two directed work experiences (PLSC287/289), alternating with full-time attendance at the University, and an on-the-job orientation toward political science programs subject to department approval. Graded on a credit/no credit basis.

Prereq: Junior standing major in political science, public administration or public law and government; departmental recommendation required.

PLSC224 POLITICAL SCIENCE IN FICTION

3 HRS

A discussion and analysis of political theories, institutions, and practices utilizing a storehouse of insightful and articulate materials not normally tapped in traditional political science courses: the works of authors, philosophers, dramatists, novelists, poets and socialists.

Prereq: political science major or minor; at least nine hours of political science course work completed; junior or senior standing or department permission.

PLSC225 COMPARATIVE LEGAL SYSTEMS

3 HRS

Analysis of fundamental elements of the common law, the civil law, socialist laws and other legal traditions, and a comparison of the legal systems of select foreign countries.

Prereq: PLSC121/123

PLSC226 20TH-CENTURY POLITICAL THOUGHT

3 HRS

A comparative study of recent political theories and ideologies including democracy, socialism, communism and fascism. The analysis includes modern psychological and sociological theories as they affect political thought.

Prereq: PLSC112/113
PLSC450 Democracy and Power 3 hrs  
A study of the ideals and limitations of democracy. Examines values such as consent, equality, rights, citizenship, and the public interest and the limitations posed by authority, coercion, class conflict, distribution of wealth, and the state.  
Prereq: PLSC112/113

PLSC462 Russian Foreign Relations 3 hrs  
An analytical and historical examination of Soviet foreign policies since 1917 - their sources, characters, objectives and periodicity.  
Prereq: PLSC112/113

PLSC451 Seminar in Public Safety Administration 1 hr  
A capstone seminar in the public safety administration curriculum that integrates previous coursework in law enforcement, management, and politics by focusing on contemporary problems and issues in public safety operations, including attention to leadership, organizational conflict, and resource allocation/ utilization, utilizing a capstone approach.  
Prereq: senior standing

PLSC453 Criminal Law 1 hr  
A study of criminal law currently in use in the United States with emphasis upon the major basic concepts: source of principal components of crime and its impact upon the political system.  
Prereq: PLSC112/113

PLSC457 Cooperative Education in Political Science 3 hrs  
Four to six months of full-time employment in the public sector intended to provide practical experience in government, politics, or administration. The program consists of two directed work experiences (PLSC387/487) alternating with full-time attendance at the University. Applications of credit toward political science programs are department approval to be granted on a case-by-case basis.  
Prereq: senior standing. PLSC287 as departmental recommendation required

PLSC492/498/499 Independent Study 1/2/3 hrs  
Advanced study on an individual basis in areas in which the department does not offer formal courses. Normally restricted to political science majors.  
Prereq: senior standing and department permission

**Production/Operations Management Courses**

POM371/378/379 Special Topics 1/2/3 hrs  
An exploration and study of topics not covered in other departmental offerings. Students must elect more than once, provided different topics are studied.

POM377/378/379 Special Topics 1/2/3 hrs  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

POM373/374/375 Special Topics 1/2/3 hrs  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

POM376/377/378 Special Topics 1/2/3 hrs  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

POM379/380/381 Special Topics 1/2/3 hrs  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

POM382/383/384 Special Topics 1/2/3 hrs  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

POM385/386/387 Special Topics 1/2/3 hrs  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

POM388/389/390 Special Topics 1/2/3 hrs  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

POM391/392/393 Special Topics 1/2/3 hrs  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

POM394/395/396 Special Topics 1/2/3 hrs  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

POM397/398/399 Special Topics 1/2/3 hrs  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

**Psychology Courses**

PSY201 General Psychology 3 hrs  
Principles, theories and methods evolving from the scientific analysis of behavior. This is a pre requirement to all other courses. Not open to those who have earned credit in PSY102.

PSY203 General Psychology 3 hrs  
Principles, theories and methods evolving from the scientific analysis of behavior. Laboratory demonstrations and experiments illustrating selected concepts. Not open to those with credit in PSY101.

PSY177/178/179 Special Topics 1/2/3 hrs  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

PSY180/181/182 Special Topics 1/2/3 hrs  
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

PSY205 Quantitative Methods in Psychology 3 hrs  
Basic concepts and methods used in the analysis of psychological data. Methods of describing and drawing inferences from sets of data.  
Prereq: PSY101(102) and one of: MATH118.
PSY207 PSYCHOLOGY OF ADJUSTMENT 3 HRS
Systematic presentation of issues, concepts, principles, and theories of human adjustment.
Prereq: PSY101/102

PSY221 PSYCHOLOGY OF RELIGION 3 HRS
The application of psychological theory, principles, and method to the study of religious behavior. The relationships between religion and personality, health/pathology, social behavior, and memory of emotional experience.
Prereq: PSY101/102

PSY340 PSYCHOLOGY OF SEX 3 HRS
Survey of the psychological research concerning human sexuality from a psychological point of view with an emphasis on research findings.
Prereq: PSY101/102

PSY421/WMST421 PSYCHOLOGY OF WOMEN 3 HRS
Theories and empirical research concerning personality development in females. Examination of the origins of the behavior of women.
Prereq: PSY101/102

PSY277/278/279 SPECIAL TOPICS 1/1/1 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: PSY101/102 and department permission

PSY501 INTRODUCTORY EXPERIMENTAL PSYCHOLOGY 4 HRS
Design, control and measurement techniques employed in the scientific investigation of behavior. e.g., motivation, emotion, perception and learning.
Prereq: PSY205

PSY504 LEARNING 3 HRS
Includes learning theories and empirical research as developed by Pavlov, Thorndike, Guthrie, Tolman, Hull, Skinner, Mower, and others, plus select contemporary topics.
Prereq: PSY301

PSY599 SOCIAL PSYCHOLOGY 3 HRS
The order and regularity underlying processes of human interaction. Motives and attitudes, social norms and roles, the socialisation process, personality and group membership. The effect of group membership upon individual behavior. Not open to those with credit in SOC308.
Prereq: PSY101/102

PSY511 CHILD PSYCHOLOGY 3 HRS
The development of human behavior from conception to adolescence. Analysis of developmental processes involved in cognition, socialization, emotion, and personality, relying on research and theory. Emphasis on developmental trends. Not open to students in early elementary education curriculum.
Prereq: PSY101/102

PSY522 PSYCHOLOGY OF ADOLESCENCE 3 HRS
An opportunity to formulate, examine, and understand a comprehensive, balanced picture of the physical, mental, emotional, social, and intellectual development and adjustments during adolescence.
Prereq: PSY101/102

PSY534 PSYCHOLOGY OF HUMAN AGING 3 HRS
Aging individuals in the context of their life span: the special problems of the aged in modern American society. Intellectual functioning, socialization and personality, environmental factors, and the problems of isolation and institutionalization.
Prereq: PSY101 or PSY102; junior or senior standing or second bachelor's only

PSY540 PSYCHOLOGICAL PERSPECTIVES ON PREJUDICE AND DISCRIMINATION 3 HRS
The psychological processes underlying the phenomenon of prejudice and discrimination. A review of a materials on personality and development and to the practice of discrimination and to the experience of prejudice on the part of both minority and majority group individuals.
Prereq: PSY101/102 and advanced standing

PSY550 ENVIRONMENTAL PSYCHOLOGY 3 HRS
The psychological effects of various environmental settings and configurations on human behavior. Select qualities of architectural spaces, urban environments and natural settings.
Prereq: PSY101/102

PSY551 INDUSTRIAL PSYCHOLOGY 3 HRS
Applications of psychological methods and principles to industrial problems.
Prereq: PSY101/102 and junior or senior standing

PSY556 MOTIVATION AND EMOTION 3 HRS
Review and analysis of theory and research in the areas of motivation and emotion.
Prereq: PSY301

PSY557 SENSATION AND PERCEPTION 3 HRS
Analysis of the psychological literature relating to sensory and perceptual experience.
Prereq: PSY301

PSY558 COGNITIVE PROCESSES 3 HRS
A review of the theoretical and empirical developments concerned with cognitive processes, such as concept formation, memory and retrieval from memory, language acquisition, thought, problem solving, imagination, and creativity.
Prereq: PSY101/102

PSY560 ABNORMAL PSYCHOLOGY 3 HRS
Moderate theories of the origin of mental disorders and personality disturbances, nature and mechanisms of the various forms of abnormal behavior, prevention and treatment. Social significance of aberration.
Prereq: PSY101/102

PSY561 PSYCHOTHERAPY 3 HRS
Survey of therapeutic systems and research on psychotherapy.
Prereq: PSY360

PSY562 THE PSYCHOLOGY OF STRESS AND RELATIONSHIP 3 HRS
Prereq: PSY101/102

PSY565 BEHAVIOR MODIFICATION 3 HRS
For students in psychology, special education, social work, nursing, and related fields. Techniques for coping with problem behaviors. Training in practical observation and recording procedures, program evaluation designs, and behavior change principles.
Prereq: PSY101/102

PSY566 HEALTH PSYCHOLOGY/BEHAVIORAL MEDICINE 3 HRS
The application of behavioral-science theory, principles, and techniques to understanding of health, illness, and to prevention, diagnosis, treatment, rehabilitation, and health care delivery.
Prereq: PSY101/102

PSY577/578/579 SPECIAL TOPICS 1/1/1 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: PSY101/102 and department permission

PSY587 COOPERATIVE EDUCATION IN PSYCHOLOGY 3 HRS
Four months of full-time employment at an individual employer chosen to provide practical experience in the student's major field. The program consists of two work experiences (PSY587/487) alternating with full-time attendance at the University. Prereq: has 300-level psychology courses and department permission

PSY598 PSYCHOLOGY IN THE FIELD 2 HRS
A practical work experience in a supervised mental health setting that integrates scholarly and practical aspects of psychology. Approximately three hours of fieldwork and four hours of fieldwork each week and completion of a journal of goals and experiences.
Prereq: PSY101/102 and concurrent enrollment in a three-hour psychology class and department permission

PSY597/598/599 INDIVIDUAL READING IN PSYCHOLOGY 1/1/1 HRS
Supervised reading in psychological problems.
Prereq: PSY101/102 and prior department approval of a planned reading program

PSY595 CONSUMER PSYCHOLOGY 2 HRS
A survey of psychological principles, theories and methodology relating to consumer behavior.
Prereq: PSY101/102

PSY549 SEMINAR IN PSYCHOLOGY 1 HRS
A synthesis of various approaches to the study of psychology. Development, presentation, and critical appraisal of individual student projects.
Open to seniors with a psychology major or minor.
QUAL77/78/779 Special Topics 1/1/1 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

QUAL330 INDUSTRIAL QUALITY CONTROL 3 hrs
An introduction to quality control systems and methods utilized in industry. Topics include quality policy and organization, data collection, and reporting, control charts, process and gauge capability, sampling plans, reliability, cost of quality, product liability, and problem analysis.
Prep: MATH 1105

QUAL372/378/379 Special Topics 1/1/1 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

QUAL387 COOPERATIVE EDUCATION IN QUALITY TECHNOLOGY 3 hrs
The second in a two-course sequence for industrial technology majors. The students will be placed on a job that relates to their primary area of study for one semester. Regular employee benefits may be received. Graded on a credit/no-credit basis.
Prep: QUAL 387 and department permission

PSY310/310/310 INDIVIDUAL RESEARCH IN PSYCHOLOGY 1/1/1 hrs
Supervised investigation of psychological problems.
Prep: department permission

QUAL77/78/79 SPECIAL TOPICS 1/1/1 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

QUAL77/78/779 SPECIAL TOPICS 1/1/1 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

QUAL330 INDUSTRIAL QUALITY CONTROL 3 hrs
An introduction to quality control systems and methods utilized in industry. Topics include quality policy and organization, data collection, and reporting, control charts, process and gauge capability, sampling plans, reliability, cost of quality, product liability, and problem analysis.
Prep: MATH 1105

QUAL372/378/379 SPECIAL TOPICS 1/1/1 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

QUAL387 COOPERATIVE EDUCATION IN QUALITY TECHNOLOGY 3 hrs
The second in a two-course sequence for industrial technology majors. The students will be placed on a job that relates to their primary area of study for one semester. Regular employee benefits may be received. Graded on a credit/no-credit basis.
Prep: QUAL 387 and department permission

QUAL387/387/387 INDUSTRY-BASED SPECIAL TOPICS 1/1/1 hrs
Course descriptions are formulated at the time of an industry's request and reflect the particular requirements of the client company. Graded on a credit/no-credit basis.

QUAL307/407/407 INDEPENDENT STUDY 1/1/1 hrs
Available to selected students who have demonstrated ability to profit from a directed-study project. Intensive study of a problem appropriate to the student's area of concentration. Enrollment and selection of a project proposal must be approved by the department advisor and chair.
Prep: department permission

READING COURSES
RDNG157/158/157 SPECIAL TOPICS 1/1/1 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

RDNG320 TOPICS IN LITERACY EDUCATION 3 hrs
This course provides an overview of literacy education. Drawing from a variety of perspectives, including constructivist, sociolinguistic, and psycholinguistic, students will survey the major trends and issues in literacy education and the research which supports them.

RDNG330 INSTRUCTIONAL USES OF TRADE BOOKS 3 hrs
In this course, students will acquire knowledge of trade books and their uses in language arts instruction and in instruction across the curriculum. Students will develop strategies and methods for using trade books so that children discover the value and satisfaction of reading.

RDNG340 WORD STUDY IN THE READING PROGRAM 3 hrs
Using language theory as a basis, students will explore the various aspects of word study: phonemic awareness, phonics, vocabulary, dictionary skills, and spelling. Using literature and other texts, they will develop techniques and strategies for teaching word study in the elementary grades.
an intervention program for a child in the local community and report the results of this program to the parents and the school.

**RDNG54**

**RDNG477/487/497 Special Topics** 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students must elect more than once, provided different topics are studied.

**RDNG480**

**RDNG480 Program Development for Struggling Readers** 3 hrs

A course in the development of an intervention program to meet the needs of struggling readers. Students will develop and implement

**THEORETIC RECREATION COURSES**

**RECRe10** **Introduction to Recreation and Leisure** 3 hrs

A basic overview of the fields of recreation and leisure service delivery for the major student. Emphasizes the broad aspects of recreation and leisure as they relate to the delivery of human services. Includes history, philosophy, trends and job opportunities. Lecture, discussion, film, and speakers from the field.

**RECRe15** **Leisure Lifestyles** 3 hrs

An introduction to leisure lifestyles as related to oneself and how leisure behavior relates to an individual's work, education, economic, ethnic beliefs and values. The course involves individual leisure awareness, choices, goals, and strategies to assist in creating a quality and fulfilling life. Lecture, discussion, evaluation techniques and self-exploration. Helpful for majors in any discipline.

**RECRe177/178/179 Special Topics** 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students must elect more than once, provided different topics are studied.

**RECRe20** **Recreation for Persons with Disabilities** 3 hrs

This course is designed to familiarize students with the nature and scope of recreation for people with disabilities. The course will explore social, environmental, and psychosocial issues that influence the leisure lifestyle of people with disabilities. Other topics include barriers to leisure participation, activity adaptation, and characteristics of diagnostic groups.

**RECRe310** **Camping for Special Populations** 2 hrs

This course will provide practical experience for the student interested in working as a counselor at a camp for special populations. It will also provide experience in setting up a camp since the student will be responsible for the development of all materials and programming for a weekend camp.

**RECRe330/351/352/353 Fieldwork in Recreation/Theatrical Recreation** 3 hrs each

An introductory course in fieldwork. Students select a site for recreation leadership within a community or clinical setting. Students spend 60 hours on-site and participate in five classroom sessions.

**RECRe370** **Recreation Leadership** 3 hrs

Methods and techniques of group and individual leadership skills at three levels: face-to-face leadership, supervision, and management. An overview of conceptual and theoretical components of the leadership process with practical application of various leadership methods and procedures in a cross-section of leisure service settings: lectures, discussion, and experiential learning.

**RECRe371** **Park Maintenance** 3 hrs

Principles, practice, and techniques of maintenance and management of outdoor recreation areas and facilities. Resource management and maintenance: maintenance and preparation of equipment; personal practices in maintenance; safety practices; legal issues; public relations. Lecture, speakers, park visitations and project.

**RECRe377/378/379 Special Topics** 1/2/3 hrs

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

**RECRe380** **Camping** 2 hrs

History of organized camping; camping on federal and state recreation areas; information sources for camping; planning and preparation (equipment, clothing, meals, camp schedules and camp programs); skills areas for camping: map and compass, ropes and knot tying; campfire construction; camp tool use and maintenance; and tent. Safety reviewed for meal preparation, use of tools, and toxic plants and animals. Lecture, demonstrations, and student participation in a weekend camping trip.

**RECRe390** **Practical Research in Recreation** 3 hrs

The purpose of this discussion lecture course is to understand and apply basic research design, evaluation procedures and interpretation, and
with special populations including physically disabled, developmentally disabled, emotionally impaired, and the aged. Lectures, films, swimming skills, adaptations of swimming skills, and 20 hours of fieldwork.

RECR49 RECREATION PRACTICUM 8 HRS
A full time, 15 week, 600 hour experience in leisure services setting under a qualified recreation/leisure specialist and University supervisor. Prereq: completion of 90 percent of all academic courses including RECR100, RECR200, RECR250, RECR260, RECR460, and RECR465, completion of 250 hours of fieldwork, overall grade point average of 2.5 and GPA of 2.75 in recreation and park management required and elective course.

RECR497/498/499 DIRECTED STUDY 1/2/3 HRS
An opportunity for directed study in areas not covered in other course offerings, or greater depth of study in areas of continued interest for the student. Students will be assigned to select faculty members for direction, consultation, and evaluation of the completed study or project. Open only to department majors and minors who have attained junior standing, with a grade point average of 3.0 or above and who have completed the appropriate background courses.

SOCIETY COURSES

SOCI105 INTRODUCTORY SOCIOLOGY 3 HRS
Basic sociological concepts are used to analyze social systems, socialization, social inequality, deviation and conformity, and the process of social change with focus on family, educational, religious, governmental and economic institutions.

SOCI177/178/179 SPECIAL TOPICS 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied. Prereq: SOCI105

SOCI202 SOCIAL PROBLEMS 3 HRS
An analysis of problems arising in contemporary American society, such as child rearing, relations between the sexes, crime and delinquency, relations between racial and cultural subgroups, and personality disorders. Prereq: SOCI105

SOCI204 MARRIAGE AND FAMILY 3 HRS
The position and significance of the family in our changing society. Courtship, mate selection, and problems of marital adjustment from sociological and social-psychological perspectives. Prereq: SOCI105

SOCI205/ANTH205 MINORITY WOMEN IN THE UNITED STATES 3 HRS
This course surveys the situation and the conditions that affect the lives of four groups of minority women in the United States who are from diverse cross-cultural backgrounds: Black, Asian-American, Latin-American, and Native American. It focuses on the contemporary situation of these women and compares the four groups in terms of demographics, economic and occupational situations, education, family lives, and relationship to the feminine movement. Prereq: SOCI105

SOCI214 RACIAL AND CULTURAL MINORITIES 3 HRS
Racial and cultural minorities in the modern world with particular reference to the black and Hispanic, and European and Asian immigrants in the United States: racial myths, doctrines and movements: conflict and accommodation of majority and minority peoples; and proposed solutions of ethnic problems. Prereq: SOCI105 or ANTH135

SOCI320 INTRODUCTION TO APPLIED SOCIOLOGY 3 HRS
This course will be geared towards those students interested in applying the core elements of sociology to business, government and social service organizations. The tools of sociology, including theory and methods, will actively inform the study of various issues in a range of professional settings. Prereq: SOCI105

SOCI350 SOCIAL STATISTICS I 3 HRS
Introduction to the evaluation of empirical data and the organization of bivariate and univariate data using descriptive and inferential statistical techniques. Prereq: SOCI105 and level 3 Math Placement or MATH098, MATH098, MATH104 or MATH105

SOCI277/278/279 SPECIAL TOPICS 1/2/3 HRS
A single topic is covered each semester, selected as the interest and/or problems change. Students may elect this course several times, provided different topics are studied, but only twice for credit toward a major or minor in sociology.

