

EASTERN MICHIGAN UNIVERSITY

UNDERGRADUATE
CATALOG

1993-1994



INFORMATION REQUESTS

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Eastern Michigan University, Ypsilanti 48197
AREA CODE: 313

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Teacher certification	
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Transcripts	
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Evening advising and programs of study	
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ADMISSION (GRADUATE)	Graduate School, Starkweather, 487-3400
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Institute for the Study of Children and Families	102 King, 487-0372
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Scholarships	
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RECREATION AND INTRAMURAL SPORTS	Olds Student Recreation Center, 487-1338
VETERANS SERVICES OFFICE	Veterans Services Office, 201 Goodison, 487-3119

**EASTERN MICHIGAN UNIVERSITY
BULLETIN
1993-1994**



**THE UNDERGRADUATE
CATALOG**

134TH ANNUAL EDITION

ACCREDITED BY:

The North Central Association of Colleges and Secondary Schools
Dr. Patricia Thrash, Director
159 North Dearborn
Chicago, IL 60601
(312) 263-0456

For information on accreditation and to review copies of accreditation documents, contact Donald H. Bennion, Associate Vice President for Academic Affairs, 106 Welch Hall, Eastern Michigan University, Ypsilanti, MI 48197.

The contents of this Catalog are subject to revision at any time. The University reserves the right to change fees, courses, policies, programs, services, and personnel as required.

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UNIVERSITY CALENDAR

1992-93 ACADEMIC CALENDAR

FALL SEMESTER, 1992

Aug. 29, Saturday Freshman residence hall move-in day
 Aug. 29, 30, 31, Saturday, Sunday, Monday Freshman Orientation
 Aug. 31, Sept. 1, Monday &
 Tuesday Upperclass residence hall move-in days
 Sept. 2, Wednesday Classes begin
 Sept. 7, Monday Labor Day (no classes)
 Nov. 25, Wednesday No classes after 5 p.m.
 Nov. 26-29, Thursday through Sunday Thanksgiving recess
 Nov. 30, Monday Classes resume
 Dec. 12 & 15-18, Saturday &
 Tuesday through Friday Final examinations
 Dec. 18, Thursday Fall session closes
 Dec. 19, Saturday (afternoon) Fall Commencement

WINTER SEMESTER, 1993

Jan. 5, Tuesday Move-in day and Winter Orientation
 Jan. 6, Wednesday Classes begin
 Feb. 20-27, Sunday through Sunday Winter recess
 Feb. 28, Monday Classes resume
 March 1, Monday Classes resume
 April 4, Sunday Honors Convocation
 April 9-11, Friday through Sunday Spring recess
 April 12, Monday Classes resume
 April 22-27, Thursday through Tuesday Final examinations
 April 25, Sunday (afternoon) Winter Commencement
 April 27, Tuesday Winter session closes

SPRING SESSION, 1993

May 4, Tuesday Move-in day
 May 5, Wednesday Classes begin
 May 31, Monday Memorial Day (no classes)
 June 14 & 15, Monday & Tuesday Six-week final examinations
 June 24 & 25, Thursday
 & Friday Seven and one-half week final examinations
 June 25, Friday Spring session closes

SUMMER SESSION, 1993

June 27, Sunday Move-in day
 June 28, Monday Classes begin
 July 5, Monday Independence Day (no classes)
 Aug. 5 & 6, Thursday & Friday Six-week final examinations
 Aug. 17 & 18, Tuesday
 & Wednesday Seven and one-half week final examinations
 Aug. 20, Friday Summer session closes

1993-94 ACADEMIC CALENDAR

FALL SEMESTER, 1993

Aug. 28, Saturday Freshman residence hall move-in day
 Aug. 28, 29, 30, Saturday, Sunday, Monday Freshman Orientation
 Aug. 29, 30, 31 Sunday, Monday,
 Tuesday Upperclass residence hall move-in days
 Sept. 1, Wednesday Classes begin
 Sept. 6, Monday Labor Day (no classes)
 Nov. 24, Wednesday No classes after 5 p.m.
 Nov. 25-28, Thursday through Sunday Thanksgiving recess
 Nov. 29, Monday Classes resume
 Dec. 14-18, Tuesday through Saturday Final examinations
 Dec. 18, Saturday Fall session closes
 Dec. 19, Sunday (afternoon) Fall Commencement