SOCI301 SOCIOLOGY OF CHILDHOOD AND YOUTH 3 HRS
Childhood and youth as elements of social organization. The relationship between social structure and the emergent personality of the individual; normality and deviance as social processes. Prereq: SOCI105

SOCI304 METHODS IN SOCIOLOGICAL RESEARCH 3 HRS
Methods used in sociological research and their various applications. Participation in conducting a survey. Prereq: SOCI105

SOCI306 THE URBAN COMMUNITY 3 HRS
Ecological and social organization of urban life. The metropolitan trend in the United States and the social problems created by it. Prereq: SOCI105

SOCI308 SOCIAL PSYCHOLOGY 3 HRS
Introductory study of the order and regularity underlying processes of human interaction. Motives and attitudes; social norms and roles; the socialization process; personality and group membership. The effect of group membership upon individual behavior. Credit cannot be earned in both SOCI308 and PSY130.

SOCI309 CULTURE AND PERSONALITY 3 HRS
An analysis of the manner in which group and cultural factors influence the growth and change of personality. The impact of personality types on group life. Not open to those who have credit in ANTH100. Prereq: SOCI105 or ANTH135

SOCI320 SOCIAL STRATIFICATION 3 HRS
This course focuses on the social factors of inequality, the processes of status attainment, and social mobility in contemporary societies. These aspects of stratification are examined on both the national and global levels. Course materials address the differential distribution of and access to resources including issues of race, class, and gender. Prereq: SOCI105

SOCI330 SOCIAL GERONTOLOGY 3 HRS
Demographic and sociocultural factors in aging, the aging individual as a person, older people as groups and aggregates within the culture and structure of a changing society; the manner in which society attempts to meet the needs of aging people and the aged. Prereq: SOCI105

SOCI331 MEDICAL SOCIOLOGY 3 HRS
Social behavior and social organization as factors in disease distribution. The sociological analysis of medical care, organization and practitioners. Prereq: SOCI105

SOCI332 SOCIOLOGY OF RELIGION 3 HRS
A sociological analysis of religious organizations and the institution of religion including the interaction between religious organizations and other institutions and associations, and the role of religion in social movements and social change. Prereq: SOCI105

SOCI334 CRM331 COOPERATION AND CONFLICT IN SOCIETY 3 HRS
The principles of cooperation, cooperation in our competitive-individualistic society, cooperative skills, and forms of mutual aid are examined. Students learn cooperation through doing, as well as reading and writing, includ-
ing a variety of group projects, exercises and discussion.
Prereq: SOCL105

SOCL33 Violence and Society 3 HRS
An introduction to and survey of the multidisciplinary study of violence and society. Specifically examined are mass institutions of media, culture, and identity formation.
Prereq: SOCL105

SOCL34 Population 3 HRS
Population size and composition, and their impact on society: determinants and consequences of mortality, and migration; the relationship between human numbers and resources and its politico-economic implications; population theories and policies of population control.
Prereq: SOCL105

SOCL36 Social and Cultural Change 3 HRS
A survey of the theories and problems of change as they affect at the global, national and sub-cultural levels. Not open to those with credit in ANTH330.
Prereq: SOCL105 or ANTH135

SOCL37 Deviance and Society 3 HRS
An introduction to the scientific study of deviance, society’s reaction to deviance and the social strategies for managing deviance.
Prereq: SOCL105

SOCL39 Sociology of Love 3 HRS
A sociological examination of love, emphasizing typologies, scientific research and cross-cultural comparisons. Special attention is given to the analysis of love in terms of feelings, thoughts, behavior and attitudes.
Prereq: SOCL105

SOCL40 Qualitative Methods of Social Research I 3 HRS
Examination and review of research methods in behavioral sciences and the nature of empirical data, organization of anative and bivariate data. Not open to those with credit in SOCL250 or SOCL304. Must be followed by SOCL342.
Prereq: SOCL105

SOCL41 Quantitative Methods of Social Research II 3 HRS
Further review and applications of research methods and introduction to statistical inference. Not open to those with credit in SOCL250 or SOCL304.
Prereq: SOCL341

SOCL42 Sociology of Gender 3 HRS
Analysis of past, present and future sex roles: the changing roles of women and men, and the conflicts and consequences of these changes on marriage and family systems in the United States.
Prereq: SOCL105

SOCL43 Qualitative Methods 3 HRS
A review and examination of social science research methods that entail fieldwork, participant observation, naturalistic experimentation, and the analysis of cultural data. Not open to those with credit in ANTH335.
Prereq: SOCL105 or ANTH135 or department permission

SOCL44 Sociology of Education 3 HRS
Using the traditional lecture method combined with small-group interactive exercises, this course will systematically examine the institution of American public education, focusing on the interplay between education, its social history, gender and race, environment, social control, ideology, the school in a global economy, and social structure in the formation and procession of schooling through a variety of theoretical lenses.
Prereq: SOCL105

SOCL45 Political Sociology 3 HRS
The structure of political systems analyzed from an individual and social system perspective.
Prereq: SOCL105

SOCL47 Special Topics 1/2/3 HRS
One topic is covered each semester, selected as the interest and/or problems change. Students may elect this course several times, provided different topics are studied, but only twice for credit toward a major or minor in sociology.
Prereq: SOCL105

SOCL48 Cooperative Education in Sociology 3 HRS
Practical experience in industrial, business, or government settings to provide job skills. Offered on a credit/no-credit basis.
Prereq: SOCL105

SOCL49 Group Dynamics 3 HRS
Structure and interaction processes of small groups. Cohesiveness, group standards, conformity and deviance, leadership, group emotion, communication, group roles and sociometrics.
Prereq: SOCL105

SOCL50 Modern Sociological Theory 3 HRS
The rise and development of sociological thought from Comte to the present. The works of various European and American schools analyzed and critically appraised in terms of their value in empirical research.
Prereq: SOCL105

SOCL51 Senior Seminar in Sociology 3 HRS
The purpose of this course is to integrate sociological knowledge, theory, and methods and relate them to applications within the student’s discipline and profession.
Prereq: SOCL105, senior standing

SOCL52 Law and Society 3 HRS
Law as a social and cultural product, the interrelationships between law and social institutions. Not open to those with credit in CRM412.
Prereq: SOCL105

SOCL498 Comparative Social Theory 3 HRS
A study of social factors involved in the creation, innovation, distribution, evaluation, and social effects of technology.
Prereq: SOCL105

SOCL499 Collective Behavior 3 HRS
Spontaneous, transitory and volatile collective behavior contrasted with the relatively stable, institutionalized patterns of interaction. Analysis of rumor transmission, crowd behavior, mass behavior, and the emergence of organized social movements.
Prereq: SOCL105

SOCL500 The Family 3 HRS
The family as a basic social institution. Various types of family systems throughout the world with special emphasis on the American family.
Prereq: SOCL105

SOCL501 Sociology of Work and Occupations 3 HRS
Social aspects of work. Recruitment, career patterns, professionalization, sociology of the workplace and labor force.
Prereq: SOCL105

SOCL502 Complex Organizations 3 HRS
An examination of several types of large organizations, with emphasis on the nature of bureaucratic organizations. Theoretical and empirical studies of organizational growth, recruitment, control and relations between organizations.
Prereq: SOCL105

SOCL504 Sociology of Revolution 3 HRS
This course surveys major theoretical perspectives that have been used by social scientists to interpret and explain revolutions. With the aid of the best available theories, the course will examine a series of historical instances, ranging from the French Revolution of the 18th century, through the Russian and Chinese Revolutions, to recent revolutions in post-colonial or dependent countries, such as the Iranian Revolution.
Prereq: SOCL105

SOCL505 Sociology of Technology 3 HRS
A study of social factors involved in the creation, innovation, distribution, evaluation, and social effects of technology.
Prereq: SOCL105

SOCL506 Community Development 3 HRS
Students are assigned a minimum of eight hours per week to a governmental or private organization dealing with a social problem, issue, service or concern. The placement, in agreement with the field instructor, provides supervised
SPG497/498/499 INDEPENDENT STUDY 1/2/3 hrs
Directed study of a problem or group of problems in special education.
Prereq: department permission

Cognitive Impairment Courses

SPC177/178/179 SPECIAL TOPICS 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

SPC140 PRE-Clinical EXPERIENCES—
Cognitive IMPAIRMENT 3 hrs
This introductory course provides exposure to and experience with K-12 students with cognitive impairment. EMU students will be encouraged to evaluate and examine their motivation to become a teacher of students with cognitive impairment, and will be introduced to all aspects of the teaching profession. In this course, students will participate in field experiences with K-12 students with cognitive impairment.
Prereq: department permission

SPC177/178/179 SPECIAL TOPICS 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

SPC150 INTRODUCTION TO COGNITIVE IMPAIRMENT 3 hrs
Introduction to the field of cognitive impairment, its history, terminology, causes, health, medical and psychological components. Philosophies influencing educational practice and life management approaches are presented.
Prereq: SPG251, PST101

SPC177/178/179 SPECIAL TOPICS 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

SPC147 EDUCATION OF THE ELEMENTARY STUDENT WITH COGNITIVE IMPAIRMENT 2 hrs
Development of programs, materials, and instructional techniques appropriate to meet the needs of the child with cognitive impairment from birth to age 12.
Prereq: SPG240, SPC1350, and admission to the teacher education program

SPC149 CURRICULUM DESIGN AND EDUCATIONAL PROGRAMS FOR STUDENTS WITH COGNITIVE IMPAIRMENT 3 hrs
Emphasis will be given to the assessment of basic learning skills and academic levels of functioning based on the use and results of formal tests, criterion referenced tests, and informal data gathering instruments. Additional emphasis will be placed on the development of appropriate educational program goals. The development of appropriate lessons using selected materials, methods, and techniques to meet these goals. Selected behavioral management approaches will be included as they relate to overall educational goals and program development.
Prereq: SPG217 and admission to the college of education.

SPC148 EDUCATION OF STUDENTS IN PROGRAMS FOR MODERATE OR SEVERE COGNITIVE IMPAIRMENT 4 hrs
Philosophy, curriculum, assessment, teaching methods and classroom management techniques for students with moderate or severe cognitive impairment, or with multiple impairments. A three-hour per week field experience is an integral component of the course.
Prereq: SPG240, SPC1350 and SPG461; admission to the teacher education program

SPC149/498/499 INDEPENDENT STUDY 1/2/3 hrs
Advanced study on an individual basis in areas in which the department does not offer a formal course.
Prereq: department permission

Emotional Impairment Courses

SPE177/178/179 SPECIAL TOPICS 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

SPE140 PRE-Clinical EXPERIENCES—EMOTIONAL IMPAIRMENT 3 hrs
This introductory course provides exposure to and experience with K-12 students with emotional impairment. Students are encouraged to evaluate and examine their motivation to become a teacher of students with emotional impairment, as they are introduced to all aspects of the teaching profession. In this course, students participate in field experiences with K-12 students with emotional impairment and have opportunities to visit a variety of placements serving K-12 students with emotional impairment.
Prereq: department permission

SPE127/128/279 SPECIAL TOPICS 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

SPE101 CHILDREN AND ADOLESCENTS WITH EMOTIONAL IMPAIRMENT 4 hrs
This course introduces conceptual models of emotional impairment in children and adolescents. Definitive diagnostic categories are presented in context of their use in a variety of educational settings appropriate for children and adolescents with emotional impairment. Field experience is required.
Prereq: PST300; SPE240; SPG251 is advised. Not open to students on academic probation

SPE177/178/179 SPECIAL TOPICS 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

SPE140 CURRICULUM, METHODS AND PROGRAMMING FOR ELEMENTARY STUDENTS WITH EMOTIONAL IMPAIRMENT 4 hrs
Teaching methods, techniques, and materials appropriate for children with emotional impairment are presented. The Individualized Education Program (IEP), service delivery systems, federal laws and state rules governing educational programs for children with emotional impairment are discussed, and opportunities are provided for students to develop their philosophy of education statement. Field experience is an integral component of this course.
Prereq: SPE101, SPG251 and admission to the teacher education program

SPE149 SEMINAR: CURRENT TOPICS IN EMOTIONAL IMPAIRMENT 2 hrs
An examination and discussion of contemporary issues and trends in the field of special education for children and adolescents with emotional impairment.
Prereq: SPE121; junior standing and admission to the College of Education

SPE127/128/279 SPECIAL TOPICS 1/2/3 hrs
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

SPE149 CURRICULUM, METHODS AND PROGRAMMING FOR SECONDARY STUDENTS WITH EMOTIONAL IMPAIRMENT 4 hrs
Teaching methods, techniques and materials appropriate for adolescents with emotional impairment are presented. Transition fundamentals are addressed and students are provided opportunities to observe and interact with adolescents and young adults with emotional impairment. Students participate in the development of a transition plan through a structured field experience.
Prereq: SPE230 and SPG461; admission to the teacher education program. Prereq/Coreq: SPG245

SPE149/498/499 INDEPENDENT STUDY 1/2/3 hrs
Advanced study on an individual basis in areas in which the department does not offer a formal course.
Prereq: department permission
Hearing Impairment Courses

SPHI77/278/279 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

SPHI128 Education of Students with Hearing Impairment 1 HRS
Designed to cover the history of the education of persons with hearing impairments, and to provide an overview of educational programming, psychological assessment, parent counseling, communication methods, and various philosophical approaches to education of persons with hearing impairments.
Prereq: Coursing: SPN2151

SPHI177/278/279 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

SPHI175 Fundamentals of Sign Communication 2 HRS
A study of the rationale for use of manual communication systems with persons with hearing impairments, including American Sign Language, manually-coded English Sign Systems, and finger spelling. Beginning-level skills in manual communication will be developed. Observation of use of sign language in school programs will be required.

SPHI177/278/279 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

SPHI187 Introductory Practicum — Students with Hearing Impairment 1 HRS
Thirty clock hours of supervised observation and work with students with hearing impairments.
Prereq: SPHI220, admission to the teacher education program

SPHI191 Language for Students with Hearing Impairment 4 HRS
Language development of children with prelingual hearing impairments. Survey of various methods of teaching language, including natural and structured approaches.
Prereq: SPHI220, admission to the teacher education program

SPHI192 Introduction to Audiology 2 HRS
Medical and surgical treatment of pathologies of the ear. Hearing screening tests, basic audiometric testing procedures, and audiometric interpretation.
Prereq: SPSD32 and SPSD36

SPHI194 Aural Habilitation/Rehabilitation 3 HRS
A study of the avenues of receptive language available to persons with impaired hearing: the development of auditory learning, auditory training, and the training of speechreading. Includes the understanding of group and individual hearing aids, other assistive technology, and surgical implants.
Prereq: SPHI192

SPHI416 Phonetics and Hearing Impairment 2 HRS
Prereq: SPHI332 and SPHI336

SPHI417 Adaptive Curriculum for Students with Hearing Impairment 3 HRS
Principles and methods of teaching academic subject to students with hearing impairments. Classroom procedures and materials especially designed for students with hearing impairments, as well as the adaptation of regular curricular and materials will be presented.
Prereq: SPHI491; admission to the teacher education program

SPHI477/478/479 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

SPHI487 Speech Practicum — Students with Hearing Impairment 1 HRS
Thirty (30) clock hours of supervised observation and speech work with persons with hearing impairments.
Prereq: SPHI436; admission to the teacher education program

SPHI497/498/499 Independent Study 1/2/3 HRS
Advanced study on an individual basis in areas in which the department does not offer a formal course.
Prereq: department permission

Learning Disabilities Courses

SPHI177/278/279 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

SPHI177/278/279 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

SPHI168 Education of Children with Learning Disabilities 2 HRS
A study of educational and psychological problems of children with neurological and perceptual deficits. Theories as they relate to the central nervous system, teaching methods, classroom management, case studies, research, and teacher-child and parent relationships will be reviewed.
Prereq: SPG251; admission to the teacher education program; junior standing

SPHI177/278/279 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

SPHI197/198/199 Independent Study 1/2/3 HRS
Advanced study on an individual basis in areas in which the department does not offer a formal course.
Prereq: department permission

Physical Impairment or Other Health Impairment Courses

SPHI177/178/179 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

SPHI450 Practicum Experiences — POH 1 HRS
This introductory course provides exposure to and experience with the physically or otherwise health impaired. Students will be encouraged to evaluate and examine their motivation for becoming a teacher of the physically and health impaired and be introduced to all aspects of the teaching profession. Students will participate in a field experience, being exposed to all age and grade levels. They will have an opportunity to visit a variety of settings that employ teachers.
Teaching of the Physics Content

The content of the physics program includes:

- Fundamentals of Physics
- Mechanics
- Electricity and Magnetism
- Thermal Physics
- Waves and Optics
- Modern Physics

This content is delivered through lectures, laboratories, and problem-solving sessions. Students are required to complete assignments and projects that reinforce the concepts learned in class. The program also includes a capstone project that allows students to apply their knowledge to a real-world problem.
SPV1464 METHODS OF TEACHING CHILDREN WHO ARE BLIND  3 HRS
A study of the various methods used in educating and assessing children who are blind, and the adaptation of these methods to the teaching of school subjects for these students. Further emphasis on Nemeth Code, Canute abacus and other teaching materials and devices.
Prep: SPGN251; admission to the teacher education program

SPV1465 NEMETH CODE  3 HRS
Development of proficiency in reading and writing Nemeth Braille code for mathematics and science notation.
Prep: SPV1464; admission to the teacher education program

SPV1467 EDUCATION OF CHILDREN WITH VISUAL IMPAIRMENT  2 HRS
Organization and administration of various plans for educating children with visual impairments. Adaptation of various teaching methods and materials for these children, as well as comparison of various vision testing methods and devices.
Prep: SPGN251; admission to the teacher education program

SPV1468 TECHNOLOGY FOR PERSONS WITH VISUAL IMPAIRMENT  3 HRS
Experience with a variety of tools available for use by persons with visual impairments. The tools and devices covered include those designed to provide assistance in reading, Braille, and low-vision.
Prep: SPV1467; admission to the teacher education program

SPV1471/478/479 SPECIAL TOPICS  1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prep: department permission

SPV1502 HUMAN ANATOMY FOR SPORTS MEDICINE  3 HRS
Required lecture course for sports medicine majors that examines the structure of the human body. In addition to lecture format, computer graphic software will be utilized to enhance the learning process.
Prep: BIOL105 or BIOL110, departmental permission and 2.5 GPA in science courses

SPV1506 HUMAN PHYSIOLOGY FOR SPORTS MEDICINE  3 HRS
Required lecture course for sports medicine majors that examines the structure and function of the human body.
Prep: BIOL105, departmental permission and 2.5 GPA in science courses

SPM101 INTRODUCTION TO ATHLETIC TRAINING  3 HRS
An introduction designed to expose the student to the discipline of athletic health care. The student will study modern concepts of the prevention and care of athletic injury and common health care issues.
Prep: SPMD119

SPM225 THERAPEUTIC MODALITIES FOR ATHLETIC TRAINERS  2 HRS
A detailed study, with laboratory experiences, of theory, applications, physiological effects, indications, and contraindications of commonly used therapeutic modalities in the practice of athletic training.
Prep: SPMD119

SPM226 PRACTICUM I  2 HRS
A supervised educational experience in athletic training under the supervision of a certified athletic trainer.
Prep: GPA 2.8, SPMD119 and department permission

SPM227 PRACTICUM II  2 HRS
A supervised educational experience in athletic training under the supervision of a certified athletic trainer.
Prep: GPA 2.8, SPMD119 and department permission

SPM236 PHARMACOLOGY FOR SPORTS MEDICINE  2 HRS
Provides basic components of pharmacology, theories of drug actions, physiological processes mediating drug actions, variables affecting drug actions, benefits plus unwanted and adverse drug therapy responses. Physiological and cultural aspects of drug therapy and self-medication are explored.
Prep: BIOL105, BIOL110, SPM202, CHEM120 or CHEM21

SPM2910 PRACTICUM II  2 HRS
A supervised athletic training practicum designed to incorporate theories and technical skills learned in the prerequisite courses. The objective is to obtain hands-on experiences in an intercollegiate setting.
Prep: department permission and GPA 2.9
A detailed study of theory, application, physiology, and specific exercises. This course is designed for students interested in the field of exercise science. Students will be introduced to basic terminologies and principles of exercise science.

Prerequisites: PHED 110 and PHED 111

1.5 hours

SPMD55 Introduction to Exercise Science

A course in the development of exercise science. The course will cover the fundamental concepts of exercise science, including exercise physiology, exercise biomechanics, and exercise psychology. Students will learn about the principles of exercise prescription and will be introduced to the role of exercise in health and disease prevention.

Prerequisites: PHED 110 and PHED 111

3 hours

SPMD56 Exercise Physiology

A course in the study of the physiological responses to exercise in humans. The course will cover the effects of exercise on the cardiovascular, respiratory, and metabolic systems. Students will also learn about the effects of exercise on muscle function and the endocrine system.

Prerequisites: PHED 110 and PHED 111

2 hours

SPMD57 Exercise Biomechanics

A course in the study of the mechanics of human movement. The course will cover the principles of kinematics and dynamics, and will also address the role of exercise in the prevention and management of musculoskeletal injuries.

Prerequisites: PHED 110 and PHED 111

2 hours

SPMD58 Exercise Psychology

A course in the study of the psychological aspects of exercise. The course will cover the role of exercise in mental health, and will also address issues such as exercise addiction and the psychology of motivation.

Prerequisites: PHED 110 and PHED 111

2 hours

SPMD59 Exercise Nutrition

A course in the study of the role of nutrition in exercise performance. The course will cover the effects of diet on exercise performance, and will also address issues such as weight management and the role of exercise in the prevention of chronic diseases.

Prerequisites: PHED 110 and PHED 111

2 hours

SPMD60 Exercise Testing and Prescription

A course in the application of exercise science in the development of exercise programs. The course will cover the principles of exercise testing and prescription, and will also address issues such as the role of exercise in the prevention and management of health problems.

Prerequisites: PHED 110 and PHED 111

2 hours

SPMD61 Exercise Leadership

A course in the development of leadership skills in the field of exercise science. The course will cover the principles of leadership development, and will also address issues such as the role of exercise in the prevention and management of health problems.

Prerequisites: PHED 110 and PHED 111

2 hours

SPMD62 Exercise Psychology II

A course in the study of the psychological aspects of exercise. The course will cover the role of exercise in mental health, and will also address issues such as exercise addiction and the psychology of motivation.

Prerequisites: PHED 110 and PHED 111

2 hours

SPMD63 Exercise Nutrition II

A course in the study of the role of nutrition in exercise performance. The course will cover the effects of diet on exercise performance, and will also address issues such as weight management and the role of exercise in the prevention of chronic diseases.

Prerequisites: PHED 110 and PHED 111

2 hours

SPMD64 Exercise Testing and Prescription II

A course in the application of exercise science in the development of exercise programs. The course will cover the principles of exercise testing and prescription, and will also address issues such as the role of exercise in the prevention and management of health problems.

Prerequisites: PHED 110 and PHED 111

2 hours

SPMD65 Exercise Leadership II

A course in the development of leadership skills in the field of exercise science. The course will cover the principles of leadership development, and will also address issues such as the role of exercise in the prevention and management of health problems.

Prerequisites: PHED 110 and PHED 111

2 hours

SPMD66 Exercise Psychology III

A course in the study of the psychological aspects of exercise. The course will cover the role of exercise in mental health, and will also address issues such as exercise addiction and the psychology of motivation.

Prerequisites: PHED 110 and PHED 111

2 hours

SPMD67 Exercise Nutrition III

A course in the study of the role of nutrition in exercise performance. The course will cover the effects of diet on exercise performance, and will also address issues such as weight management and the role of exercise in the prevention of chronic diseases.

Prerequisites: PHED 110 and PHED 111

2 hours

SPMD68 Exercise Testing and Prescription III

A course in the application of exercise science in the development of exercise programs. The course will cover the principles of exercise testing and prescription, and will also address issues such as the role of exercise in the prevention and management of health problems.

Prerequisites: PHED 110 and PHED 111

2 hours

SPMD69 Exercise Leadership III

A course in the development of leadership skills in the field of exercise science. The course will cover the principles of leadership development, and will also address issues such as the role of exercise in the prevention and management of health problems.

Prerequisites: PHED 110 and PHED 111

2 hours
SPMD 485 Seminar in Athletic Training 3 HRS
A course designed to prepare students for the internship experience and future employment in the athletic training profession. The three major components of the course include professional preparation, administrative principles and procedures, and verification examination preparation. The course delivery includes computer simulations, role-playing, collaborative interaction, and individual activities.
Prereq: candidacy, junior or senior standing

SPMD 490 Internship Athletic Training 8 HRS
The course is a clinical experience to be conducted in an off-campus agency. The agency provides direct supervision at the site. The course is limited to senior students in their last semester. The student will be expected to increase his/her skills and knowledge in the key task areas of athletic training.
Prereq: candidacy and department permission

SPMD 497/498/499 Directed Study 1/2/3 HRS
Directed study in areas not covered in other course offerings, or greater depth of study in areas in which the student has a continuing interest. Students will be assigned to select faculty members for direction, consultation, and evaluation of the completed study or project. Open only to department major and minors who have attained junior standing, with a grade point average of 3.0 or above, and who have completed the appropriate background courses.
Prereq: department permission

Spanish Courses

SPN 111 Beginning Spanish 5 HRS
Basic principles of grammar, practice in elementary conversation, pronunciation, composition and reading. One-half hour per day in the laboratory required. Satisfies the general education foreign language composition requirement, Area I.

SPN 112 Beginning Spanish 5 HRS
Basic principles of grammar, practice in elementary conversation, pronunciation, composition and reading. One-half hour per day in the laboratory required. Satisfies the general education foreign language composition requirement, Area I.
Prereq: SPN 111 or equivalent; placement exam required

SPN H 177/178/179 Special Topics 1/2/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission

SPN H 221 Intermediate Spanish 3 HRS
A review of Spanish grammar, frequent simple written compositions, and extensive oral work.
Meets three times per week and students will spend two half-hour periods per week in the laboratory. In Spanish. Satisfies the general education foreign language composition requirement, Area I. Does not satisfy the general education literature requirement.
Prereq: SPN H 220 or equivalent

SPN H 222 Intermediate Spanish Reading 3 HRS
An introduction to literary criticism as applied to Hispanic literature. Extensive reading of materials in Hispanic literature and culture.
In Spanish. Satisfies Area IV of the general education requirements.
Prereq: SPN H 202 or department permission

SPN H 223 Intermediate Spanish Reading 3 HRS
An introduction to literary criticism as applied to Hispanic literature. Extensive reading of materials in Hispanic literature and culture.
In Spanish. Satisfies Area IV of the general education requirements.
Prereq: SPN H 221 or department permission; placement exam required

SPN H 227/278/279 Special Topics 1/2/3 HRS
These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times, provided different topics are studied.
Prereq: department permission

SPN H 230 The Cultures of Spain 3 HRS
A panoramic view of the peoples of Spain, their cultures, environment and way of life. In Spanish.
Prereq: SPN H 202/222 or department permission

SPN H 231 The Cultures of Spanish America 3 HRS
A panoramic view of the cultures, the peoples and the environment of Spanish America. In Spanish.
Prereq: SPN H 202/222 or department permission

SPN H 441 Survey of Spanish Literature 3 HRS
This survey course covers the major authors and literary movements from the beginning of peninsular Spanish literature to the end of the 17th century. In Spanish. Satisfies the general education literature requirement, Area IV.
Prereq: SPN H 222 or department permission

SPN H 442 Survey of Spanish Literature 3 HRS
This survey course covers the major authors and literary movements in peninsular Spanish literature from 1700 to the present. In Spanish. Satisfies the general education literature requirement, Area IV.
Prereq: SPN H 222 or department permission

SPN H 443 Spanish Grammar and Composition 3 HRS
A systematic review of Spanish grammar and practice in composition. Frequent written assignments.
Prereq: SPN H 202/222 or department permission

SPN H 444 Spanish Conversation and Composition 3 HRS
Improved pronunciation, the acquisition of an active vocabulary for daily life, frequent written compositions, and the development of greater oral facility. Meets three times per week and students spend three half-hour periods in the laboratory each week.
Prereq: SPN H 202 and SPN H 222 or department permission

SPN H 452 Survey of Spanish-American Literature 3 HRS
This course deals with the major writers of Spanish America from the colonial period through modernism. In Spanish.
Prereq: SPN H 222 or department permission

SPN H 453 Survey of Spanish-American Literature 3 HRS
This course deals with the major writers of Spanish America from postmodernism to the present. In Spanish.
Prereq: SPN H 222 or department permission

SPN H 456 Spanish for International Trade 3 HRS
This course is intended for students who already have a solid intermediate-level command of Spanish and who wish to acquire minimum professional competencies in the Spanish language as it is used in the world of international business. It includes practice in various forms of business communication, both written and oral.
Prereq: SPN H 453 or department permission

SPN H 477/478/479 Special Topics 1/2/3 HRS
These courses deal with subject matter not provided in other department offerings. Students may select a course several times, provided different topics are studied.
Prereq: department permission

SPN H 583 Internship 1 HR
Provides an opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisor. Offered on a credit-no-credit basis.
Prereq: department permission
SPNH443 Advanced Spanish Grammar and Composition 3 HRS
A review of select points of Spanish grammar and extensive practice in writing Spanish. Prereq: SPNH343 and SPNH344 or department permission

SPNH444 Advanced Spanish Conversation and Composition 3 HRS
Improved pronunciation, greater oral facility, and frequent written compositions. Meets three times per week and students spend three half-hour periods in the laboratory each week. May be repeated for supplementary credit. Prereq: SPNH343/344 or department permission

SPNH445 Spanish-American Prose 3 HRS
A study of selected topics in Spanish-American literature. May be repeated for credit if the material of the course is in another area. In Spanish. Prereq: SPNH352 or department permission

SPNH446/447 Business Spanish 5/1 HRS
Required of students majoring in business Spanish. Practice with Spanish commercial correspondence, translation of Spanish business documents, and reading of foreign periodical publications on economics and international trade. An overview of international economic organizations and trade agreements related to Spanish-speaking countries and a review of existing bibliography on commercial Spanish. Prereq: SPNH150 or department permission

SPNH448 Modern Drama 3 HRS
The development of modern Spanish drama and its various types. Works of the principal dramatists of the 19th and 20th centuries. In Spanish. Prereq: SPNH342 or department permission

SPNH449 Romanticism 3 HRS
A study of the major works of Hispanic Romanticism in Spanish. Prereq: SPNH342 or department permission

SPNH450 Spanish-American Theatre 3 HRS
A study of the theatre in Spanish America from its beginning to the present. In Spanish. Prereq: SPNH352 or department permission

SPNH454 Modernism in Spanish America 1 HRS
A survey of the literary movement known as 'modernismo' in the literature of Spanish America. In Spanish. Prereq: SPNH352 or department permission

SPNH455 The Generation of 1898 3 HRS
A study of the works of the main authors of the generation of 1898, from Unamuno to Ortega y Gasset. In Spanish. Prereq: SPNH342 or department permission

SPNH456 Scientific and Technical Spanish I 3 HRS
Study of the fundamental Spanish terminology required for scientific and technical contexts, including basic vocabulary for mathematics, geometry and physics. In-depth study of at least one scientific or technical field (e.g., automobile industry, automated processes). Students will explore the vocabulary and resources in their chosen fields. Prereq: SPNH345 or department permission

SPNH457 Scientific and Technical Spanish II 3 HRS
Study of the fundamental Spanish terminology required for scientific and technical contexts, including basic vocabulary for computers, chemistry, and biology. In-depth study of at least one scientific or technical field (e.g., data processing, nutrition). Students will explore the vocabulary and resources in their chosen fields. Prereq: SPNH456 or department permission

SPNH464 Don Quijote 3 HRS
The universal qualities of both the book and its author, as well as their relation to Spanish life and literature of the period. In Spanish. Prereq: SPNH441 or department permission

SPNH465 Modern Novel 3 HRS
Study of the development of the modern novel in Spain during the 19th and 20th centuries. Representative novels will be read and discussed in Spanish. Prereq: SPNH432 or department permission

SPNH471 Culture and Literature of the Hispanic Groups in the United States 3 HRS
A study of the cultures of the major Hispanic groups in the U.S. The study of representative literary works is intended to lead to an increased appreciation of the cultural roots and current lifestyles of these groups. In Spanish. A minimum of 24 hours of field experience required.

SPNH477/478/479 Special Topics 1/2/3 HRS
These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times, provided different topics are studied. Prereq: department permission

SPNH483 Language of the Hispanic Groups in the United States 3 HRS
A survey of present-day social and regional variations in the Spanish spoken in the U.S. and the historical background of these variations. In Spanish. A minimum of 24 hours of field experience required. Prereq: an introductory course in linguistics or department permission

SPNH488/489 Internship 2/3 HRS
Provides an opportunity for the student to extend theoretical classroom learning through working experience in an appropriate setting. Field experience will be supplemented by regular meetings with the faculty supervisors.

Offered on a credit/no credit basis. Prereq: department permission

SPNH490 Intensive Spanish 6 HRS
An intensive summer course offered in Mexico. Instruction on a small-group (four to five students) basis, with many different instructional levels available. Students advance according to individual progress. Students live with Mexican families. May be counted for equivalent hours in Spanish on 100- to 400-level. May be repeated for credit.

SPNH497/498/499 Independent Study 1/2/3 HRS
Advanced study on an individual research basis in areas not covered in formal course work. Prereq: department permission

SOCIAL WORK COURSES

SWRK220 Introduction to Social Work Services and Professional Roles 3 HRS
An overview of the social work profession including its philosophy, values, professional roles, current trends, and models in varied practice arenas as criminal justice, mental health, child and family services, public welfare services, and medical and industrial settings. Concurrent registration in SWRK222/225 is permissible, but not required.

SWRK222 Social Welfare Agencies and Services 3 HRS
A survey of welfare institutions and policies in their historical and modern contexts. American social welfare services as related to the economic, political, and sociocultural conditions and prevailing ideologies. Concurrent registration in SWRK222/225 is permissible, but not required.

SWRK223 Social Welfare Policies and Programs 3 HRS
A survey of welfare institutions and policies in their historical and modern contexts. American social welfare services as related to the economic, political, and sociocultural conditions and prevailing ideologies. Concurrent registration in SWRK222/225 is permissible, but not required.

SWRK224 Self Assessment and Development for Social Work 1 HRS
This course is required for admission to the Social Work program. It is designed to help students to self-assess their personal preparation for the social work profession. Exercises will help students explore their own values, particularly with respect to culture, gender, and sexual orientation. Students will learn about the social work program sequence and requirements. Opportunities will be provided for learning about working in groups, being assertive, and developing skills for educational survival. Concurrent registration in SWRK222/223 is permissible, but not required.
SWRK527/538/549 SPECIAL TOPICS 1/1/1 HRS
Specialized topics integral to contemporary social work practice. Social work faculty members will select contemporary topics that are different from existing social work courses. Since topics change, a student may take the course more than once.
Prep: department permission

SWRK537 Cooperative Education in Social Work 3 HRS
Employment for pay in a work setting chosen to provide practical experience related to social work. The cooperative education sequence is alternating with full-time attendance at the University. Students who wish to substitute a cooperative education course for the practicum component of SWRK538 must enroll in SWRK538 concurrently with one of the cooperative courses. Cooperative education does not substitute for the field placement courses required of all social work majors.
Prep: SWRK120, sophomores standing, approval of Cooperative Education Office and department permission

SWRK535 Theoretical Bases for Social Work Practice 3 HRS
Integrating, supplementing, and translating into social work practice students' knowledge of human beings and their social environments. The purposes for which the social work professional intends to use the knowledge and the values that form the base of professional practice.
Prep: SWRK120, SWRK222, SWRK251; PSY101, SOC1105, EDP5225 or HHS2620 and PSY101, social work majors only

SWRK537 Social Work Practice I 3 HRS
The first course in a sequence of social work practice, designed to prepare the student for field experience. Relationship building, information gathering and preliminary assessment, and contracting. Must be taken concurrently with SWRK538.
Prep: SWRK515; Coreq: SWRK538; social work majors only

SWRK560 Practice Issues with People of Color 3 HRS
Examines social work methodology and techniques in the development and delivery of social work services to people of color. Focuses on expanding the range of perception, thought, and practice skills relative to race and culture. Personal values toward racial and cultural variation are examined in the context of social work values and practice. Course available to social work majors only.
Prep: SWRK120, SWRK222 and SWRK251

SWRK577/578/579 SPECIAL TOPICS 1/1/1 HRS
Specialized topics integral to contemporary social work practice. Social work faculty members will select contemporary topics that are different from existing social work courses. Since topics change, a student may take the course more than once.
Prep: department permission

SWRK587 Cooperative Education in Social Work 3 HRS
Employment for pay in a work setting chosen to provide practical experience related to social work. The cooperative education sequence is alternating with full-time attendance at the University. Students who wish to substitute a cooperative education course for the practicum component of SWRK538 must enroll in SWRK538 concurrently with one of the cooperative courses. Cooperative education does not substitute for the field placement courses required of all social work majors.
Prep: SWRK120, sophomores standing, approval of Cooperative Education Office and department permission

SWRK538 Preprofessional Practicum 3 HRS
The student is assigned to a human services agency or organization for the semester for four hours weekly. The agency, in agreement with the faculty instructor, provides social work learning experiences and social work supervision. A two-hour weekly seminar relates practicum experience to theoretical knowledge. For students majoring in social work, students minoring in social work, and students pursuing related disciplines such as gerontology and criminal justice, who are interested in an introduction to practical aspects.
Prep: social work majors only; Coreq: SWRK517

SWRK543 Practice Issues with Women 3 HRS
Builds upon and integrates various theoretical frameworks to provide a basis for social work practice with women. An important theme in the course is the exploration of personal attitudes and beliefs as they affect social work practice with women.
Prep: PSY282, WSQ200, SOC1344, WSQ3344, ANTH255, WSQ3355 or PSQ360 and SWRK515; social work majors only

SWRK549 Analysis and Change of Social Welfare Policies 3 HRS
Current social policy and its intended and unintended effects on client populations. Policy analysis and methods for policy change.
Prep: social work majors only; Coreq: SWRK498 or SWRK499

SWRK548 Social Work Practice II 3 HRS
The generalist conceptual framework for social work practice. Practice values, models of assessment, and phases of planned sequential change.
Coreq: SWRK548

SWRK549 Social Work Practice III 3 HRS
A continuation of SWRK548; examines in more depth a variety of social work practice models, interventive strategies, methods, roles, and skills.
Coreq: social work majors only; Coreq: SWRK549

SWRK543 Women and Aging 3 HRS
Designed to provide social work students and gerontology students the skills and sensitivity to understand the issues, needs, and positive attributes of women as they grow older.

Students will examine the lives of women in special groups such as older minority women, caregivers, widows and institutionalized elderly women. Students will learn skills to provide effective services to older women in a variety of human service settings.
Prep: social work major or minor or department permission

SWRK540 Working with Aging People 3 HRS
The role of the social worker with aged people. The delivery of social services to the aged with a focus on practice approaches and techniques unique to various social service settings.
Prep: social work major or minor or department permission

SWRK541 Substance Abuse 3 HRS
Current approaches to the prevention and treatment of drug and alcohol abuse. Consideration of the physiological, psychological, and social impact of substance abuse on the individual, the family, and the community. The role of the social worker in prevention and treatment.
Prep: social work major or minor or department permission

SWRK542 Group Work with Children and Families 3 HRS
Social work group theory and practice as a relevant way to work with children and families. Group process as it occurs in natural groups and the effect of this process on individual behavior. Techniques that can be built into the group to effect client change.
Prep: social work major or minor or department permission

SWRK544 Issues in Mental Health Practice 3 HRS
Issues in mental health practice with emphasis on deinstitutionalization, community mental health, and the role of the entry-level social worker.
Prep: social work major or minor or department permission

SWRK545 Assessment Issues in Domestic Violence 3 HRS
This course will explore violence in the home, focusing primarily on spouse or partner abuse and touching on elder abuse, sexual abuse, and child abuse and neglect. Students will learn how to make domestic violence social work assessments.
Prep: social work major or minor or department permission

SWRK547 Separation, Loss, and Grief 1 HRS
Separation, loss, and grief as integral aspects of the human experience. Practice issues and applications addressing the impact of loss, separation, and grief on client and societal systems.
Prep: social work major or minor or department permission

SWRK546 The Law and Social Work with the Family 3 HRS
Social workers and lawyers frequently find themselves working together dealing with issues and problems involving individuals and families, such
as in cases of divorce, child abuse and neglect, child custody, delinquency and mental health. Legal and social work perspectives in terms of client rights, needs and professional goals. Social work practice in the family court arena.