WINTER SEMESTER, 1994

Jan. 4, Tuesday Move-in day and Winter Orientation
 Jan. 5, Wednesday Classes begin
 Feb. 20-27, Sunday through Sunday Winter recess
 Feb. 28, Monday Classes resume
 April 1-3, Friday through Sunday Spring recess
 April 4, Monday Classes resume
 April 21-26, Thursday through Tuesday Final examinations
 April 24, Sunday (afternoon) Winter Commencement
 April 26, Tuesday Winter session closes

SPRING SESSION, 1994

May 3, Tuesday Move-in day
 May 4, Wednesday Classes begin
 May 30, Monday Memorial Day (no classes)
 June 13 & 14, Monday & Tuesday Six-week final examinations
 June 23 & 24, Thursday
 & Friday Seven and one-half week final examinations
 June 24, Friday Spring session closes

SUMMER SESSION, 1994

June 26, Sunday Move-in day
 June 27, Monday Classes begin
 July 4, Monday Independence Day (no classes)
 Aug. 4 & 5, Thursday & Friday Six-week final examinations
 Aug. 16 & 17, Tuesday
 & Wednesday Seven and one-half week final examinations
 Aug. 19, Friday Summer session closes

WELCOME to Eastern Michigan University. This institution's proud heritage has now become YOUR future—a future in which to learn and grow, to advance toward a career and service, and to seek counsel and advice. Here you will find new friends from Michigan, other states, and around the world.

EMU's focal point is southeastern Michigan—an area surrounded by small cities and towns of which its hometown, Ypsilanti, with 25,000 people, is one. Thirty miles to the east is Detroit, industrial and business hub of the Great Lakes; and an equal distance to the south is Toledo, northernmost city on the Ohio border and a new area of student growth.

Advantageous to all students are not only the cultural activities of the metropolitan areas, both within a 45-minute drive from the campus, but also the resources of its sister city, Ann Arbor, home of The University of Michigan. EMU offers its own cultural opportunities through the artistic accomplishments of its students in theatre and drama, extensive music and fine arts programs, and also its Office of Campus Life, which brings well known speakers and entertainers to its auditoriums and classrooms.

The campus is close enough to home for many students to commute, but both nearby and far-distant students choose to live in EMU's dormitories and apartment complexes.

Major highways crisscross the southeastern Michigan area, bus service is available within and from outside Ypsilanti, and Detroit Metropolitan Airport is 30 minutes away. Feeder highways are I-94, which borders Ypsilanti, and US-23, which passes between Ypsilanti and Ann Arbor, connecting with the Ohio Turnpike to the south and other interstate highways to the north. I-275 provides quick and convenient access from Detroit's northwestern suburbs. More than half the population of the state of Michigan lives within 50 miles of EMU's campus.

Prospective students desiring to visit the campus are greeted by EMU's University Ambassadors Society, which provides tours and arranges visits with faculty in fields of interest to high school or transfer students. Orientation is provided for all incoming students.

Once on campus, the University catalog becomes the student's bible of information as personal programs are planned with the help of University counselors and faculty advisers.

UNIVERSITY PROFILE

Eastern Michigan University is a multipurpose university whose roots date back to 1849, when the State 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 schoolhouses had just begun.

For its first 100 years, Michigan State Normal School. as EMU was conceived, certified thousands of teachers and developed the broad-based academic curricula that prepared it for its evolution to university status in 1959. Within the new university, three colleges emerged: the College of Education, the College of Arts and Sciences, and the Graduate School. The University expanded again in 1964 with a College of Business, in 1975 with a College of Health and Human Services, and in 1980 with a College of Technology.

New colleges precipitated the need for additional acreage. The university campus expanded from its original 275 acres on the south side of the Huron River to an additional 182 acres west of the campus primarily for student residences and athletic facilities. Among the newest buildings on campus are the Olds Student Recreation Center, opened in the fall of 1982 to provide needed recreational and intramural activities for the growing student body; the Sponberg Theatre addition to the Quirk Building, dedicated in January 1986; and the Coatings Research Building, opened

in fall 1987. EMU's campus also extends into downtown Ypsilanti, where its new College of Business building is located.

Student enrollment continued to increase in the 1980s. The rapid college matriculation experienced in the late 1960s peaked in 1970 at 19,965, stabilized at 18,500 plus in 1979, and then began its upward climb again, totaling 25,936 in the fall of 1991. The 1993 Higher Education Directory lists EMU as the 50th largest university.

Today's student body represents both full-time and part-time students, indicative of the national trend of mature adults returning to complete their college education and to prepare for new careers in a changing society. Women comprise almost 60 percent of EMU's student body. Many students work part-time and others are assisted by EMU's Office of Financial Aid in work-study programs to meet the costs of a college education.