**SWRK465 Social Work Practice with Legal Offenders** 3 HRS

Professional roles and appropriate practice skills utilized by social workers and allied professionals in working with legal offenders.

**PreReq:** social work major or minor or department permission

**SWRK467 Crisis Intervention** 2 HRS

Systems in crisis including different types of crises, indicators of a system in crisis and crisis intervention strategies.

**PreReq:** social work major or minor or department permission

**SWRK477/478/479 Special Topics** 1/2/1 HRS

Specialized topics integral to contemporary social work practice. Social work faculty members will select contemporary topics that are different from existing social work courses. Since topics change, a student may take the course more than once.

**PreReq:** SWRk420 and SWRk422 or SWRk425 and SWRk424 or department permission

**SWRk488 Field Experience I** 6 HRS

Field experience designed to meet the learning needs of students and the standards of professional social work education. Professional standards are fixed; however, learning needs of students may vary. The field placement agency, in consultation with the Social Work Department, provides learning experiences and supervision at the senior level. Open only to social work majors with senior standing and an overall GPA of 2.3 or better in social work courses. Student may not be on academic probation.

**PreReq:** SWRk417, SWRk308 and department permission; social work majors only. Coreq: SWRk308

**SWRk489 Field Experience II** 6 HRS

A continuation of SWRk488. A student must receive a C or better in SWRk488, have an overall GPA of 2.3 or better in social work courses, and not be on academic probation. Open to majors only. Must be taken concurrently with SWRk409.

**PreReq:** SWRk488; social work majors only

**SWRk490 Senior Thesis Seminar** 1 HRS

This is the capstone course for students completing the honors program in social work. A senior thesis or project is completed in consultation with the faculty member.

**PreReq:** social work major only; member of University Honors Program

**SWRk497/498/499 Independent Study** 1/2/3 HRS

Directed study in area not provided in other course offerings, or advanced study in areas of special interest to the student.

**PreReq:** department permission

### TECHNOLOGY EDUCATION COURSES

**TEDU103 Structures and Design in Technology** 3 HRS

The application of design elements, principles and procedures in the development of solutions to structural problems in technology. Consider human and environmental factors in design solutions. Illustration and description of structures, shapes and forms used in these solutions.

**PreReq:** department permission

**TEDU104 History of Industrial Technology** 3 HRS

An introduction to the history of industrial technology. The development of industry and its impact on the other arts and culture in general. Basic principles of design in industrial and home arts, and the esthetic, technical, mechanical and social periods of technology.

**PreReq:** department permission

**TEDU106 Processing Technology** 3 HRS

An introduction to tools, materials, processes and their application to discrete and integrated systems of technology. Relationships between humans and machines will be studied to develop the student's ability to transfer knowledge of processes from one environment to the other.

**TEDU104 Information and Control Technology** 3 HRS

Access, manage and control information and technology through the application of technological systems. Design and construct models, devices and mechanisms that will process information and control technology through the use of machines and humans.

**TEDU118 Energy and Transportation Technology** 3 HRS

Forms, sources, and uses of energy and transportation for applications to technology. Description of past, present, and future systems that transform, transmit, store, control, and/or utilize energy and/or transportation. Consider conservation issues.

**TEDU122 Arts and Crafts** 3 HRS

Experience in design and use of a wide variety of craft materials. Vocational and recreational use of craft media.

**TEDU177/178/179 Special Topics** 1/2/3 HRS

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

**PreReq:** department permission

**TEDU124 Safety in Technology and Vocational Education** 2 HRS

Safety, health and environmental factors and their implications for technology and vocational education, students, laboratories and instructional programs.

**TEDU190 Foundations of Technology and Vocational Education** 3 HRS

An introduction to the foundations and implementation of technology education and vocational education. Past, present and future developments in the profession will be studied through lectures, discussions, seminars, microteaching, school visits and prestudent teaching activities.

**TEDU195 Technology Education for Children** 3 HRS

Content and methods which enable the elementary teacher to assist children in learning about the concepts, processes, systems and impacts of technology. Individual and group laboratory activities involve applications of technology with other subject areas through problem solving experiences.

**TEDU177/178/179 Special Topics** 1/2/3 HRS

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

**PreReq:** department permission

**TEDU190 Curriculum in Technology and Vocational Education** 3 HRS

Curriculum bases, the derivation of content, the formulation of objectives, the selection and organization of learning activities, and the selection and development of procedures for evaluation of technology and vocational education students and programs.

**PreReq:** TEDU190

**TEDU195 Experiences in Technology for Children** 2 HRS

Laboratory experiences in the use of materials, tools, processes and products of industry as utilized in the elementary and middle school. Emphasis is on individual and group learning situations relevant to integrated curriculum activities.

**PreReq:** TEDU195

**TEDU195 Seminar in Technology for the Elementary School** 2 HRS

Practical experiences in integrating concepts of technology with existing elementary and special education curricula. Students will design, conduct, and evaluate manipulative activities for and with children.

**PreReq:** TEDU195

**TEDU138 Tools and Materials** 3 HRS

Experiences in the use of selected tools, machines and materials following contemporary therapeutic practices in occupational therapy and related professions. Lectures two hours per week. Laboratory: two hours per week.

**TEDU177/178/179 Special Topics** 1/2/3 HRS

An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.

**PreReq:** department permission
TUD 437 Cooperative Education in Technology Education 3 HRS
Technology education majors will be placed on a job that relates to their primary area of study for one semester. During this period, regular employee benefits may be received. Offered on a credit/no-credit basis. Credit applicable to a major in technology education only.
Prereq: department permission.

TUD 450 Solving Technological Problems 3 HRS
A capstone experience in the technology component of the technology education curriculum. Student applies problem-solving techniques to arrive at the solution to a technological problem.
Prereq: TUD 350, senior standing and department permission.

TUD 452 Principles of Vocational Education 3 HRS
Concepts and principles of vocational education; current issues in vocational education in Michigan.
Prereq: TUD 350.

TUD 460 Methods of Teaching Technology and Vocational Education 3 HRS
Involvement in solving problems related to classroom activities in technology and vocational education programs. Emphasis on the implementation of classroom methods, including the selection, organization, and evaluation of activities. Examines the relationship between principles of effective learning and various methods of organizing technology and vocational education content.
Prereq: TUD 350 and junior or senior standing.

TUD 477/478/479 Special Topics 1/1/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

TUD 487 Cooperative Education in Technology Education 3 HRS
The second in a two-course sequence for technology education majors. The students will be placed on a job that relates to their primary area of study for one semester. Regular employee benefits may be received. Credit applicable to a major in technology education only. Offered on a credit/no-credit basis.
Prereq: TUD 387 and department permission.

TUD 497/498/499 Directed Study—Technology Education 1/1/3 HRS
Available to select students who have demonstrated ability to profit from a directed study project. Intensive study of a problem appropriate to the student's area of concentration. Enrollment and selection of a project proposal must be approved by the department advisor-chair.
Prereq: department permission.

TESOL Courses

TSL 410 TESOL Methods 3 HRS
Various methods and techniques used to teach language components (pronunciation, vocabulary and pronunciation) and language skills (reading, writing, listening, and speaking) are examined with regard to the theories on which they are based. Practice in developing and implementing balanced and effective language lesson plans is provided.
Prereq: LNGE 223 or LNG 201

TSL 420 Materials and Tests for TESOL 3 HRS
Review of existing materials and tests used with limited English proficient students in public schools. Practice in adapting and developing materials for varying audiences in the public schools. Practice administering ESL tests used in public schools.
Prereq: TSL 410 or concurrent enrollment or department permission.

TSL 477/478/479 Special Topics 1/1/3 HRS
An exploration and study of topics not covered in other departmental offerings. Students may elect more than once, provided different topics are studied.
Prereq: department permission.

TSL 497/498/499 Independent Study 1/1/3 HRS
Advanced study on an individual research basis in areas not covered in formal course work.
Prereq: department permission.

Division of Academic Affairs Courses

UNIV 101/102 Introduction to the University 1/1.5 HRS
Restricted to first-time entering freshmen only. This course provides students the information and skills that help make the transition to college more successful. Students learn how to effectively manage the university system, what study techniques can enhance their grades, and how to live and learn in a multicultural environment. In addition, the classes are small and allow students to develop individual relationships with the faculty/staff teaching small sections and other students in the class. This class prepares students for success at EMU and beyond.

UNIV 214 Special Topics: Prior Learning and Portfolio Development 3 HRS
Course goals are to assist students in clarifying educational, career, and personal goals by developing a portfolio that documents experience and identifies learning for evaluation by appropriate departmental faculty for possible award of degree credit.
Prereq: department permission.

Women's Studies Courses

WMST 217/218/219 Special Topics 1/1/3 HRS
Different subject matter will be taught each semester offered, including interdisciplinary courses in women's studies. Students may take these courses more than once provided the subject matter is different, but no more than two such courses may be counted toward the minor in women's studies.
Prereq: department permission.

WMST 300 Introduction to Women's Studies 3 HRS
An overview of women in society, historical and literary perspectives on women's contributions, socialization, roles and status in professional fields.

WMST 305/BEDU 305 Women in Business 3 HRS
Social and business conditions that support the entry of women to executive positions in business; career opportunities at the professional and executive levels of business.

WMST 320/PHIL 326 Feminist Theory 3 HRS
A consideration of philosophical issues concerning the nature and status of women. Readings from both traditional and contemporary sources. Topics may include scientific and religious views, the ideal society and women's place in it, varieties of feminism, views on sexuality, family and reproduction, and work and the economy.

WMST 324/PSY 214 Psychology of Women 3 HRS
Theories and empirical research concerning personality development in females. Examination of the origins of the behavior of women.
Prereq: PSY 101 or PSY 102.

WMST 327/328/329 Special Topics 1/1/3 HRS
Different subject matter will be taught each semester offered, including interdisciplinary courses in women's studies. Students may take these courses more than once provided the subject matter is different, but no more than two such courses may be counted toward the minor in women's studies.
Prereq: department permission.

WMST 341/CLAS 341/HIST 341 Women and Gender in the Ancient World 3 HRS
An investigation of life for women in antiquity, focusing on the sex-gender system of Greek and Roman societies. Literary, iconographical and other evidence will be studied to disclose the classical roots of western beliefs and attitudes about women.
Prereq: one 100-level course in history.

WMST 342/ECON 318 Economics of Women 3 HRS
The changing economic role of women in the labor force. Analysis of policies affecting earnings, employment, and work and family issues.
in traditional and nontraditional occupations. Includes some international comparisons.

WMST 315 HIST 315 History of Women in Europe 3 HRS
A study of the history of women and views of women in western society from the 18th century to the present. Emphasizes the struggles, setbacks, and achievements of the women's movement in the context of modern European history.

Prep: one course in history

WMST 316 HIST 316 History of Women in the United States and Great Britain, 1800 to the Present 3 HRS
A comparative study of the history of women in the United States and Great Britain. Examines the ideology of the nature and role of women, the history of women's lives, the impact of industrialization, and the feminist movements of the 19th and 20th centuries.

Prep: one course in history or department permission

WMST 344 SOCIOL 344 Sociology of Gender 3 HRS
Analysis of past, present, and future sex roles, the changing roles of women and men, and the conflicts and consequences of these changes on marriage and family systems in the United States.

Prep: SOCI 105 and sophomore standing

WMST 355 ANTH 355 Anthropology of Women 3 HRS
The role of women in diverse cultural contexts. Theories dealing with the position of women. Life histories of women constitute the basic reading in this course.

Prep: ANTH 115 or department permission

WMST 362/AAAS 362/PLSC 362/Black Women: Religion and Sexism 3 HRS
An introduction to the social and political role of Black women in African American religious institutions. Particular attention will be placed on how African American religion has limited the power of women. Additionally, the course will examine the historical evolution of the various major Black denominations in America and their political and social roles in African American communities.

WMST 377/378/379 Special Topics 1/2/3 HRS
Different subject matter will be taught each semester offered, including interdisciplinary courses in women's studies. Students may take these courses more than once provided the subject matter is different, but no more than two such courses may be counted toward the minor in women's studies.

Prep: department permission

WMST 387 Cooperative Education in Women's Studies 3 HRS
This course provides students with an opportunity to deal directly with issues affecting women by working with agencies and local organizations.

Prep: department permission

WMST 390 Capstone Seminar 3 HRS
A culminating experience designed to enable students to understand, demonstrate, and improve skills acquired as majors or minors in the program, and to facilitate the integration of interdisciplinary knowledge.

Prep: WMST 200 and WMST 226

WMST 410 Women and Technology 3 HRS
An interdisciplinary course designed to familiarize students with various concepts of technology, technological change, and technological society; explore the problems and advantages women face in technological society or technology-based professions; explore women's roles in several specific technology professions.

Prep: WMST 2126/PHIL 4126 Women and Philosophy 3 HRS
An examination of gender and its relationship to other issues from a philosophical perspective. Possible topics include rationality, sexuality, aesthetics, ethics, and political theory.

Prep: two courses in philosophy

Prep: ART 108 or department permission

ZOOL 140 Biology of Animals 4 HRS
With three hours of lecture and three hours of combined recitation/demonstration and laboratory this course will focus on the biology and impact of the diverse animal groups in their interaction with humans. Diseases caused, new medical contributions, economic costs and benefits and ecological roles of repressive animals will be studied. Does not count toward major or minor.

Prep: CHEM 1120 (if taken concurrently, students must register for CHEM 1120 first) or BIOL 105

ZOOL 202 Human Anatomy and Physiology I 3 HRS
An intensive lecture and laboratory course investigating human anatomy and physiology with emphasis on both normal and pathological conditions, in a two-semester sequence. First semester will cover the basic structure and function of the muscular, skeletal, and nervous systems.

Prep: CHEM 1210 (if taken concurrently, students must register for CHEM 1210 first) or BIOL 105

ZOOL 204 Human Anatomy and Physiology II 3 HRS
An intensive lecture and laboratory course investigating human anatomy and physiology with emphasis on both normal and pathological conditions, in a two-semester sequence. The second semester will cover circulatory, metabolic, endocrine, digestive, excretory, and reproductive systems, and the integration of the systems of the body.

Prep: ZOOL 201

ZOOL 312 Wildlife of Michigan 3 HRS
A course emphasizing the ecology, behavior, conservation, and management of amphibians, reptiles, birds, and mammals that live in Michigan. Students also will learn to identify common species based on appearance, call, songs, and tracks. Does not count toward the major or minor.

Prep: BIOL 105 or BIOL 210

ZOOL 377/378/379 Special Topics 1/2/3 HRS
An examination of zoology topics not covered in other departmental offerings. Students may elect this course more than once, provided different topics are studied.

Prep: department permission

ZOOL 509 Natural History of Invertebrates 3 HRS
A field course in the recognition, collection, identification, and preservation of common invertebrates of Michigan, exclusive of the insects, with emphasis on their natural history, ecology and economic importance. Counts as a
Indices

Sections:
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Disclaimer
Courses in this catalog have been authorized in accordance with University policies. Class schedule books must be consulted each semester for courses to be offered, since the frequency of offerings is determined by the department as program needs dictate. There is no assurance that a given course will be offered each year. The requirements stated in department summaries are intended to serve as guides to program planning and are subject to specific determination by, and consultation with, the departmental advisor.
### COURSE PREFIXES

A department prefix or code is used to identify courses offered by Eastern Michigan University.

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| Finance                        | FIN  |
| Insurance                      | INS  |
| Computer Information Systems   | IS   |
| Production/Operations Management| POM  |
| Management                     | MGMT |
| Marketing                      | MKTG |
| Law                            | LAW  |

### COLLEGE OF EDUCATION

| Leadership and Counseling      | EDLD |
| Educational Leadership         | EDLD |
| Counseling                    | COUN |
| Special Education              | SPED |
| General                       | SPED |
| Cognitive Impairment           | SPEI |
| Emotional Impairment           | SPEI |
| Learning Impairment            | SPEI |
| Physical and Health Impairment | SPEI |
| Speech/Language Pathology      | SPEI |
| Visual Impairment              | SPEI |
| Student Teaching               | EDUC |
| Teacher Education              | CURR |
| Curriculum                     | CURR |
| Early Childhood Education      | ECE  |
| Educational Media              | EDM  |
| Educational Media and Technology| EDME |
| Educational Psychology         | EDPS |
| Educational Technology         | EDTE |
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| Social Foundations             | SOFO |

### COLLEGE OF HEALTH AND HUMAN SERVICES

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### COLLEGE OF TECHNOLOGY

| Engineering Technology                  | COT  |
| Computer Aided Design/Manufacturing     | CADM|
| Computer Engineering Technology         | CET  |
| Construction Management                 | CMNT|
| Electronic Technology                   | ELEC|
| Engineering Technology                  | ET   |
| Facility Management                     | EMGT|
| Industrial Design                       | IDE  |
| Manufacturing                            | MFG  |
| Manufacturing                            | MFG  |
| Mechanical Engineering Technology       | MET  |
| Quality Technology                      | QUAL|
| Military Science and Leadership         | MLIS|
| Technology Studies                      | STS  |
POLICIES AFFECTING YOU AT EMU

In this section you will find the FERPA law, the Student Code of Conduct, the EMU Alcohol and Other Drug Policy, the new Student Involuntary Administrative Withdrawal Policy, the Grade Grievance Procedures, Class Attendance Policy, and the EMU Policy on Sexual Harassment. These policies will not only serve as an important reference during your University experience, but they will also help you as a student to make informed choices.

Undergraduate Policy on Probation/Dismissal/Readmission

If, at the end of any term of enrollment, an undergraduate's cumulative grade point average (GPA) falls below 2.0, having previously been at or above 2.0 (or if new to the University), the student will be placed on academic probation (PRB1). The student will then have three terms of enrollment (spring/summer count as one) to raise the cumulative GPA to 2.0 or higher. After the cumulative GPA has reached 2.0, the student will be removed from academic probation (GOCO), unless the cumulative GPA has been raised to 2.0 by the end of the third term of probation (PRB3), the student will be subject to academic dismissal.

Exceptions to this policy are as follows:

1. Any student whose first term of probation is the result of a semester of all E's must earn better than 0.0 (all A's) in the first term of probation or face dismissal immediately.

2. Students who have been readmitted (READ is equivalent to PRB1) after a dismissal will be placed on PRB2 after their first term, if their cumulative GPA remains below 2.0. They will have two terms to raise their cumulative GPA average to 2.0 or they will face a second and final dismissal.

3. All initial dismissal actions are subject to appeal. Procedures and deadlines for such appeals will be included in notices of academic dismissal, sent to students at the conclusion of a term of enrollment. If an appeal is successful, the student will be reinstated, which means the dismissal does not count. Students who are reinstated after an appeal will be given one more term to raise the GPA to 2.0 or they will be dismissed.

Students dismissed from the University for the first time must remain away from Eastern Michigan University for one calendar year. They can then apply for readmission through the Academic Advising Center. Procedures and deadlines for readmissions are available in the Academic Advising Center (501 Pierce Hall). Contact the Assistant Director for Academic Actions. Students dismissed more than once (excluding reinstatement) are usually not eligible to return to the University. On occasion, when students have been away from the University for at least 10 years, a request may be submitted, through the Assistant Director for Academic Actions, to the Academic Standards Committee, which will make the final decision in such a case.

While remaining out of the University due to a dismissal, students may choose to attend another institution. Certain rules apply to course work taken elsewhere. Refer to the resent policy in the catalog and consult with Academic Records on transfer of courses.

While on academic probation, a student may meet with the Assistant Director for Academic Actions or any advisor in the Academic Advising Center. In addition, students may seek help in developing successful strategies for academic performance through the Counseling Center, the Counseling Services Center and the Career Services Center.

Notification of Student Rights under FERPA

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

1) The right to inspect and review the student's education records within 45 days of the day EMU receives a request for access. Students should submit to Eastern Michigan University's Office of Records and Registration written requests that identify the record(s) they wish to inspect. A University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2) The right to request the amendment of the student's education records that the student believes are inaccurate or misleading. Students may ask the University to amend the record that they believe is inaccurate or misleading. They should write the University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading.

If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3) The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.

One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interest. A school official is a person employed by EMU in an administrative, supervisory, academic, research or support staff position (including law enforcement unit personnel and health staff); a person or company with whom EMU has contracted (such as an attorney, auditor or collection agent); a person serving on the Board of Regents; a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

A school official has a legitimate educational interest in the student's education records, in that the information will be used only to fulfill that official's professional responsibilities.

Upon request, the University discloses education records without consent to officials of another school in which a student seeks or intends to enroll. The University may, without the student's permission, release certain information to parents or guardians of students under the age of 21. School officials are considered to be responsible for violating any law or University policy pertaining to drugs or alcohol.

EMU has designated the following items as directory information and these items may be released in publications or disclosed upon request without consent: the student's name; address; telephone listing; electronic-mail address; date and place of birth; major field of study; participation in recognized activities and sports; weight and height of members of athletic teams; dates of attendance and degrees and awards received (including, but not limited to, the Dean's List); and the most recent previous educational agency or institution attended by the student.

EMU reserves the right to make directory information public unless a student's written objection (specifying the category of information not to be made public without prior consent) is filed at the Office of Records and Registration within 14 days after each term begins.

Students who do not want to be included in the annual EMU Student Directory should either complete a directory exclusion card or request directory exclusion through the touch tone registration system (734-487-3309) by September 15. Cards can be picked up from University Publications, McKenney Information Center, Campus Life, Office of Records and Registration, Academic Advising Center, Office of Admissions or a residence hall information desk. They must be turned
in by September 15 to Public Information, 18 Welch Hall. Requesting
directory inclusion will remove your name, address and phone number
from the current and subsequent telephone directories.

6 The right to file a complaint with the U.S. Department of Education
concerning alleged failures by EMU to comply with the requirements
of FERPA. The name and address of the office that administers
FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Ave., SW
Washington, D.C. 20202-4605

Applicable Laws for Americans with Disabilities
1973 Vocational Rehabilitation Act, Section 504
Colleges and universities nationwide have been protecting the rights
of students with disabilities since the 1973 Vocational Rehabilitation Act,
specifically Section 504, which states:

No otherwise qualified handicapped individual in the United States
shall, solely by reason of handicap, be excluded from the participation
in, be denied the benefits of, or be subjected to discrimination under
any program or activity receiving federal financial assistance.

Americans with Disabilities Act (ADA)
Unlike Section 504 of the Rehabilitation Act, the ADA applies to employ-
ees, public services, public accommodations, communication providers
and transportation providers regardless of whether they receive or benefit from
federal financial assistance.

The ADA defines a person with a disability to mean a person who:
1) has a physical or mental impairment that substantially limits one or
more major life activities; 2) has a record of such an impairment; or 3) is
regarded as having such an impairment.

The ADA covers protection in five different areas:

- Employment
- Public services/transportation
- Public accommodations/transportation
- Telecommunications
- Miscellaneous

EMU Policy on Sexual Harassment
The University's Mission Statement and accompanying Institutional Values
and Guiding Principles reflect our collective commitment to providing
an environment that positively affects the lives of all individuals who are
part of the EMU community. The University's Sexual Harassment Policy
affirms our shared values and responsibility to respect all individuals, and
prohibits any member of the University community from engaging in
sexual harassment activities that deme or diminish an individual in any
way. Such activity is prohibited by law and by this policy. The rights
and responsibilities inherent in this policy apply to all employees, students,
guests and outside contractors. One of the strengths of Eastern Michigan
University is that we value and respect human dignity and the rights of all
people. Each of us shares the responsibility for ensuring that sexual harass-
ment will not be tolerated and that we strictly adhere to the tenets of this
policy. Copies of the policy and procedures are posted on the Web sites
of the Office of Diversity and Affirmative Action, the Office of Judicial
Services, Human Resources and the Office of the Assistant Vice President
for Academic Affairs.

Policy on Sexual Harassment
It is the policy of Eastern Michigan University to provide an educational,
employment and business environment free of unwelcome sexual advances;
requests for sexual favors and other verbal or physical conduct or communica-
tions constituting sexual harassment, as defined and otherwise prohibited
by state and federal statues.

Prohibited Acts
No member of the University community shall engage in sexual harassment.
Persons who engage in sexual harassment are subject to disciplinary action,
and including dismissal for employees and/or suspension or dismissal
for students. Sexual harassment is defined as unwelcome advances, requests
for sexual favors or other behavior of a sexual nature when:

• Submission to such conduct is made explicitly or implicitly a term
  or condition of an individual's employment or status in a course,
  program or activity.
• Submission to, or rejection of, such conduct is used as a basis for
  a decision affecting an individual's employment or participation in a
  course, program or activity.
• Such conduct has the purpose or effect of unreasonably interfering
  with an individual's work or performance in a course, program or
  activity, or of creating an intimidating, hostile or offensive environ-
  ment in which one engages in employment, a course, a program or
  an activity.

Confidentiality
To the extent permitted by law, the confidentiality of each party involved
in a sexual harassment investigation, complaint or charge will be observed,
provided it does not interfere with the University's ability to investigate
the allegations or take corrective action.

Examples of Sexual Harassment
• Physical assault.
• Threats or intimations which cause the victim to believe that sexual
  submission or rejection will affect his/her reputation, education, em-
  ployment, advancement, or any conditions which concern the victims
  standing at the University.
• Direct propositions of a sexual nature.
• Subtle pressure for sexual activity, an element of which may be conduct
  such as unwelcome sexual teasing.
• Conduct (not legitimately related to the subject matter of the work,
  course, program or activity in which one is involved) intended to
  or having the effect of discomfiting and/or humiliating a reasonable
  person at whom the conduct is directed. This may include, but is not
  limited to, comments of a sexual nature of sexually explicit statements,
  questions, jokes or anecdotes, and unnecessary touching, patting, hugging
  or brushing against a person's body. Depending upon the circumstances,
  any of the above types of conduct may be sexual harassment and
  subject to disciplinary action, even if that conduct only occurs once.

Consensual Sexual Relationships:
Professor and student:
The ideal professor demonstrates respect for students as individuals and
serves as students' mentors, intellectual guides, and model of honest academic
conduct. The professor acts to ensure academic evaluations of students that
reflect each student's true merit. He or she respects the confidential nature
of the relationship between professor and student and avoids all forms of
exploitation, harassment, and discriminatory treatment of students.

Sexual relations (which includes contact of a sexual nature) or requests
for sexual relations between students and faculty members with whom they
also have a current instructional or evaluative relationship are fraught with
the potential for exploitation and must be avoided, and are prohibited. The
respect and trust accorded a professor by a student, as well as the power exer-
cised by the professor in an instructional or evaluative role, make voluntary
consent by the student suspect. In their relationships with students, members
of the faculty are expected to be aware of their professional responsibilities
and to avoid apparent or actual conflict of interest, favors or bias.

Seeking Assistance for Filing a Complaint
Students, faculty and staff who believe they are the victims of sexual harass-
ment may seek information and assistance from the Office of Student Judicial
Services (204 King Hall), Jennifer Schrau, director, 487.2157 — or the
Diversity and Affirmative Action Office (11 Welch Hall), 487.1166. If the
student, faculty member or staff member wishes to file a complaint, she/he
may take the following action(s):
Section II: Responsibility for Implementation

The President, as Chief Executive Officer of the University, has overall responsibility for implementation of the Student Conduct Code and the student disciplinary process and has delegated this overall management to the Vice President for Student Affairs and the Director of Student Judicial Services. The Student Judicial Services office is directly responsible for the daily administration of the University's student judicial system.

Section III: Jurisdiction

The University will have jurisdiction over misconduct that occurs on University premises and/or at University-sponsored activities but may also address off-campus behavior if the University determines that the behavior, or the continued presence of the student, impairs, obstructs, interferes with or adversely affects the mission, process or functions of the University.

A student committing a criminal offense, off-campus that is also a violation of the Student Conduct Code may be subject to University discipline.

The University may pursue disciplinary action against a student at the same time the student is facing criminal charges for the same offense, even if the criminal prosecution is pending, has been dismissed or the charges have been reduced.

Section IV: Definitions

A. For purposes of the Student Conduct Code only, the following definitions apply:

1. **Faculty Member** means any person hired by the University to conduct classes.

2. **Institution or University** means Eastern Michigan University.

3. **Member of the University Community** includes any person who is a student, faculty member, University official or any other person employed by the University.

4. **Student** includes all persons enrolled for courses through or at EMU, both full-time and part-time, and those who attend educational institutions other than EMU but who reside in EMU residence halls.

5. **Student Group** means a number of students who are associated with each other and have not complied with University requirements for registration as an organization.

6. **Student in Good Standing** means a student who is in good academic standing and who is not presently under any University disciplinary sanctions.

7. **Student Organization** means a number of students who have complied with University requirements for registration and/or recognition.

8. **University Premise** includes all land, buildings, facilities, and other property in the possession of or owned, used, or controlled by the University.

9. **University Sponsored Activity** means any activity on or off campus, which is initiated, aided, authorized or supervised by the University.

Section V: Violations

The following behavior is subject to disciplinary action under this Code. An individual, a group of individuals or a student organization may be
charged with any of the violations. In cases where a violation is committed by an individual member of a student organization, the entire organization may be held responsible, in addition to the individual member, when those members not directly involved participate in the activity by encouraging, witnessing or condoning the act in any manner.

A. Academic Dishonesty
Engaging in academic dishonesty in any form with respect to examinations, course assignments, research projects, grades, and/or academic records, including, but not limited to the following:

1. Cheating — using or attempting to use unauthorized materials, information or study aids in any academic assignment. Examples of cheating are: looking on someone else's paper; using any kind of "cheat" sheet or other enhancement during a test; allowing someone else to take an exam in your place; submitting the same work more than once for credit; using someone else's homework or lab assignments; collaborating with another student on any assignment or take-home test if told that collaboration was not allowed; assisting another student in committing an act of academic dishonesty by allowing another student to copy homework or an exam; taking an exam for someone else; giving test information to students in other sections of the same class.

2. Falsification — intentional and unauthorized falsification or invention of any information or citation in an academic assignment. Examples of falsification are: making up data on an assignment; making up a source to cite in a paper; altering then re-submitting returned academic work; giving false information to a faculty or staff member to increase one's grade; or attempting to change, actually changing, altering grades or any other unauthorized tampering with grades.

3. Plagiarism — deliberate and knowing use of someone else's work or ideas as one's own. Examples of plagiarism are: quoting a source verbatim, or paraphrasing text from a given source, without properly citing the source; running a research paper that was written by someone else; or in any other way passing off someone else's work as one's own; or failing to give credit for ideas or materials taken from someone else.

B. Alcohol Violations
1. Possession or consumption of alcoholic beverages by persons under the legal drinking age as defined by Michigan law.

2. Dispensing, selling or supplying alcoholic beverages to a person under the legal drinking age as defined by Michigan law.

3. Possession or consumption of alcoholic beverages in violation of federal, state and local laws.

Notes:
1. Transportation in sealed containers to and from an authorized area or place is permissible if the person in possession is of legal age to possess alcoholic beverages as allowed by Michigan law.

2. Use of alcohol and controlled substances by Greek Organizations is covered under Student Conduct Code Section XI: Special Provisions Governing the University Recognition and Conduct of Greek Letter Social Organizations. These provisions should be used to address alcohol violations committed by a Greek organization.

C. Computer Misuse
1. Unauthorized access, entry or use of a computer, computer system, network, software, password, account or data.

2. Unauthorized alteration or tampering with computer equipment, software, network, or data.

3. Unauthorized copying or distribution of computer software or data.

4. Use of computing facilities or equipment to send obscene, harassing or abusive messages.

5. Use of computers to falsify records, tamper with records or commit any act of academic dishonesty.

6. Any other act in violation of law and/or University policies and guidelines regulating computer-related use.

D. Discrimination by Student Organizations
Selecting its membership upon the basis of restrictive clauses involving race, religion, color, national origin, gender, age, sexual orientation or disability unless any given student organization's membership restriction is shown to be specifically allowed by law.

E. Disruptive Conduct
1. Actions that impair, interfere with, or obstruct the normal operations of the University and/or interfere with the rights of other members of the University community or visitors. This includes intentional occupation of or blocking the entry or exit of University facilities, including but not limited to buildings, classrooms, offices, hallways, entrance areas and campus grounds.

2. Actions that impair, interfere with, or obstruct the orderly conduct, processes and functions within any classroom or other instructional setting. This includes interfering with a faculty member's or instructor's role to carry out the normal academic or educational functions of his/her class.

3. Participating in, leading or inciting others to disrupt scheduled and/or normal campus activities, events and programs.

4. Intentional obstruction of the free flow of pedestrian or vehicular traffic on University premises or at University sponsored or supervised functions.

5. Disturbance of any member of the University community or visitor.

6. Solicitation on campus without prior approval from appropriate University officials. This includes, but is not limited to, the disbursement of any forms of promotional/informational material on University property or on items (e.g., motor vehicles) on University property, requests for donations, or the selling or vending of any merchandise or services.

E. Drugs
1. Possession or use of narcotics, prescription drugs or other controlled substances in violation of local, state or federal drug or narcotic laws.

2. Distribution, delivery or sale of narcotics, prescription drugs or other controlled substances in violation of local, state or federal drug or narcotic laws.

3. Possession or use of drug paraphernalia.

G. Failure to Comply
1. Failure to comply with a lawful order of a University official, including a campus police officer, in the performance of his/her duty.

2. Failure to comply with the sanctions rendered during the student judicial process.

3. Failure to comply with a request to be interviewed by a University judicial officer during the investigation of a conduct code violation. (Students may choose not to appear and present testimony at a student judicial proceeding after meeting with the judicial officer.)

H. Falsification/Fraud/False Testimony
1. Furnishing false information to the University, including false reporting of emergencies, knowingly making false accusations or giving false testimony during the disciplinary process.
The document contains a series of sentences and paragraphs, likely discussing various topics and providing information. Due to the complexity of the text, it's not possible to accurately transcribe the entire content without context. If you have specific questions or need help with a part of the document, please let me know!
3. Attempt or intent to commit any violation outlined in the Student Conduct Code.

4. Off-Campus Conduct as described in the Student Conduct Code, Section III: Jurisdiction.

Section VI: Sanctions for Misconduct

The purpose of University discipline is to be corrective and educational as well as punitive. The disciplinary experience is intended to make clear to students the limits of acceptable behavior and to give students who violate these rules an opportunity to more fully understand the rules and incorporate the experience into his/her overall development. Assigned discipline may include a combination of sanctions for a particular incident. The sanctions which may be incurred include, but are not limited to, the following:

A. Sanctions for Students and/or Student Groups

1. Verbal Warning: Notice that continuation or repetition of prohibited conduct may be cause for additional disciplinary action.

2. Formal Reprimand: An official written statement of the University's disapproval of a student's actions and a warning that any future violation(s) will be dealt with more severely.

3. Disciplinary Probation: An official notice that the student's conduct is in violation of the Student Conduct Code but does not warrant suspension or permanent dismissal. Probation is for a designated period of time and includes the probability of more severe disciplinary sanctions if the student commits another conduct code violation during the probationary period. During the Probation period, a student will be considered "not in good standing" and may be excluded from some programs and curricula or extra-curricular activities, including running for and/or holding office in any student organization.

4. Suspension: An involuntary separation of the student from the University for a definite period of time and/or until certain conditions for readmission are met. The student is not guaranteed readmission at the end of such period of time, but it is guaranteed a review of the case and a decision regarding eligibility for readmission. (Suspension requires administrative review and approval by the President or his/her designee.)

5. Deferred Suspension: The sanction of Suspension may be placed in deferred status provided that the student completes other assigned sanctions by the specified deadline dates. Failure to complete all sanctions and provide proof of completion by the deadline date(s) will result in the automatic enactment of the suspension without charges or hearing. If a student is found responsible for another violation of the Student Conduct Code during the period of deferred suspension, the student may be permanently dismissed from the University.

6. Permanent Dismissal: An involuntary permanent separation from the University. (Permanent dismissal requires administrative review and approval by the President or his/her designee.)

7. Delay and/or Denial of Degree: During the period disciplinary charges are pending against a student, the University may deny and/or delay issuance of a degree. Further, the University may refuse to issue a degree to a student who is serving a suspension or has been permanently dismissed from the University.

8. Revocation of degree: An awarded degree may be revoked for violations of the Student Conduct Code, which occur prior to the award of the degree but are discovered after the degree has been awarded, where the violation is sufficient to justify the suspension or permanent dismissal of the student. (Revocation of a degree requires administrative review and approval by the President or his/her designee.)

9. Other Secondary Sanctions may be imposed instead of or in addition to those specified above. Secondary sanctions include, but are not limited to:

a. Restitution (compensation for loss, damage or injury)

b. Fines (for alcohol or drug violations) First Offense = $100; Second Offense = $200; Third Offense = $300

c. Community Service

d. Educational activities such as a reflective writing assignment or attendance at an event directly related to the violation committed, (e.g. alcohol/drug workshop, diversity awareness training)
e. Restrictions (temporary or permanent loss of privileges or the use of a University facility or service)

B. Sanctions for Student Organizations

1. Verbal Warning: Notice that continuation or repetition of prohibited conduct may be cause for additional disciplinary action.

2. Formal Reprimand: An official written statement of the University's disapproval of a student organization's actions and a warning that any future violation(s) will be dealt with more severely.

3. Disciplinary Probation: An official notice that the student organization's conduct is in violation of the Student Conduct Code but does not warrant suspension or permanent termination of the organization's University status. Probation is for a designated period of time and includes the probability of more severe disciplinary sanctions if the student organization commits another conduct code violation during the probationary period. During the Probationary period, a student organization may also be excluded from campus activities, forfeit student monetary allocations, and lose Campus Life status.

4. Suspension: An involuntary withdrawal of student organization status from the University for a definite period of time and/or until certain conditions for renewal of recognition are met. During this time, the University will not in any way recognize nor support the continued operation of said student organization. The Student organization must reapply to the University for renewed recognition following any period of suspension. The suspension shall be reported to said organization's national office, if applicable. (Suspension requires administrative review and approval by the President or his/her official designee.)

5. Deferred Suspension: The sanction of Suspension may be placed in deferred status provided that the student organization completes other assigned sanctions by the specified deadline dates. Failure to complete all sanctions and provide proof of completion by the deadline date(s) will result in the automatic enactment of the suspension without charges or hearing. If a student organization is found responsible for another violation of the Student Conduct Code during the period of deferred suspension, the student organization may have its University status permanently terminated.

6. Permanent Termination of University Status: An involuntary permanent withdrawal of student organization status from the University. The University will not in any way recognize nor support the continued operation of said student organization. The permanent termination shall be reported to said organization's national office, if applicable. (Permanent termination requires administrative review and approval by the President or his/her official designee.)