Included in the geographic distribution of EMU undergraduates in 1987 were 92 percent from the state of Michigan, 4 percent from out-of-state, and 3.7 percent who listed citizenship from countries other than the United States. Approximately 79 percent of the students from other states were from Ohio, largely because of a reciprocity tuition plan.

Program development has consistently adapted to the needs of entering and returning students as the world greets the new era of high technology. College faculty as well as college students are becoming computer literate. More opportunities are being offered to those seeking practical experience through business-industry internships and cooperative education experiences. Courses are provided in approximately 180 fields of study for the ever-diversifying student body.

EMU's perspective also has grown larger, not only in on-campus program developments but also in regular or special courses offered in 14 counties through its Division of Continuing Education and in cooperative agreements with nearby community colleges. The Office of International Studies plans spring/summer travel-study credit programs abroad and student-faculty exchanges with the University of Warwick, the Bulmershe College of Higher Education, and Nonington College, all in England.

In addition, the Corporate Education Center provides a vital link between research theory and practical application as it is called upon by businesses, schools, industries, and agencies to lend its expertise.

Eastern Michigan University today is known world-wide for its educational contributions. Its 76,770 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, Michigan.

Eastern Michigan University campuses and buildings are detailed on page 48. A map of Ypsilanti and the surrounding area is printed on page 47.

EASTERN MICHIGAN UNIVERSITY MISSION

Eastern Michigan University is committed to distinguishing itself as a comprehensive educational institution that prepares people and organizations to adapt readily to a changing world. Central to this mission are:

- providing an exceptional learning environment;
- applying new technologies to teaching, learning, and research;
- expanding knowledge and providing leadership through research, contract learning, and public service; and

- continually interpreting and responding to a changing regional, national, and global society.

VALUES

Eastern Michigan University's mission and philosophy are built upon shared values that define and nourish the intellectual, ethical, and aesthetic environment.

These values are:

EXCELLENCE

The University's principal responsibility is to provide academic programs in a learning environment that promotes academic and personal excellence.

The University, in all of its activities, encourages the achievement of excellence by all members of its various constituencies.

RESPECT

The University recognizes that wisdom, sound judgment, tolerance, and respect for other persons, cultures, and ideas are hallmarks of an educated person.

The University seeks to demonstrate, through all its programs and activities, appreciation of human diversity and to maintain an atmosphere of tolerance and mutual respect that will nourish human liberty and democratic citizenship.

SCHOLARSHIP

The University promotes and encourages continual research and creative activity by all its constituencies. Through such activity, participants remain intellectually alive, expand their fields of knowledge, enrich learning experiences, and bring academic recognition to the community. The intellectual and personal growth of individuals is a central purpose. Knowledge and learning are both the University's products and its processes.

OPPORTUNITY

The University is committed to providing opportunities for learners of varying interests, abilities, backgrounds, and expectations.

It seeks to attract, serve, and accommodate a highly qualified and pluralistic student body, drawn from a variety of ethnic, social, and economic backgrounds and to make a special effort to provide access to the campus' educational opportunities for non-traditional students and underrepresented populations.

COMMUNITY

The University strives to create and nurture a community that fosters mutual trust and respect for the open and amicable expression of differences.

SERVICE

The University endeavors to provide service for the public good. It encourages all constituents to be concerned about the welfare of humanity and to engage in public service.

The University is committed to developing and strengthening collaborative initiatives with the industrial, business, civic, and educational world.

FREEDOM

The University respects and protects personal and academic freedom. It seeks to provide an environment that facilitates involvement in intellectual and cultural activities and encourages formal and informal interaction between and among students, faculty, staff, administration, and community.

INTEGRITY

Intellectual, academic, financial, and operational integrity are critical to the University's survival and effectiveness.

LEADERSHIP

The University strives to provide leadership in addressing the educational and social issues confronting the people and organizations in our society.

It promotes leadership and development activities that enhance educational and industrial opportunities for meeting this charge.

EMPOWERMENT

The University community is empowered to do what is right and necessary to achieve the University's mission.

PHILOSOPHY

The University is dedicated to improving the quality of life within the global community it serves through teaching, contract learning, research, and service.

As an integral part of the state-supported public education system, the University is responsible for providing leadership in developing creative, innovative, and collaborative approaches to meet learning and research demands created as a result of a dramatically changing world.

The University recognizes that an educated populace is the essential ingredient for the successful improvement of humankind. It is dedicated to:

- providing opportunities for professional, intellectual, and personal growth;
- preparing individuals for careers and professions;
- encouraging all University members to be concerned about the welfare of the campus, local, and world communities;
- assisting organizations to function effectively in a global economic environment; and
- instilling in all persons a commitment as leaders, to engage in public service.