7. Other Secondary Sanctions may be imposed instead of or in addition to those specified above. Secondary sanctions include, but are not limited to:

a. Restitution (compensation for loss, damage or injury)

b. Fines (for alcohol or drug violations) First Offense = $100; Second Offense = $200; Third Offense = $300

c. Community Service

d. Educational activities such as a reflective writing assignment or attendance at an event directly related to the violation committed, (e.g. alcohol/drug workshop, diversity awareness training)
e. Restrictions (temporary or permanent loss of privileges or the use of a University facility or service)
C. Enhanced Sanctions
Any violation of the Student Conduct Code against any individual, group or student organization which is shown to be motivated by the individual’s, group’s or student organization’s racial identity, religion or religious beliefs, disability, national origin, gender, sexual orientation or other personal characteristic will subject a student/student organization to a more severe sanction than would ordinarily accompany that violation.

D. Counseling Assessments and Counseling
In addition to any sanctions assigned, a student may also be required to undergo a counseling assessment and/or participate in counseling. Issuance of sanctions may be postponed pending the results of the counseling assessment.

Section VII: Organization of the University Judicial System

A. University Judicial Board
1. Composition — The University Judicial Board will consist of five (5) enrolled students and two (2) alternates; two (2) full-time faculty members and one (1) alternate; and two (2) full-time members of the University community and one (1) alternate. A student member must be a student in good standing in order to be selected for and remain on the University Judicial Board.

2. Selection of board members — In consultation with the Director of Student Judicial Services, student members will be appointed by the Student Government; faculty members will be selected by Faculty Council; and the full-time members from the University community will be selected by the President or his/her designee.

3. Terms of Office — Board members will be appointed for a two-year term. They may be reappointed by the person or body who appointed them. A Chief Justice will be elected by a majority vote of all the Judicial Appeals Board members.

4. Removal from office — A board member who is consistently unavailable for appellate reviews may be removed from the board by a simple majority vote of the total Judicial Appeals Board.

5. Jurisdiction — The Judicial Appeals Board will serve as the panel to review decisions rendered by the University Judicial Board during the formal hearing process. Both the charged party and the University will have the right to appeal a University Judicial Board decision.

6. Procedural Considerations
a. Selection of the Judicial Appeals Board members for any given case depends on the availability of the members at the time scheduled for the appeal.

b. A quorum will exist with the presence of the Chief Justice and any two (2) other Judicial Appeals Board members, except that any three (3) Judicial Appeals Board members may hear the appeal if the Chief Justice cannot be available within a reasonable time, not to exceed fourteen (14) work days from the date of the written appeal.

Section VIII: Rights of Charged Student(s)/Student Organizations in Disciplinary Proceedings

The following rights apply to a student conduct proceeding that has reached the level of a formal hearing, EXCEPT that Rights One (1) through Four (4) apply also to any investigative meeting held with Student Judicial Services and to the Informal Disposition Conference. Student/student organizations will have the right to:

1. Remain silent and not have that silence used against them.

2. Have a voluntary advisor present who may participate in the proceeding. The advisor must be a member of the university community, and if the advisor is another SMU student, said he/she must be a student in good standing.

3. Engage an attorney, at the student/student organization’s own expense only when criminal prosecution is pending on charges stemming from the same incident. The attorney may appear at the proceeding with the student(s)/student organization, directly question or cross-examine witnesses, or in any other way participate in the proceeding.

4. Be given a written statement of the charges against them, in accordance with the provisions of Section IX.B. of the Student Conduct Code.

5. Adequate notice of dates set for all hearings, and related conferences and meetings.

6. Reasonable review of the disciplinary case file maintained by Student Judicial Services prior to a formal hearing and/or appeal.

7. Question and cross-examine the complainant and all witnesses.

8. Present witnesses and submit any pertinent supportive documentation. The hearing board, by a 2/3 vote of members present at the hearing, may limit the number of witnesses in order to avoid dilatory tactics.

9. An open or closed hearing. A hearing will be considered open if no person is excluded until the room’s capacity has been reached; EXCEPT that a person may be removed if his/her behavior is disruptive to the hearing process. A closed hearing will include only the charged student(s)/student organization, Student Judicial Services officials, witnesses, and members of the particular judicial board hearing the case.
10. Challenge a judicial board member on the grounds of bias, conflict of interest or any other factor that could prejudice the board member from rendering an impartial and fair decision. The board member may be disqualified upon majority vote of the remaining members of the board present at the hearing, conducted by secret ballot. If the board votes to exclude the challenged board member from that particular hearing, the hearing will continue with the remaining board members present; even if the number of board members remaining is less than the number required by the Student Conduct Code to reach a quorum for that hearing.

11. A written statement of the outcome of the proceeding, and a description of the appeal procedure.

12. Make a taped recording of the proceeding at their own expense.

13. Appeal the decision of the university judicial board, subject to the provisions of the Student Conduct Code, Section IX: Appeal of Formal Hearing Results.

Section IX: University Disciplinary Procedures

A. Reporting

Any member of the university community may initiate a complaint against a student or student organization for an alleged violation of the Student Conduct Code through the Student Judicial Services office. A complaint shall be submitted to the Student Judicial Services office within a reasonable amount of time from the date the violation occurred. For purposes of this Code, an incident report generated by the Department of Public Safety or an incident report generated by University Housing will be considered a complaint to be reviewed by Student Judicial Services for possible Student Conduct Code violations.

B. Charges and Notice

1. Student Judicial Services will investigate each complaint, and if the circumstances surrounding the complaint indicate that a violation of the Student Conduct Code may have occurred, disciplinary charges may be issued. The student/student organization will be notified of the charges in writing. Notice of the charges will be considered adequate if it is sent to the student/student organization’s last known address registered with the University OR to the address given by a student on either an EMU Department of Public Safety’s Incident Report or on a Housing Incident Report.

2. A proper written notice to a student/student organization shall include the following:
   a. Recitation of facts surrounding the incident, in as sufficient detail as possible to date, time, and location;
   b. Statement of the specific conduct code provision(s) violated;
   c. Any penalty assigned or other action taken;
   d. Amount of time in which the student/student organization has to respond to the notice;
   e. Ruminations of not responding to the notice within the time limit; and
   f. Copy of “Rights of Charged Student/Student Organizations in Disciplinary Proceedings”.

3. Student Judicial Services may place a judicial hold on a student's academic record, and/or may go forward with disciplinary action against a student/student organization in either of the following situations:
   a. The student/student organization fails to respond to a charge letter sent by Student Judicial Services within the applicable time limit.
   b. The student withdraws from the University after allegedly committing a violation, whether or not Student Judicial Services has yet had the opportunity to charge the student with a conduct code violation.
   c. The student/student organization fails to appear at his/her scheduled formal hearing or appeal hearing.

C. Disposition of Cases

A disciplinary case may be handled in one of the following two formats:

1. Informal Disposition Conference — The student(s)/student organization representative and a Student Judicial Services judicial officer will meet informally to discuss the alleged violation(s). If the substantive facts and sanction(s) can be agreed upon by the judicial officer and the charged student(s), a disciplinary action agreement will be prepared and signed by both sides. A signed disciplinary action agreement will constitute a waiver of the right to a formal hearing and any appeal, and an acceptance of the findings(s) and sanction(s). The President or his/her designee must approve any suspension, permanent dismissal or permanent termination of a student organization's university status.

2. Formal Hearing — If, during the informal disposition conference, the student(s)/student organization disputes the findings by Student Judicial Services that a violation has occurred or if an appropriate sanction(s) cannot be agreed upon, the case will be referred to the University Judicial Board for a formal hearing.

D. Procedures for Formal Hearings

1. Notice of Hearing — After the formal hearing is scheduled, Student Judicial Services will notify the student(s)/student organization involved of the date, time and place of the hearing and of the preconference.

2. Preconference — At least two (2) days prior to the formal hearing, a prehearing conference will be scheduled by Student Judicial Services for any charged student(s)/student organization. The two (2) day requirement may be modified by mutual consent of the charged student(s)/student organization and Student Judicial Services. The conference will include the presiding officer of the University Judicial Board or a designee, the Director of Student Judicial Services or a designee, any individual designated to represent the University, and the charged student(s)/student organization and their advisor.

   The purpose of the prehearing conference will be to identify those issues and facts which will be presented at the hearing, to exchange information as to witnesses likely to be called, to answer procedural questions, and to settle those matters which may be agreeably concluded. The conference will not be used to settle the issue of whether or not the violation was committed or to challenge any recommended sanctions. Failure of the charged student(s)/student organization or the advisor to appear will in no way affect any of their procedural rights and will not prohibit a hearing from being set and being held.

3. Formal Hearing Premises — The following premises will govern any formal hearing:

   a. The focus of inquiry in a University hearing will be the determination of whether a violation of University rules occurred, and such decision will be final unless unrelated to any criminal or civil decisions against the student(s)/student organization arising from the same incident.
   b. Formal rules of evidence will not apply to University proceedings, nor will deviations from these prescribed procedures necessarily invalidate a decision or proceeding unless significant prejudice to the charged student(s)/student organization or the University may result.
   c. The charged student(s)/student organization will be presumed to have not violated the Student Conduct Code until it is proven otherwise.
   d. The burden of proof during a formal hearing will rest with the University. The University must prove its case by a preponderance of the evidence, meaning that the evidence, considered in its entirety, indicates that, more likely than not, the charged student(s)/student organization committed the violation(s).
   e. The Student Judicial Services officer may recommend a sanction to the University Judicial Board during the formal hearing, but the University Judicial Board will have the authority to reject the recommendation and issue any sanction(s) deemed appropriate.
Section X: Special Disciplinary Provisions Governing Acts of Academic Dishonesty

A. Academic dishonesty is both an academic matter between a student and his/her faculty member and a violation under the Student Conduct Code subject to University disciplinary action. An act of academic dishonesty may and should be handled by the faculty member, the student, and, if appropriate, the faculty members department head and/or the dean over that particular academic department. Sanctions that can be assigned by a faculty member range from giving a reduced grade on the particular work in question to failing the student for the entire course. In addition, some academic departments and programs have their own policies for dealing with academic dishonesty and/or violations of Professional Codes of Ethics which allow the department or program to impose sanctions ranging from probation to program dismissal. A sanction assigned by a faculty member and/or an academic department or program is an academic, not a disciplinary sanction.

B. If the matter is resolved satisfactorily between the student and the faculty member, and the faculty member decides not to refer the student for University disciplinary action, the faculty member may still report the incident to Student Judicial Services. Student Judicial Services will maintain a record of the reported incident and may elect to pursue University disciplinary action against a student who is reported to that office for a subsequent act of academic dishonesty.

C. If the faculty member decides that a stronger sanction is needed instead of or in addition to any academic sanctions assigned by that faculty member, the incident may be referred to Student Judicial Services for review and possible University disciplinary action. Once the referral is made to Student Judicial Services, the incident will be handled in the same manner as would any other allegation under the Student Conduct Code.

D. In cases where the student denies the allegation of academic dishonesty, the faculty member may elect to postpone assigning any academic sanctions until after the student has gone through the University disciplinary process. If at the end of that process, the charge of academic dishonesty is upheld, the faculty member may then assign an academic sanction. The academic sanction is independent of any disciplinary actions taken against the student by the University.

E. Academic sanctions assigned by the faculty member in agreement with the student or assigned by the faculty member after the charge of academic dishonesty has been validated through the University disciplinary system cannot begned under the University's Grade Grievance Procedure.

Section XI: Special Provisions Governing the University Recognition and Conduct of Greek Letter Social Organizations

A. Because of the importance of the Greek social system and because of the unique circumstances under which it operates, the following conditions have been established between the University and the Greek social organizations. These provisions set out the requirements for maintaining University recognition and good standing and delineate specific violations that may be handled through the Greek system's own judicial process rather than under the University's Student Conduct Code.

B. The University reserves the right to retain jurisdiction over cases in which the conduct violates both these provisions and the University's Student Conduct Code AND the University determines that the misconduct is of such severe nature as to impair, obstruct, interfere with or adversely affect the mission, processes or functions of the University.

C. The University may take action against an individual member of a student organization for misconduct that is both a violation of this provision and of the Student Conduct Code, regardless of any separate disciplinary action taken against the student organization.
D. This section of the Student Conduct Code applies only to the relationship between the University and the Greek social organizations and has no bearing on relations between chapters and national and/or alumni agreements.

E. Good standing must be maintained in order for Greek social organizations to participate in Greek sponsored activities. Failure to do any of the following will constitute a violation of these provisions of the Student Conduct Code and will subject the Greek social organization to disciplinary action, including possible loss of good standing, as described within these provisions under sub-sections F and G:

1. Registering annually as a recognized student organization with the Office of Campus Life;
2. Participating in the appropriate Greek governing bodies (Greek Council and/or Panhellenic Council or Interfraternity Council);
3. Submitting roster and grade release forms for active members and pledges/associates during the first month of the semester;
4. Following all rules and guidelines for Greek Rush and
d. Abiding by all terms and conditions of the alcohol and controlled substances guidelines below:
   a. The possession, use and/or consumption of alcoholic beverages while on chapter premises during an official event or in any situation sponsored or endorsed by the chapter or organization must be in compliance with any and all applicable laws and University rules and policies.
   b. No chapter or organization members, collectively or individually, shall purchase for, serve to, or sell alcoholic beverages to anyone under the legal drinking age.
   c. The possession, sale, and/or use of any illegal or controlled substance at any chapter, organization or University sponsored event are strictly prohibited.
   d. Alcohol or controlled substances will be prohibited at any and all rush activities.
   e. Open parties where alcohol is provided by the host chapter, meaning those with unrestricted access by non-members of the organization, without specific invitation, will be prohibited.
   f. All organizations must provide, at no charge, an alternative non-alcoholic beverage and food at any event where alcohol is provided.
   g. There will be no solicitation or encouragement of alcohol consumption by consent or promotion at any chapter event where alcoholic beverages are present.

F. Greek organizations whose members are in violation of this policy, regardless of whether the individuals are identified, will be subject to one or more of the sanctions listed in the Student Conduct Code, Section VI.B. Sanctions for Student Organizations.

G. The following process will be utilized in any incident alleging a violation of these policy provisions by a Greek social organization:

1. The incident will be referred to the respective Greek Judicial Board for hearing and original adjudication (i.e., severity cases will be handled by Panhellenic Council, fraternity cases will be heard by IFC and black Greek cases will be heard by Black Greek Council). Each Greek Council will establish its own judicial board and its own set of hearing procedures for handling the incident. The chair of the respective Greek Judicial Board will immediately inform Student Judicial Services about any incident referred to it.

2. A decision rendered by the respective Greek Judicial Board may be appealed by either the party alleging the violation or by the Greek social organization being accused of a violation. The appeal will be made to the Greek Council Judicial Board, which may accept, modify or reject any sanction issued by the Greek Judicial Board.

3. Student Judicial Services will receive written transcripts of all final judicial decisions, whether from the respective Greek Judicial Board (if there was no appeal of its decision) or from the Greek Council Judicial Board (for decisions that were appealed). Student Judicial Services will review the decision and may accept or reject the proposed sanctions.

4. In the event Student Judicial Services rejects the final decision, the Director will provide a written explanation of the rejection and a recommended alternative.

5. In the event that Student Judicial Services and the Greek board rendering the final decision cannot reach an agreement, the case will be referred to the Eastern Michigan University Judicial Appeals Board as outlined in the Eastern Michigan University Student Conduct Code. In this instance Student Judicial Services will notify the national or international headquarters of the organization involved. In the case of local organizations, the Alumni Association will be notified.

Section XII: Interim Suspensions and Other Interim Sanctions

A. For alleged violations of this Code, interim sanctions, including but not limited to, interim suspension, remandment to alternate housing, limitation of access to designated University housing facilities, and/or campus facilities by time and location, and limitation of privilege to engage in specified University activities may be imposed by the President or his/her designee. Such interim sanctions are to be utilized only when there is reason to believe that the student/student organization's conduct poses a substantial threat of harm oneself or others, threatens or endangers University property, or disrupts the stability and continuance of normal University operations and functions.

B. For interim suspension only, a student will be denied access to the residence halls, and/or to the campus (including classes), and to all other University activities or events, which the student might otherwise be eligible to participate in or attend. A student organization will lose its University student organization status and will be denied access to any University activities or events which the student organization might otherwise be eligible to participate in or attend.

C. A student/student organization will be notified of an interim sanction or interim suspension, usually by written notice served on the student/student organization, or by written notice sent to the last address on record. The interim sanctions or interim suspension takes effect the day it is issued by the President or his/her designee.

D. A student/student organization issued an interim suspension or interim sanctions will be given an opportunity to appear before the Vice President of Student Affairs or a designee within three (3) working days in order to discuss the following issues only:

1. the reliability of the information concerning the student/student organization's alleged misconduct
2. whether the conduct and surrounding circumstances reasonably indicate that the continued presence of the student on University premises poses a substantial and immediate threat to himself/herself, to others, or to property.

E. The Vice President for Student Affairs or his/her designee may affirm or alter the interim sanctions or interim suspension based on the discussion with the student/student organization. If the decision is affirmed, the Vice President or his/her designee will inform the student/student organization of that decision at the conclusion of the discussion. Regardless of whether the interim sanctions or interim suspension is affirmed or altered, the Vice President or his/her designee will direct that a formal
hearing before the University Judicial Board take place within ten (10) days. If the University fails to schedule the formal hearing within the ten (10) day period, the interim sanctions or interim suspension will cease although the original charges will not be dropped and will still be handled through the University's disciplinary process.

Section XIII: Emergency Powers of the President:
A. The President, as Chief Executive Officer of the University, is charged with the maintenance of that degree of order and safety necessary to the successful continuation of the University's lawful mission, and he/she is further charged with the authority to protect the members of the University community and University property.

B. When faced with mass disruptions, activity of a violent and destructive nature, or other dangerous violations of University rules of a serious enough nature to threaten the University, the President, after consultation with and approval of the Board of Regents, may declare a "state of emergency" and do any of the following:

1. Impose and have enforced a curfew on all or portions of the University campus.

2. Curtail or suspend services.

3. Close the University or portions of the University entirely for the period of emergency.

4. Issue an emergency suspension and forbid the presence on campus of any student(s)/student organization(s) if they have been sufficiently identified to him/her as participants in activities which violated University policy and are defined in the conditions described above. Suspensions issued under this section of the code are effective immediately upon notice to the student(s)/student organization(s).

5. Appoint a Special Hearing Board on an ad hoc or extraordinary basis to make a recommendation as to whether any emergency suspensions issued should be continued. The Special Hearing Board will convene and make its recommendations to the President within seven (7) calendar days from the effective date of the emergency suspension. Regardless of the recommendation to the President as to the continuation of the emergency suspension, the President will direct Student Judicial Services to convene a formal hearing before the University Judicial Board within ten (10) days of the date of the Special Hearing Board's recommendation to the President in order to rule on the original charges brought against the student(s)/student organization(s).

6. Take other actions that may be explicitly stated in or implied by any laws governing the authority of the University and/or the President in emergency situations.

Notes: Due to the unique circumstances and severe conditions that would lead the President to exercise any of his/her emergency powers, an emergency suspension issued under this section of the Code is to be considered different from an interim suspension issued under the conditions stated in Section XIII. The issuance and review of an emergency suspension will be handled in accordance with the procedures outlined above in subsections 4 and 5.

C. The Board of Regents, regardless of granting any emergency powers to the President, in no way restricts its own powers and prerogatives to carry out its obligations and duties as imposed by the Constitution and laws of the State of Michigan.

Section XIV: Student Disciplinary Files and Records
A. Student Judicial Services will establish a student disciplinary file whenever a case is referred for investigation of a possible conduct code violation. A student or student organization's file will be destroyed if the investigation indicates that no violation occurred. The file of a student/student organization found to have violated the conduct code will be retained for four (4) years from the date of the sanction or until the student's graduation from the University, whichever comes first. Student conduct records may be retained longer or permanently if the student was suspended or permanently dismissed or if there is reason to believe the case could result in future litigation.

B. A notation will be made on the student's official University transcript if the student was suspended, permanently dismissed or given an "E" grade in a course as a result of academic dishonesty.

C. The release of student disciplinary records will be governed by applicable federal and state laws governing the privacy of educational records.