The University seeks to provide an intellectual, social, and cultural environment that attracts, serves, and empowers a pluralistic community.

GUIDING PRINCIPLES

Guiding principles form the framework against which the University tests its effectiveness.

In all programs, activities, and services, the University seeks to be:

APPROACHABLE

Psychological barriers that impede participation are eliminated. People and organizations are valued as the University's resources, products, and customers.

ACCESSIBLE

Programs and activities of the University are open to all qualified persons without regard to race, religion, marital status, sex, sexual orientation, age, national or ethnic origin, political belief, or physical handicap.

The University seeks to demonstrate, through all its programs and activities, its appreciation of human diversity and to maintain an atmosphere of tolerance and mutual respect that will nourish human liberty and democratic citizenship.

AFFORDABLE

The University is committed to ensuring that those individuals who are qualified and who desire to participate are not discouraged from doing so because of financial resources, time restraints, or physical distance.

The University seeks to provide financial aid for all constituencies, to be sensitive to changing demands in the educational marketplace, and to deliver educational services in non-traditional ways and settings.

APPLICABLE

Programs are designed to broaden perspectives, enrich awareness, deepen understanding, establish disciplined habits of thought, respond to changes in the workplace and society, and help develop individuals who are informed, responsible citizens.

ATTAINABLE

Recognizing that various constituencies have different needs, programs, activities, and services must be flexible so that all people have the opportunity to participate and to achieve their goals or purpose.

COLLABORATIVE

To utilize financial and human resources effectively, all programs, activities, and services should seek to develop linkages with internal and external constituencies.

The University must continue to develop new partnerships with business, industry, education, and government, to define mutual goals and benefits, and to meet its responsibilities to the global community.

QUALITY

Quality is the first priority in all programs, activities, and services.

UNIVERSITY GOVERNMENT

Eastern Michigan University is an autonomous university governed by an eight-member Board of Regents appointed by the governor and subject to the approval of the state Senate. Financial support for the University comes from tax money paid by the people of Michigan and receipt of student tuition and fees.

Members of the Board of Regents, whose terms expire at the end of the calendar year listed, are Frederick L. Blackmon (2000), Bloomfield Hills; James Clifton ('96), Ypsilanti; Robert A. DeMatia ('94), Northville, chair; Anthony A. Derezinski ('96), Ann Arbor; Philip A. Incarnati ('94), Linden; Mara M. Leticia ('98), Bloomfield Hills; Carl Pursell (2000), Plymouth; and Gayle P. Thomas ('98), Dearborn, vice-chair.

Policies complied with by the University affirm the admission and participatory rights of all individuals, regardless of gender, race, color, religion, creed, national or ethnic origin. These include:

Civil Rights Act: The University will work for the elimination of improper discrimination in organizations recognized by the University and in non-University sources wherein students and employees of the University are involved.

Equal Opportunity and Affirmative Action: The University does not discriminate in the administration of its educational and admissions policies, scholarships and loan programs. It is its practice to take affirmative action in all personnel matters.

Title IX, Education Amendments of 1972: The University complies with the athletic regulations which prohibit discrimination on the basis of sex.

Rehabilitation Act of 1973: The University encourages qualified veterans and handicapped students to apply for admission and take part in the general and specific activities for students offered on this campus.

Section 504 of the act requires that no otherwise qualified handicapped individual, solely by reason of his or her 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.

Students encountering difficulty with access to full participation to University activities should contact the dean of students in 218 Goodison Hall. Individuals who believe that the University is not in compliance are invited to contact the executive director of human resources at (313) 487-1052.

COLLEGES AND DEPARTMENTS

Eastern Michigan University seeks an atmosphere of community, trust, and commitment among all segments of its campus—students, faculty, and staff. Its goals are to encourage instructional growth, research, scholarship, and artistic pursuits and to provide service to the local community, the state, nation, and world. It offers undergraduate programs in the colleges and departments listed below as well as graduate study in selected disciplines which may lead to the master's or specialist's degrees.

College of Arts and Sciences: African American Studies; Art; Biology (Botany, Zoology); Chemistry—accredited American Chemical Society; Communication and Theatre Arts (Radio-TV-Film); Computer Science; Economics; English Language and Literature (Journalism); Foreign Languages and Bilingual Studies; Geography and Geology; History and Philosophy; Mathematics; Music—accredited National Association of Schools of Music;

Physics and Astronomy; Political Science; Psychology; Sociology, Anthropology, Criminology; Women's Studies.

College of Business: accredited by the American Assembly of Collegiate Schools of Business; Accounting; Finance and Computer Information Systems; Management; Marketing.

College of Education: accredited by the National Council for Accreditation of Teacher Education for the preparation of elementary and secondary teachers and school service personnel; Leadership and Counseling—accredited by the Council for Accreditation of Counseling and related programs; Health, Physical Education, Recreation and Dance; Teacher Education; Special Education—accredited by the American Speech and Hearing Association for its Speech Pathology Program for Teachers of the Speech and Language Impaired and by the Council on Education of the Deaf for the Hearing Impaired Program.

College of Health and Human Services: Associated Health Professions (Health Administration—member of the Association of University Programs in Health Administration, Clinical Laboratory Sciences, Occupational Therapy—accredited by the American Medical Association in collaboration with the American Occupational Therapy Association and National Accrediting Agency for Clinical Laboratory Sciences); Human, Environmental and Consumer Resources—accredited by the American Home Economics Association, and for its Dietetics Program by the American Dietetic Association; accredited by the Foundation for Interior Design Research (FIDER), and the Child Development Laboratory by the National Academy of Early Childhood Programs; Nursing Education—accredited by the National League for Nursing; Social Work—baccalaureate program accredited by the Council on Social Work Education.

College of Technology: accredited by the National Association of Industrial Technology; Business and Industrial Education; Industrial Technology; Interdisciplinary Technology; Military Science.

The sections on Admission, Tuition and Fees, Financial Aid, Academic Procedures and Graduation Requirements that follow represent the official policies of Eastern Michigan University as adopted by its Board of Regents.

ADMISSION

ADMISSION to Eastern Michigan University is open to all students who have the potential to succeed and the motivation to continue their education. To attract strong students, an extensive academic scholarship program has been developed to award and recognize students who have demonstrated strong academic ability or unusual talent (see Financial Aid section). A wide variety of service and support activities also are provided for those who wish to improve their academic skills and performance.

ACCEPTANCE into the University is dependent on meeting the admission criteria described below. Students are accepted into the University and may take courses with any of the University's colleges. Many academic programs are designed to include courses from more than one college; however, admission to the University does not preclude meeting specific program requirements.

The Admissions Office, 400 Pierce Hall, provides information to meet the varied circumstances of the applicant. The Academic Advising Center, 301 Pierce Hall, assists students in selecting courses applicable to their planned program or appropriate to their academic needs after the students have been admitted to the University.

APPLICATION FOR ADMISSION is a simple process that requires the submission of a completed admission application form, supporting academic records, and a \$20 non-refundable application fee. The required supporting records vary with the category of admission.

FRESHMAN APPLICANTS entering college for the first time must submit their official high school transcript and results of the American College Test (ACT) or the Scholastic Aptitude Test (SAT). Evidence of graduation or results of the General Education Diploma (GED) test is required if the applicant is no longer attending high school. Applicants over 21 years of age should refer to the non-traditional student category.

Students not qualifying for regular admission under the above criteria may be considered for the PASS (Promote Academic Survival and Success) program or the Summer Incentives Program (SIP). Admission to both programs is by University selection only.

TRANSFER APPLICANTS who have earned credit at a college or university other than Eastern Michigan University must provide an official transcript from each institution attended. Any applicant who has earned less than 12 semester hours of transferable credit (18 quarter hours) also will be required, if under 21, to submit a high school transcript (or equivalent GED) and results of the ACT or SAT.

Students with credit only from a two-year or community college must earn a minimum of 60 semester hours at EMU to complete degree requirements, exclusive of physical activity or junior or community college credit.

NON-TRADITIONAL STUDENTS who are 21 years of age or older and have a high school diploma (or its equivalent) but have not attempted college work previously may be considered for admission without further requirements. Evidence of the high school diploma is expected. The student may be required to take selected tests for advising purposes only.

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, the application will be reviewed as that of a transfer student.

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 elected at this University will apply to his/her program of study. While at EMU, the student is subject to this University's academic policies. Applications for admission as a guest student may be obtained either at the home institution or the Admissions Office of EMU. *NOTE:* Space is seldom available for guests during the fall semester.

NON-MATRICULATED STUDENTS are permitted to take a course or courses for one semester only without going through the regular admission process. Students in this category must present unofficial records indicating their acceptability. Any subsequent enrollment requires regular admission to the University.