Section XV: Review of the Student Judicial System
A. Student Judicial Services will convene a Student Judicial System Review Committee at least every four (4) years that will be responsible for carrying out the following tasks:

1. Reviewing the goals and effectiveness of the University's disciplinary system;

2. Reviewing the effectiveness of the types of sanctions issued;

3. Recommending changes to the Student Conduct Code;

4. Recommending changes in the judicial processes and procedures established and followed by Student Judicial Services;

5. Recommending training sessions and publications on topics related to the mission of Student Judicial Services to educate the campus community about student conduct and the campus judicial processes.

B. The Committee will be appointed and chaired by the Director of Student Judicial Services and will include one representative from the following areas:Dean of Students; Legal Affairs; Housing; Health Services; Counseling Services; Student Government; Faculty Council; Department of Public Safety; Chief Judge of the University Judicial Board; and Chief Justice of the Judicial Appeals Board.

Amendments to the Student Conduct Code that receive the support of the Review Committee will be forwarded, in accordance with University procedures, to the Board of Regents for approval.

UNIVERSITY ALCOHOL AND OTHER DRUG POLICY

The University is committed to promoting and maintaining a work and academic environment that is free from illegal alcohol and drug use and abuse, in accordance with all federal, state, and local laws. Students and employees are prohibited from reporting to work or attending class under the influence of alcohol or drugs.

Employees may not consume, possess, distribute, or be under the influence of alcoholic beverages on University property or while on University business (except at University functions at which use of alcohol is approved). Employees, students, and campus visitors aged twenty-one (21) years or older, consuming alcohol at University functions or while on University business, where such use is approved, are expected to use alcohol responsibly and not engage in illegal, unprofessional, or disruptive behavior.

Students and campus visitors who have attained the legal drinking age of twenty-one (21) years of age may possess and consume alcoholic beverages only as approved university functions or in residence hall rooms of students who have attained the legal drinking age. Those under twenty-one (21) years of age are not permitted to consume or possess alcoholic beverages at any time.

Students, employees and visitors are prohibited from dispensing, selling or supplying alcoholic beverages to a person under the legal drinking age as defined by Michigan law.
Students, employees, and visitors are prohibited from possessing, consuming, manufacturing, dispensing, or being under the influence of illegal drugs or engaging in improper self-medication while on University property or University business.

Any member of the University community who violates this policy is subject to both prosecution and punishment under federal, state and local laws and to disciplinary proceedings by the University.

This policy is not designed to punish people for seeking rehabilitation. All information about those individuals who voluntarily avail themselves of drug or alcohol counseling or rehabilitation services will remain confidential. Seeking counseling or rehabilitation will not be used as a basis for disciplinary action or be used against an individual in any way.

University employees and students who violate this policy shall be informed and referred to services to assist them in determining whether they are abusing drugs and alcohol or are chemically dependent. If a problem is found to exist, the individual shall be referred to resources to assist him/her in overcoming the drug or alcohol abuse pattern. This referral or assessment shall not limit the University's ability to pursue appropriate disciplinary action, up to and including termination or expulsion, when an employee or student has violated this policy or any other University policy.

This policy shall not add to or supersede union contracts or established employee work rules.

### Health Risks of Alcohol, Tobacco and other Drugs

#### Types of Drug: Tobacco

- **Health Risks:**
  - Cancer of the cheeks, gums, palate, tongue, lips, pancreas, bladder, lungs and kidneys are substantially more common in smokers than nonsmokers.
  - An average of three times more cavities than nonsmokers.
  - Loss of teeth at a rate three times higher than nonsmokers.
  - Peptic ulcers twice as common in smokers as nonsmokers.
  - Increased chance of heart disease and stroke.
  - Emphysema and chronic bronchitis.
  - Higher incidence of infertility, lower birth weights and smaller size of infants born to smokers.
  - Physical and psychological dependence.

- **Marijuana (including Hash, Hash Oil, Tetrahydrocannabinol, THC, Cannabis):**

- **Cocaine (including "Crack" cocaine):**

- **High risk sexual behavior is more likely and more frequent when under the influence of alcohol.**

- **Fetal Alcohol Syndrome** is one of the three leading causes of birth defects and the only one that is preventable. It causes mental retardation, physical deformities and heart defects and can be prevented by not drinking during pregnancy.

- **Mental health problems are more frequent in children raised in homes with heavy or frequent use of alcohol.**

- **Irritation and inflammation of the esophagus, stomach, small intestine and pancreas.**

- **Liver disorders including alcoholic hepatitis and cirrhosis.**

- **Nutritional deficiencies.**

- **Cardiovascular disease and inflammation of the heart.**

- **Cancer of the tongue, mouth, throat, esophagus, liver and breast.**

- **Miscarriage and low birth rate.**

- **Brain damage.**

- **Sensory problems — increased desire but reduced ability to perform or reach climax for both men and women.**

- **Disintegration of family life.**

- **Behavior inconsistent with values (violence, personality changes, etc.).**

- **Diminished short-term memory, motivation and concentration; coordination and concentration; communication; reaction time and motivation to achieve.**

- **Anxiety and panic reactions.**

- **Long and respiratory system damage from exposure to smoke.**

- **Psychological dependence.**

- **Extensive addictive physically and psychologically.**

- **Sudden death one of four ways collapsed respiratory system; arrested heartbeat; heart attack caused by narrowed blood vessels; or stroke caused by increased blood pressure.**

- **Increased risk taking.**

- **Suicides.**
<table>
<thead>
<tr>
<th>Sleeplessness</th>
<th>Anabolic Steroids</th>
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<tbody>
<tr>
<td>Paranoia, delusions and hallucinations — Cocaine psychosis</td>
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<tr>
<td>Mood swings with violent behavior</td>
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<td>Malnutrition</td>
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<td>Sexual dysfunction</td>
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<tr>
<td>Severe birth defects — physical damage and permanent emotional damage to babies born addicted to Cocaine</td>
<td></td>
</tr>
</tbody>
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**Depressants (including tranquilizers, barbiturates, Methaqualone)**

| Physical and psychologically addictive |
| Extremely dangerous when mixed with alcohol — death |
| Respiratory depression can result in death |
| Sleep disturbances |
| Severe withdrawal symptoms |
| Liver damage and impaired liver function |
| Birth defects including brain tumors |

**GHB** *(gamma-hydroxybutyrate)*

| Fast-acting central nervous system depressant |
| Colorless, odorless, liquid salty taste, powder and capsule too |
| Nausea, drowsiness, respiratory distress, seizures, amnesia |
| Withdrawal symptoms |

**Narcotics (including Opium, Morphine, Codeine, Heroin, Methadone, Darvon and Demerol)**

| Physically and psychologically addictive |
| Painful withdrawal process |
| Central nervous system depression |
| Acquired Immune Deficiency Syndrome (AIDS) from sharing needles during use |
| Seizures, nausea, and vomiting |
| Hallucinations and unpredictable behavior |
| Malnutrition |
| Birth defects |

**MDMA (Ecstasy)**

| Neurotoxic |
| A synthetic drug similar to stimulant amphetamine and hallucinogen mescaline |
| Stimulant and psychedelic effects |
| Taken orally, tablets form |
| Significant increase in heart rate, blood pressure and body temperature |
| High doses can lead to kidney and cardiovascular failure |

**Minor Tranquilizers (including Xanax, Tranxene, Valium, Librium, Ativan, Secon, Mitron, Dalmane, Halcion, Restoril, etc.)**

| Psychologically and physically addictive |
| Withdrawal symptoms include: tremors, rapid heartbeat, blood pressure drop, headache, mood swings, tension, nightmares, nausea, loss of sexual function and apathy |
| Dangerous when combined with other tranquilizers or alcohol |
| Lack of awareness of the dangers associated with these drugs since they are often prescribed by physicians |
| Possible birth defects |

<table>
<thead>
<tr>
<th>PCP (Phencyclidine)</th>
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<tbody>
<tr>
<td>Paranoia — panic and fear of death lasting several days</td>
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<tr>
<td>Irregular heartbeat and breathing</td>
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<td>Ongoing speech problems</td>
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<tr>
<td>Depression and hallucinations</td>
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<tr>
<td>Aggressive behavior</td>
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<tr>
<td>Impaired memory and perception</td>
</tr>
<tr>
<td>Unpredictable and sometimes intense mood disturbances and behavior changes</td>
</tr>
</tbody>
</table>
Assistance Available to Faculty, Staff and their Families at EMU
Geriatric/LifeWorks
www.lifeworks.com
877.234.5151
800.999.3004

Assistance Available to Students at EMU
University Health Services:
Counseling Services
Health Education Program
Department of Public Safety

Alcohol and Other Drug Abuse Treatment Services Available in Southeast Michigan
Adrian
Sage Outpatient Treatment
Ann Arbor/Ypsilanti Area
St. Joseph's Mercy Hospital Chemical Dependency Services
Clear House Help Source
Ann Arbor Consultation Services
Alcoholics Anonymous
Narcotics Anonymous
(for Washtenaw and Livingston County)
Brighton/Livingston County
Brighton Hospital
www.brightonhospital.org

Choice
Chelsea Hospital Chemical Dependency Services
Ann Arbor number
www.chohc.org
313.930.0201

Detroit Metropolitan Area:
Eastern Clinic
Belleville
Dearborn
Detroit (Gratiot and 8 Mile)
Livonia
www.easten.org
313.425.4070

Fines
Insight at Leenon Center
www.insightrecovery.org
810.733.0900

Huron/Livingston County
Livingston Council Alcohol and Drug Services
Outpatient Services
Jackson
Washington Way
Alcoholics Anonymous in Jackson
Saline
Saline Hospital — Greenbrook Recovery Center
Toledo
Toledo Hospital Alcohol and Drug Assessment and Treatment Center

Sanctions for Violation of Laws and Policies
The laws of the state of Michigan and Eastern Michigan University's policies and rules prohibit the consumption or possession for personal consumption of alcoholic beverages by persons under 21 years of age. Further, Michigan laws and University policies prohibit the sale, service or giving of alcoholic beverages to persons under the age of 21. Eastern Michigan University's policies and rules, local ordinances and laws, state laws and federal laws also prohibit the unlawful possession, use and/or distribution of illicit drugs and alcohol.

Community Sanctions
Violations of laws and ordinances may result in misdemeanor or felony convictions accompanied by the imposition of legal sanctions which include, but are not limited to, the following:

- Fines as determined under local, state or federal laws;
- Imprisonment, including up to life imprisonment for possession of more than 650 grams or trafficking in drugs such as Heroin and Cocaine;
- Forfeiture of personal and real property;
- Denial of federal benefits such as grants, contracts and student loans;
- Loss of driving privileges and
- Required attendance at substance abuse education or treatment programs.

University Sanctions
Violation of University policies and rules will be subject to campus disciplinary review and action, as follows:

Faculty and Staff:
Disciplinary action will be taken as per applicable collective bargaining agreements and University policy up to and including termination of employment.

Students:
Disciplinary action will be taken by Student Judicial Services under the Student Conduct Code and may include sanctions ranging from formal reprimand to permanent dismissal, in addition to counseling and/or referral to a substance abuse educational/intervention program. In certain circumstances, parents of a student under 21 years old will be notified about the drug or alcohol violation, as per Eastern Michigan University's policy on Parental Notifications.

In addition to University level action taken under the Student Conduct Code, other University departments maintain internal policies and rules regarding alcohol and other drugs and may impose sanctions against students and/or student groups which violate these policies. For example, University Housing, Athletics, Greek, Studies abroad and several academic departments have policies addressing alcohol and other drugs. Any action taken under one policy does not prevent action being taken under any other policy.

Employee Reporting Requirement
Under the Drug Free Schools and Communities Act Amendments of 1989, a faculty or staff member employed under a federal grant or contract must notify the University, Human Resources, Employee Relations (734.487.0083) or Academic Human Resources (734.487.0076), in writing, of his or her arrest or conviction for violation of any criminal drug statute occurring in the workplace or while on University business no later than five days after such arrest or conviction.

Review of EMU’s Alcohol and Other Drug Abuse Prevention Program
The University will review its Alcohol and Other Drug Abuse Prevention Program every two years to determine its effectiveness and implement changes to the program as needed and to ensure that the disciplinary sanctions applied by the University are consistently enforced.

EMU Policy on Notification to Parents of Drug and Alcohol Violations
1. When the University has determined that a student has committed a second disciplinary violation with respect to campus rules regarding the use or possession of drugs or alcohol, the University will disclose to parents or legal guardians such information if the student is less than 21 years of age.

2. Parents will be notified of a first disciplinary violation with respect to campus rules regarding the use or possession of drugs or alcohol if (a) the incident also involves another serious offense or (b) if there is reason to believe that a student's health and well-being are in jeopardy or (c) the violation results in a sanction of either housing probation or higher at university-level probation or higher. In cases where the drug or alcohol

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The page contains text related to the importance of technology resources for education and information dissemination. It discusses the integration of technology in education, the impact of technology on communication, and the role of technology in facilitating access to information. The text highlights the need for appropriate technology use and the importance of continuous learning and adaptation to new technologies. It also mentions the need for teachers and students to be proficient in using technology tools to enhance the learning experience.
Undergraduate Catalog, Acceptance Criteria, and Information Technology Resources

387-387
Division of Academic Affairs

Curriculum, Marketing, & Communications

Office of the Provost

Undergraduate/Graduate Faculty Development

Office of the Provost

W. Melvin "Bill" Friesen

Chief of Staff, Provost's Office

Division of Student Affairs

Office of Student Affairs

Director of Student Life

Director of Student Life

The Chancellor

Board of Regents

Administrative Officers
Williams, Patricia J. (1976) Professor; M.A.; Indiana University
Yang, Guey-Mei (2003) Assistant Professor; Ph.D.; Ohio State University

**Biography**

Angell, Michael (1956) Associate Professor; Ph.D.; Pennsylvania State University
Bach, Catherine E. (1991) Professor; Ph.D.; University of Michigan
Bednarek, Peter (1997) Associate Professor; Ph.D.; Harvard University
Booth, Howard D. (1967) Professor; Ph.D.; Michigan State University
Clemens, Daniel (2000) Assistant Professor; Ph.D.; University of Minnesota
Coffman, Margaret A. (2001) Assistant Professor; Ph.D.; Notre Dame University
Eisenbach, Janin (1990) Professor; Ph.D.; University of California-Berkeley
Francesco, Steve (2002) Assistant Professor; Ph.D.; University of Alabama
Greco, Tamara (1996) Associate Professor; Ph.D.; University of Wisconsin-Madison
Hannan, Gary L. (1982) Professor; Ph.D.; University of California-Berkeley
Kass, David (1996) Associate Professor; Ph.D.; University of South Carolina
Kuehn, Kevin (2000) Associate Professor; Ph.D.; University of Alabama
Kurtz, Allen (1988) Professor; Ph.D.; Boston University
Lipton, Marianne M. (2001) Assistant Professor; Ph.D.; University of Wisconsin
Liggio, Peggy (1998) Associate Professor; Ph.D.; University of Nevada-Reno
Nerly, Robert K. (1984) Professor and Associate Dean; College of Arts and Sciences; Ph.D.; Iowa State University
Novak, John A. (1986) Associate Professor; Ph.D.; University of Michigan
Reinhardt, Ulrich (2000) Assistant Professor; Ph.D.; University of British Columbia
Skillington, Cara (2001) Assistant Professor; Ph.D.; Oklahoma State University
VandenBosch, James L. (1987) Professor; Ph.D.; University of Michigan
Walker, Glenn K. (1976) Professor; Ph.D.; University of Maryland
Winn, Robert S. (1995) Associate Professor; Ph.D.; University of Waterloo

**Bence T. Haile Library**

Badia, Joseph (1993) Instructor; M.L.S.; University of Michigan
Baird, Randi (2000) Assistant Professor; M.L.S.; University of Michigan
Best, Margaret (1977) Associate Professor; M.A.L.S.; University of Michigan
Buccariello, Elizabeth (1993) Instructor; M.A.L.S.; Wayne State University
Bullard, Rita J. (1986) Associate Professor; M.A.L.S.; University of Michigan
Cheng, Rachel J. (2002) Professor and University Librarian; M.L.S.; University of Michigan
Fowles, Rhonda (1989) Assistant Professor; M.L.S.; University of Michigan
Glover, Barbara (1991) Associate Professor; A.M.L.S.; University of Michigan
Hansen, Louise J. (1965) Associate Professor; M.L.S.; Case Western Reserve University
Klopper, Lisa (2000) Assistant Professor; M.L.S.; University of Michigan
Lucas, Raymond (1985) Assistant Professor; M.A.; University of Michigan
Meerkin, Mary A. (1987) Associate Professor; A.M.L.S.; University of Michigan
Nits, Julia (2000) Assistant Professor; M.L.S.; Indiana University
Owens, Eric (2000) Instructor; M.S.I.; University of Michigan
Shiraco, Linda (1998) Assistant Professor A.M.L.S.; University of Michigan
Stanger, Keith J. (1974) Assistant Professor; M.L.S.; University of Illinois
Tammara, Rosina (1988) Associate Professor; A.M.L.S.; University of Michigan

**Chemistry**

Armitage, Ruth Ann (2001) Assistant Professor; Ph.D.; Texas A&M
Brabec, Michael J. (1985) Professor; Ph.D.; University of Wyoming
Brewer, Timothy R. (1998) Associate Professor; Ph.D.; Stanford University
Burch, Elizabeth R. (1998) Associate Professor; Ph.D.; Purdue University
Comis, Ellen T. (1971) Professor and Assistant Vice President for Academic Administrative Services; Ph.D.; University of Michigan
Friebe, Timothy L. (1980) Associate Professor; Ph.D.; Northwestern University

**Communication and Theatre Arts**

Aghasa, Pirooz (1995) Associate Professor; Ph.D.; Texas Tech University
Aldridge, Henry B. (1972) Professor; Ph.D.; University of Michigan
Alexander, Jessica (2000) Assistant Professor; M.F.A.; Eastern Michigan University
Beaeg, Dennis M. (1967) Professor and Department Head; M.A.; University of Michigan
Bird, George P. (1955) Professor; M.S.; University of Wisconsin
Brown, Wallace (1992) Associate Professor; M.F.A.; Western Illinois University
Cooper, John G. (1953) Associate Professor; Ph.D.; Bowling Green State University
Evans, Gary L. (1970) Professor; Ph.D.; University of Michigan
Felds, Doris (1977) Associate Professor; Ph.D.; Wayne State University
Foreman, Chris (1994) Associate Professor; Ph.D.; University of Kentucky
Grady, Dennis B. (1966) Associate Professor; Ph.D.; University of Texas
Graves, Kerry L. (1997) Associate Professor; Ph.D.; Texas Tech University
Hannibal, Geoffroy D. (1987) Professor; Ph.D.; Bowling Green State University
Heck, Selbert, Theresa (1992) Associate Professor; M.F.A.; University of Wisconsin
McCann, Sally R. (1968) Professor; Ph.D.; Wayne State University
Quail, Raymond (1999) Instructor; M.A.; Eastern Michigan University
Rich, Anita (1996) Associate Professor; Ph.D.; Southern Illinois University
Robinson, James A. (1988) Professor; Ph.D.; University of Michigan
Stacy, Kathleen (1992) Professor; Ph.D.; Wayne State University
Stevens, Kenneth W. (1972) Professor; M.A.; University of Cincinnati
Sille, Lee (1998) Assistant Professor; Ph.D.; University of Minnesota
Strand-Brans, Katherine E. (1973) Professor; M.F.A.; Ohio University
Sturges-Hill, Judy (1992) Assistant Professor; M.A.; Eastern Michigan University
Tanner, Christine (2002) Assistant Professor; Ph.D.; Brigham Young University
Taylor, Michael A. (1989) Professor; Ph.D.; Wayne State University
Watson, Mary Ann (1990) Professor; Ph.D.; University of Michigan
Zimmer, Patricia Moore (1980) Professor; M.F.A.; Florida State University