OFF-CAMPUS AND CONTINUING EDUCATION STUDENTS (see Division of Continuing Education) are subject to regular admission criteria. However, they may be admitted as non-matriculated students for one semester. Applicants planning to continue with other courses should apply for regular admission in the appropriate category described above.

SECOND BACHELOR'S DEGREE: This option is chosen by those already holding a bachelor's degree from an accredited college/university who are now changing careers.

Applications should be made to the Undergraduate Admissions Office. A non-refundable \$20 application fee and official transcripts from all colleges/universities attended must be submitted.

DUAL ENROLLMENT may be approved for a student whose primary enrollment is in a high school (provided space 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 are welcomed by the University, which is authorized under federal law to enroll non-immigrant alien students. They may apply for admission any semester but are advised to contact the Admissions Office as soon after making their decision as possible to accomplish the following admission requirements:

1. Write for and complete an application for admission.
2. Provide original documents of transcripts of academic credit or certified copies of original 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 Michigan Test). In some cases, foreign students will be required, as a condition of admission, to take one or more courses in spoken or written English for foreign students.
4. Present a statement of financial responsibility covering the total cost of attending the University.

Undergraduate international students' English proficiency requirements are listed under the Department of Foreign Languages and Bilingual Studies (page 104).

SECOND BACHELOR'S DEGREE

Students wishing to pursue a second bachelor's degree are admitted to the University through the Undergraduate Admissions Office, Fourth Floor Pierce Hall. Application for admission and official transcripts of all prior academic work must be submitted. The prospective candidate should make an appointment with the

coordinator of Second Bachelor's Degree Programs in the Academic Advising Center, 301 Pierce Hall (313-487-2170) for evaluation of transcripts and development of program of study. That program is approved by the appropriate academic department and is the basis of degree completion.

General requirements for a Second Bachelor's Degree are as follows:

- Completion of a first bachelor's degree from an accredited college or university with a minimum of 120 semester hours.
- Completion of a basic studies (liberal arts) program.
- Completion of a course in American Government or equivalent.
- Completion of curricular requirements for new academic major.
- Completion of a minimum of 30 semester hours post-baccalaureate at Eastern Michigan University.

Students holding a bachelor's degree from EMU may only pursue a second bachelor's degree different from their first degree: i.e., a student with an EMU Bachelor of Science degree may pursue a Bachelor of Arts degree and, conversely, a student with an EMU Bachelor of Arts degree may pursue a Bachelor of Science degree. Students not pursuing a different degree may complete additional majors or minors to supplement the original degree. The procedure is the same for program development. Admission is granted through re-enrollment with Records Office, 302 Pierce Hall, based on the recommendation by coordinator of Second Bachelor's Programs.

RE-ENROLLMENT

Former EMU students desiring to re-enroll at EMU after an absence of one year should make application in the Academic Records Office, 302 Pierce Hall, at least *two months* prior to the first day of classes. The applicant should complete the application and return it to the *same* office.

Students who have a past due obligation to the University must clear their obligation through the Student Accounting Office, Pierce Hall, before their application for re-enrollment can be processed.

Students who have attended any institution of higher education since being enrolled at Eastern Michigan University must secure a transcript of work done elsewhere and submit it to the Academic Records Office with an application for re-enrollment.

If absence from Eastern Michigan University was by request of the University, the student must initiate any application for re-admission with the Academic Advising Center, 301 Pierce Hall.

If the student wishes to advance register for a session, the application for re-enrollment must be filed no later than the following dates:

For fall semester	August 1
For winter semester	December 1
For spring session	April 1
For summer session	May 15

ALTERNATIVE CREDIT OPTIONS

Eastern Michigan University offers students the opportunity to earn up to 30 hours of academic credit by examination and, in some instances, to 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)

The table that follows 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 basic studies 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 three hours of academic credit for a score of 3 or higher on an AP exam and 4 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 as 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, fill out, and return application for credit by examination/validation to the Academic Records Office. Eligibility to sit for credit by examination/validation will be determined by the Academic Records Office, 302 Pierce.
2. Take paper provided by the Academic Records Office 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 P/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. Department head will forward the permission form to the Academic Records Office, 302 Pierce for posting to the student's record.

CLEP examinations as listed on the following chart are administered through the Academic Advising Center, 301 Pierce Hall.

UNIVERSITY HONORS PROGRAM

Robert Holkeboer

Director

Jones-Goddard Community of Scholars

487-0341

Entering first-year, transfer, and currently enrolled students with excellent academic records may apply for admission to the University Honors Program. Admission is based on such factors as grade point average, standardized test scores, letters of recommendation, and a personal essay.

Honors certification may be pursued either on the basic studies level, in departments or professional programs, or both. Honors courses feature small class size, outstanding instructors, and enriched course materials.

Graduation with honors requires a cumulative GPA of at least 3.3 and the completion of either 18 hours of honors credit in basic studies or 12 hours of departmental honors credit, including the senior thesis. The designation "with honors" is separate from the "laude" designations, which refer strictly to GPA.

Students who complete the program are appropriately recognized by special designations on their transcripts, certificates of achievement, the honors medallion, press releases, and letters of recommendation from the honors director explaining their achievements.

Other benefits include housing in the Jones-Goddard Community of Scholars, early registration, mainframe computer access, and extended library loans and advising support.

For further information, contact the University Honors Program office, 250 Jones Hall, Community of Scholars, (313) 487-0341.

ACADEMIC CREDIT AVAILABLE BY DEPARTMENTS

**Essay required

Department	Exam/Subject	Min. Score	Credit Awarded*	Placement	Departmental Credit-by-exam Available
Art	AP History of Art	3	FA 101 (3)	FA 107	with special permission
	AP Studio Art: General	4,5	FA 108 (3)		
	Portfolio or drawing portfolio	3	FA 179 (3) or FA379 (3)	See department head	
<i>NOTE: An additional three credit hours may be awarded to art majors and minors through departmental evaluation of art portfolio.</i>					
Biology	CLEP General Biology	46	BIO 105 (4) - <i>Basic studies or elective credit only</i>	BOT 221 or ZOO 222	with special permission
		50	BIO 105 (4)		
	AP General Biology	3	BIO 105 (4) - <i>Basic Studies or elective credit only</i>	BOT 221 or ZOO 222	
	IB (Higher Level)	4	BIO 105 (4) - <i>Basic Studies or elective credit only</i>	BOT 221 or ZOO 222	
Chemistry	CLEP General Chemistry	48	CHM 121 (3)	CHM 122	with special permission
		58	CHM 121 (3) and CHM 123 (3)	CHM 122	
	AP Chemistry	3	CHM 121 (3)	CHM 122	
		4	CHM 121 (3) and CHM 123 (3)	CHM 122	
Computer Science	CLEP Information Systems & Computer Programming	52	CSC 137 (3)	CSC 238	yes
	AP Computer Science A	3	CSC 138 (3)	CSC 238	
	AP Computer Science AB	4	CSC 138 (3) and CSC 238 (3)		
Economics	CLEP Intro to Macroeconomics	50	ECO 201 (3)	ECO 202	yes
	Intro to Microeconomics	50	ECO 202 (3)	ECO 302	
English	CLEP College Composition**	50	ENG 121 (3)	ENG 225	yes
		65	ENG 121 (3) and ENG 225 (3)	any 200-300 level English course	
	English Literature**	50-64	LIT 100 (3)	LIT 101, 102 or 103	
		65	LIT 101 (3) and LIT 100 (3)	any 200-300 level LIT course	
	AP English Language	3	ENG 121 (3)	any 200-300 level English course	
		4-5	ENG 121 (3) and ENG 225 (3)	any 200-300 level English course	
AP English Literature	3	LIT 100 (3)	LIT 101, 102 or 103		
	4-5	LIT 100 (3) and 101 (3)	any 200-300 level English course		
Foreign Languages***	AP French Language or French Literature	3	FRN 121 (3)	FRN 122	yes
		4,5	FRN 122 (3)	FRN 221	
	German Language	3	GER 121 (3)	GER 122	
		4,5	GER 122 (3)	GER221	
	AP Latin: Vergil or Catullus-Horace	3	LAT 121 (5)	LAT 122	
		4-5	LAT 122 (5)		
	Spanish Language or Spanish Literature	3	SPN 121 (3)	SPN 122	
		4,5	SPN 122 (3)	SPN 201	
	CLEP College French I	39-44	FRN 121 (3)	FRN 122	
		45	FRN 121/122 (3)	FRN 221	
	College French II	44-53	GER 121 (3)	GER 122	
	College German I	54	GER 121/122 (3)	GER221	
	College German II	44-53	SPN 121 (3)	SPN 122	
College Spanish I	54	SPN 121/122 (3)	SPN 201		
College Spanish II	54	SPN 121/122 (3)	SPN 201		
History	CLEP American History I	50	HIST 123 (3)	Most courses in the department	yes
		50	HIST 124 (3)		
	American History II	50	HIST 101 (3)	HST 124 (3)	
		50	HIST 102 (3)		
	AP United States History	3	HIST 123 (3)		
	AP United States History	4-5	HIST 123 (3) and HIST 124 (3)		
	AP European History	3	HIST 101 (3)	HST 102	
	4-5	HIST 101 (3) and HIST 102 (3)			
Management	CLEP Intro to Business Management	50	MGT 382 (3)	MGT386	yes
Marketing	CLEP Intro to Business Law	55	LAW 293 (3)		yes
Mathematics	CLEP College Algebra	53	MT11 105 (3)	MT11 118, MTH 119 or MTH 120 or MTH 122	yes
		53	MT11 107 (2)	MTH 120 or MTH 122	
	Calculus**	55	MT11 120 (4)	MTH 121	
	AP Calculus AB	3	MT11 120 (4)	MTH 121	
	Calculus BC	3	MT11 120 (4) and MT11 121 (4)	MTH 122 or MTH 223	
Music	AP Music Listening and Literature	3	MUS 107 (2)		with special permission
		3	MUS 100 (3)		
Physics	AP Physics B	3	PHY 221 (4)	PHY 222	with special permission
		4,5	PHY 221 (4) and PHY 222 (4)		
	AP Physics C	3	PHY 223 (5) and PHY 224 (5)		
Political Science	CLEP American Government	50	PLS 112 (3)	Most upper-level courses	yes
	AP American Govt. and Politics	3	PLS 112 (3)		
	AP Comparative Govt. and Politics	3	PLS211 (3)		
Psychology	CLEP General Psychology	50	PSY 101 (3)	Most upper-level courses	yes
Sociology	CLEP Introduction to Sociology	50	SOC 105 (3)	SOC 202 or SOC 204	yes