**Computer Information Systems**

Ahmad, S. Iltiaaz (1988) Professor; Ph.D.; University of Ottawa
Chen, David C. (2001) Professor; Ph.D.; George Mason University
Chung, Sock (2002) Assistant Professor; Ph.D.; Auburn University
Esteve, Juan C. (1990) Associate Professor; Ph.D.; Wayne State University
Farah, Badie N. (1982) Professor; Ph.D.; Ohio State University
Khalsany, Asad S. (1972) Professor; M.Sc.; Washington University
Khosheed, Wafa (1990) Associate Professor; Ph.D.; Wayne State University
Lee, Hui (2001) Associate Professor; Ph.D.; Georgia State University
Mittal, Steven (1987) Professor; H.D.; University of British Columbia
Sanchez, Pedro P. (1972) Professor; Ph.D.; University of Michigan
So, Charles S. (1976) Professor; Ph.D.; University of Michigan
Sokken, Fathi E. (1971) Professor; Ph.D.: University of Illinois
Tang, Hung-Lian (2000) Professor and Department Head; Ph.D.; University of Nebraska-Lincoln
Tatsuno, Rao V.M. (1981) Professor; Ph.D.: Michigan State University
Umi, Neo I. J. (1974) Professor; Ph.D.: Purdue University

Computer Science
Bahordi, Zena (1990) Instructor; M.S.; Eastern Michigan University
Chaudhuri, Ranjan (1984) Professor; Ph.D.: University of South Florida
Cooper, John K., Jr. (1980) Assistant Professor; Ph.D.: Michigan State University
Evetz, Matthew (1999) Associate Professor; Ph.D.: University of Maryland
Hynes, Susan M. (1992) Associate Professor; Ph.D.: University of Michigan
Höfl, Horruzz E.W. (1970) Professor and Department Head; Ph.D.: University of Houston
Iseri, Augustine C. (1988) Associate Professor; Ph.D.: Wayne State University
Keller, Benjamin (2002) Assistant Professor; Ph.D.: Virginia Polytechnic Institute and State University
Maniccia, Suchindran (2001) Assistant Professor; Ph.D.: State University of New York at Buffalo
Moore, Pamela A. (1985) Instructor; M.S.; Michigan State University
Narayanan, Krishnakumar (2002) Assistant Professor; Ph.D.: Oakland University
Poh, Elai S. (2001) Assistant Professor; Ph.D.: University of Toledo
Sjögren, William (1999) Associate Professor; Ph.D.; Wayne State University
Tilansipou, Aby (1990) Professor; Ph.D.: University of Nebraska
Zeiger, Michael (1979) Assistant Professor; Ph.D.: University of Michigan
Zhang, Li (2004) Assistant Professor; Ph.D.; State University of New York at Buffalo

Economics
Cary, David B. (1982) Associate Professor; Ph.D.: University of Maryland
DeVon, Abdullah (1984) Professor; Ph.D.: University of Kentucky
Edger, John (1979) Professor; Ph.D.: University of Michigan
Ewing, Sharon J. (1986) Professor; Ph.D.: University of Illinois
Haring, Rabab S. (1975) Professor and Department Head; Ph.D.: Indiana University
Hayworth, Steven C. (1977) Associate Professor; Ph.D.; Massachusetts Institute of Technology
Mortland, Kemper (1980) Professor; Ph.D.: University of Wisconsin
Pearson, Donald W. (1970) Professor; Ph.D.; University of Texas
Rice, Jennifer (2004) Assistant Professor; Ph.D.; Indiana University
Thomson, James (1991) Professor; Ph.D.; University of Oregon
Vogt, Michael G. (1978) Professor; Ph.D.; University of Wisconsin
Woodland, Bill M. (1981) Professor; Ph.D.: Purdue University

Engineering Technology
Almaysan, Jihad M. (1999) Associate Professor; Ph.D.; University of Cincinnati
Baghchali, Jalal (1997) Professor; Ph.D.; University of Mississippi
Bari, Mohsin M. (Jamil) (2000) Assistant Professor; Ph.D.; University of Arizona
Bart, Mary
Chapman, Robert E. (1992) Assistant Professor; Ph.D.; Yale University
DeLaski-Smith, Deborah (1978) Professor and Associate Dean, Graduate School; Ph.D.; Michigan State University
Ferber, Millis (Mike) (1999) Instructor; M.A.; Wayne State University
Ficht, Daniel J. (1986) Professor and Department Head; Ph.D.; Michigan State University
Jones, Frank (1990) Professor; Ph.D.; Duke University
Jones, Louisi (1990) Professor; Ph.D.; University of Michigan
Kangas, Max E. (1980) Professor and Associate Dean, College of Technology; Ph.D.; Ohio State University
Lahidii, Bob (Bertain) (1994) Associate Professor and Director; Ph.D.; University of Missouri-Columbia
Lin, Su-Chan (Jonathan) (1988) Professor; Ph.D.; Iowa State University
Loken, Robert (1986) Professor; Ph.D.; Iowa State University
Love, Dain (2002) Assistant Professor; M.S.; University of Michigan

Lu, Junsong (1993) Associate Professor; Ph.D.; Indiana University
Lyons, Harvey (1999) Associate Professor; Ph.D.; Ohio State University
Mann, Vinay (2002) Assistant Professor; Sarnia Paul University
Mannari, Vijaykumar
Mitchell, James G. (Greg) (2000) Assistant Professor; M.S.; Wayne State University
Moynihan, William (2001) Instructor; M.S.; Massachusetts Institute of Technology
Ruff, Phillip (1980) Instructor; M.S.; Eastern Michigan University
Shay, Tony E. (1980) Professor; Ph.D.; Iowa State University
Soydan, Thomas G. (1982) Associate Professor; Ed.D.; Temple University
Spedden, Pamela (1990) Associate Professor; Ed.D.; Wayne State University
Stans, James (1990) Assistant Professor; Ed.D.; Wayne State University
Tennen, John (2002) Professor; Ph.D.; Lehigh University
Tilman, Tracy S. (1990) Associate Professor; Ph.D.; Purdue University
Tuckett, Walter W. (1978) Professor; Ph.D.; University of Michigan
Wang, Jianniu (2002) Assistant Professor; Ph.D.; University of Iowa

English Language and Literature
Adler-Kaanne, Linda (2000) Associate Professor; Ph.D.; University of Minnesota
Allen, Nancy (1991) Professor; Ph.D.; Purdue University
Arstak-Dry, Helen (1991) Professor; Ph.D.; University of Texas at Austin
Arrington, Philip (1984) Professor; Ph.D.; University of Louisville
Baker, William Douglas (2001) Assistant Professor; Ph.D.; University of California at Santa Barbara
Benninghoff, Steven (2002) Assistant Professor; Ph.D.; Purdue University
Blikslee, Amy (1996) Professor; Ph.D.; Carnegie-Mellon University
Blumner, Jacob (2002) Assistant Professor; Ph.D.; University of Nevada at Reno
Brass, S. (1969) Professor; Ph.D.; University of Rochester
Buttingame, Loni (1997) Associate Professor; Ph.D.; University of Rochester
Cassidy, Cheryl (1990) Professor; Ph.D.; University of Michigan
Corydield, Abigail (2002) Assistant Professor; Ph.D.; State University of New York at Buffalo
Coccia, Joseph (2000) Assistant Professor; Ph.D.; University of Nevada at Las Vegas
Cunningham, Charles (2004) Assistant Professor; Ph.D.; University of Iowa
Daymon, Elizabeth (1992) Professor; Ph.D.; Indiana University
Dionne, Craig (1995) Professor; Ph.D.; Carnegie-Mellon University
Duncan, Jeffrey L. (1971) Professor; Ph.D.; University of Virginia
Eise, Harry E. (1987) Professor; Ph.D.; University of North Dakota
Fairman, Heidi (2000) Assistant Professor; Ph.D.; University of Nevada at Reno
Fleischer, Catherine (1990) Professor; Ph.D.; University of Michigan
Garrett, Edward (2003) Assistant Professor; Ph.D.; UCLA
Gershwin, David J. (1969) Professor; Ph.D.; Purdue University
George, Laura (1994) Associate Professor and Associate Dean of the College of Arts and Sciences; Ph.D.; Ohio State University
Goodman, Beverly (1996) Associate Professor; Ph.D.; Cornell University
Grendlovicz, Veronica (2000) Assistant Professor; Ph.D.; University of Pittsburgh
Hendrix, Lula (1994) Professor; M.A.; Eastern Michigan University
Hume, Christine (2001) Assistant Professor; Ph.D.; University of Denver
Kato, Andra (2000) Assistant Professor; Ph.D.; University of Wisconsin
Kaufman, Janet (1988) Professor; Ph.D.; University of Chicago
Knapp, James (1998) Associate Professor; Ph.D.; University of Rochester
Krause, Steven (1998) Associate Professor Ph.D.; Bowling Green University
Lawrence, Russell R. (1970) Professor and Department Head; Ph.D.; University of Michigan
Lucy, Robin (2002) Assistant Professor; Ph.D.; McMaster University
Mills, Bernard A. (1987) Professor; Ph.D.; Purdue University
Most, Sheila (1971) Professor; Ph.D.; Northwestern University
Mutchell, Melissa (1995) Associate Professor; Ph.D.; Wayne State University
Neff, Heather (1993) Professor; Ph.D.; University of Zurich
Neff, Christine (2003) Assistant Professor; Ph.D.; McGill University
Norton, Alexandra M. (1989) Professor; Ph.D.; University of California at Berkeley
Packer, Jeff (2004) Assistant Professor; M.E.A.; Syracuse University
Amos, Charles N. (1975) Professor; Ph.D.; University of Iowa
Babcock, Donald J. (2001) Assistant Professor; D.M.A.; Michigan State University
Cole-Luevano, Kimberly (1996) Associate Professor; D.M.A.; Michigan State University
Donney, John F. (1997) Assistant Professor; M.M.; University of Michigan
Eggars, Carter J. (1967) Professor; M.M.; Ithaca College
Foster, Daniel L. (1987) Associate Professor; M.M.; University of Michigan
Gaidia, Anne B. (1979) Professor; M.M.; University of Michigan
Hartmann, Donald (1990) Professor; M.S.; University of Oklahoma
Iannaccone, Anthony J. (1971) Professor; Ph.D.; Eastman School of Music University of Rochester
Jenone, Sherry (1999) Assistant Professor; M.PA; Texas Christian University Kirkland, Glenda E. (1973) Professor; M.A.; Eastern Michigan University
McGann, Michael G. (1983) Professor; M.M.; State University of New York M. Colonna, Joanne (1980) Professor; Ph.D.; Texas Woman’s University
Mereza, Krissy L. (1982) Professor; M.A.; University of Michigan
Miller, Kevin (1991) Associate Professor; M.M.; University of Michigan
O’Brien-Pederson, Julianne (1998) Assistant Professor; M.F.A.; Ohio State University
Patrick, Louise Rose (1990) Professor; Ph.D.; Michigan State University
Pedenen, Gark (1989) Professor; D.M.A.; University of Iowa
Pierce, David (1990) Professor; D.M.A.; University of Illinois-Urbana-Champaign
Plunk, Matt E. (1968) Professor; D.M.A.; University of Michigan
Prince, J. Whitney (1981) Professor; D.M.A.; University of Colorado
Riccio, Leonard L. (1985) Professor; D.M.A.; Michigan State University
Raiter-Fernsta, Pamela (1990) Associate Professor; D.M.A.; University of Iowa
Sackett, Marilyn N. (1992) Associate Professor; Ph.D.; University of Wisconsin-Madison
Shoenthal, Joel (2001) Assistant Professor; D.M.A.; Eastman School of Music University of Rochester
Smith, John R. (1969) Assistant Professor; M.A.; Eastern Michigan University
Stone, Julie (1994) Associate Professor; D.M.A.; University of Maryland-College Park
Winder, Diane (1988) Professor; D.M.; Florida State University
Woike, David O. (1990) Professor and Department Head; Ph.D.; Ohio State University

Nursing

Afford, Peggy (1998) Associate Professor; Ph.D.; Wayne State University
Beard, Betsy L. (1976) Professor; Ph.D.; University of Michigan
Berry, Linda M. (1994) Associate Professor; Ph.D.; University of Michigan
Bieglov, April (2004) Assistant Professor; M.S.N.; University of Michigan
Branson-Hilligas, Kethleen (1981) RN/BSN Coordinator, Associate Professor; M.S.; University of Michigan
Fex, Diane (2004) Assistant Professor; M.S.N.; Eastern Michigan University
Lan, Virginia (1997) Associate Professor; Ph.D.; University of Michigan
Matz, Mary Sue (2001) Professor and Department Head; Ph.D.; RN; Wayne State University
Nelson, Sandra (1990) Associate Professor; Ph.D., RN, C.S.; Michigan State University
Nunn, Patricia (1998) Assistant Professor; M.E.H., RN; University of Michigan
Putz, Susan (1996) Professor; Ph.D.; University of Michigan
Prince, Nancy (1985) Assistant Professor; M.S.N., N.P.; Michigan State University
Riley, Janice (2002) Lecturer; M.S., R.N.; Eastern Michigan University
Rubenfeld, Marlene G. (1986) Associate Professor; R.N., M.S.; Ohio State University
Schaffer, Barbara K. (1976) Professor; Ed.D., RN; Eastern Michigan University
Taneda, Martha (1999) Assistant Professor; M.S.N.; Medical College of Ohio

Williams, Michael (1998) Associate Professor; M.S.N.; Grand Valley State University
Wilson, Lorraine (1988) Professor; Ph.D.; Wayne State University
Wu, Ti-Yin Stephanie (1999) Associate Professor; Ph.D.; University of Michigan

Physics and Astronomy

Behringer, Ernest R. (1995) Associate Professor; Ph.D.; Cornell University
Carroll, James J., III (1998) Associate Professor; Ph.D.; West Virginia University
Jacobs, Diane A. (1985) Professor; Ph.D.; University of Texas-Austin
Oakes, Alexandria (1987) Professor and Department Head; Ph.D.; Lehigh University
Porter, James C. (1967) Professor; Ph.D.; Purdue University
Reid, David (1988) Professor; Ph.D.; Wayne State University
Sharma, Nath L. (1986) Professor; Ph.D.; Ohio University
Sheerin, James P. (1991) Professor; Ph.D.; University of Michigan
Shi, Weidian C. (1991) Professor; Ph.D.; Wayne State University
Thomson, Marshall J. (1986) Professor; Ph.D.; University of Michigan
Trotchen, Daniel E. (1968) Professor; Ph.D.; University of Michigan
Wyn, Bonnie (1988) Professor; Ph.D.; University of Michigan

Political Science

Bentzel, Jeffrey (1997) Assistant Professor; Ph.D.; University of Michigan
Green, Telosa (1998) Assistant Professor; Ph.D.; Wayne State University
Horton, David W. (1968) Professor; J.D.; University of Michigan
Kullberg, Judith (2004) Assistant Professor; Ph.D.; University of Michigan
Longworth, Rhonda (1994) Associate Professor and Department Head; Ph.D.; University of Iowa
Lowe, Adrian J. (1992) Associate Professor; Ph.D.; Wayne State University
Martin, Elaine E. (1984) Professor; Ph.D.; University of Oklahoma
O’Brien, Joseph F. (1985) Professor; Ph.D.; Syracuse University
Passia, Claudia (2002) Assistant Professor; Ph.D.; University of Pittsburgh
Pfister, James Wilber (1970) Associate Professor; Ph.D.; University of Michigan
Pyle, Barry (1997) Associate Professor; Ph.D.; University of Missouri-St. Louis
Rosenfeld, Raymond A. (1983) Professor; Ph.D.; Emory University
Sakhi, Mohammad Hashim (1969) Professor; Ph.D.; Indiana University
Scott, Joanna V. (1990) Professor; Ph.D.; University of Strathclyde, Scotland
Sidlow, Edward (1995) Professor; Ph.D.; Ohio State University
Smeld, Bechanya (2004) Assistant Professor; Ph.D.; Wayne State University
Stabler-Sholk, Richard (1997) Associate Professor; Ph.D.; University of California-Berkeley

Psychology

Bosom, Marilyn K. (1987) Associate Professor; Ph.D.; Utah State University
Byrd, Michelle R. (2002) Assistant Professor; Ph.D.; University of Nevada at Reno
Dunley, Jeffrey L. (1976) Professor; Ph.D.; Bowling Green University
Delpont, Dennis J. (1969) Professor; Ph.D.; Michigan State University
Feld, Barry A. (1970) Professor; Ph.D.; Wayne State University
Friedman-Duan, Carol R. (1995) Professor; Ph.D.; Wayne State University
Gordon, Norman G. (1975) Professor; Ph.D.; Wayne State University
Hodges, Kay V. (1988) Professor; Ph.D.; University of Maryland
Hoodin, Flora (1998) Associate Professor; Ph.D.; Wayne State University
Hüppich, Steven (2004) Assistant Professor; Ph.D.; University of Colorado
Kanberich, Stuart A. (1966) Professor; Ph.D.; University of Michigan
Knapp, John R. (1971) Professor; Ph.D.; University of Denver
Koch, Ellen (2003) Assistant Professor; Ph.D.; Western Michigan University
Lauterbach, Dean (2001) Associate Professor; Ph.D.; Panthe University
McHosey, John W. (1997) Associate Professor; Ph.D.; Miami University of Ohio
McMaus, John L. (1981) Associate Professor; Ph.D.; Ohio State University
Nabors, Nina (1999) Associate Professor; Ph.D.; University of Florida
Richard, David C.S. (2001) Associate Professor; Ph.D.; University of Hawaii
Rutinska, Kenneth W. (1981) Professor; Ph.D.; University of California at Los Angeles
Technology Studies
Aizukas, Anthony (1997) Associate Professor; Ph.D., Wayne State University
Becker, Pamela (2004) Assistant Professor; M.L.S., Eastern Michigan University
Bellamy, Al (1996) Professor; Ph.D., Purdue University
Boggs, David (1998) Professor; Ph.D., Michigan State University
Beone, Merrill (2001) Professor and Interim Director; Ph.D., Syracuse University
Boyless, John E. (1977) Associate Professor; M.A., Eastern Michigan University
Cardon, Phillip (1999) Associate Professor; Ph.D., Ohio State University
Doyle, Timothy (1986) Instructor; M.A., Eastern Michigan University
Dugger, John C. (2001) Professor; Ph.D., Texas A&M University
Fulkert, Ronald (1997) Associate Professor; Ph.D., University of Toledo
Ghosh, Subhas (2002) Professor; Ph.D., University of Manchester, England
Golt, David K. (1983) Assistant Professor; M.S., Eastern Michigan University
Gregory, Susan (2002) Associate Professor; Ed.D., Temple University
Haddad, Carol (1993) Professor; Ph.D., University of Michigan
Jooginstane, Giri D. (1996) Associate Professor; Ph.D., Virginia Polytechnic Institute and State University
Kalian, Serina (2004) Associate Professor; Ph.D., Michigan State University
Kaczowski, Linda (2000) Assistant Professor; Ph.D., Wayne State University
Kusmor, Konnie G. (1994) Professor; J.D., Detroit College of Law
Kwak, Paul D. (1980) Professor; Ph.D., Ohio State University
Lavender, Gerald V. (1987) Associate Professor; Sp.A., Eastern Michigan University
Leopard, David W. (1992) Professor; Ph.D., University of South Carolina
Majeske, Paul (1997) Assistant Professor; M.L.S., Eastern Michigan University
Plato, Denise (2002) Assistant Professor; Ph.D., Michigan State University
Preston, John M. (1983) Associate Professor; M.S., Eastern Michigan University
Ray, Daniel (1999) Associate Professor; J.D., University of Missouri
Remp, Ann M. (1984) Professor; Ph.D., Michigan State University
Van Der Velden, Robert (2002) Professor; J.D., Cleveland-Marshall College of Law
Welker, Kelly (1999) Assistant Professor; MBA., Ball State University
Westrum, Ronald (1972) Professor; Ph.D., University of Chicago
White, Darcelle D. (1995) Professor; J.D., University of Detroit
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Parking and Hanging Parking

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All University meters enforced
7 a.m. to 10 p.m.
Monday through Friday
Lot signs take precedence

* Parking rules subject to change.
EASTERN MICHIGAN UNIVERSITY