TUITION AND FEES

All University fees and assessments are subject to change without notice and 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 and pay their registration fee and tuition assessment.

The registration fee is \$40 for each fall and winter semester and \$30 for each spring and summer session. This fee is assessed and collected at the time the student registers and is non-refundable.

A late registration fee of \$10 is charged students who, for any cause, do not complete registration prior to the official first day of classes each semester. Checks returned by a bank constitute late registration, and a late registration fee is charged.

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 statements 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 cancellation-of-registration form either in person or by letter to the Registration Office, 303 Pierce Hall. If students have applied for University housing, they also must cancel the contract in the Housing Office. This is necessary for cancellation of tuition and room and board assessments.

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 100 through 400 level courses; graduate tuition is assessed for all 500 and 600 level courses.

Off-campus tuition rates are the same as on-campus tuition rates.

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

Tuition rates per credit hour, using the fall 1992 levels are:

1992-93 Michigan Resident Rates

Undergraduate courses lower level (100-200)	\$76.50
upper level (300-400)	\$81.50
Graduate courses (500-600 level)	\$110.00

1992-93 Non-Resident Rates

Undergraduate courses lower level (100-200)	\$196.00
upper level (300-400)	\$206.00
Graduate courses (500-600 level)	\$258.00

RESIDENCE CLASSIFICATION FOR TUITION PURPOSES POLICY

I. 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 dependents for federal income tax purposes by their parents or guardians at the time of registration and for the tax year preceding the year in which they register will be classified for tuition purposes as though they were minors.

C. Nondependent Students

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. Aliens

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 Services 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—intracompany transferee; L-2—spouse or child of L-1.

F. Migrants

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 that 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 enrolls 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 effect 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. RECLASSIFICATION 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 resident 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 Accounting Office 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 Michigan State Board of Education and the Ohio Board of Regents in 1980, allows an Ohio resident to attend Eastern Michigan University at Michigan resident tuition rates. Michigan residents can attend the University of Toledo at Ohio resident tuition rates but only if they reside in Monroe County.

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 date is printed on the invoice from Student Accounting and is published in the Class Schedule Bulletin 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.

Only special billing addresses are processed by the Student Accounting office.

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

The 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 \$20.00 is assessed with the first installment billing and a late payment fee of \$20.00 per month to a maximum of \$100 per semester or session is assessed on past-due balances.

If a student's account is past due for a current semester, enrollment, University housing and other University services (such as release of grades or certified 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.

The privilege of using the installment payment plan for tuition (room and board) is denied to students whose University account has been in arrears in amounts exceeding \$50 for periods beyond 30 days.

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

Workshop sessions offered for two and three weeks during the spring and summer sessions are assessed the same registration and tuition fees as regular class sessions. However, a student enrolled in other course work during a session will not be assessed an additional registration fee for enrolling in a workshop during the same session.

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

During the first five class days of the fall/winter semesters and the first four class days of the spring/summer sessions, a program fee of \$10 per transaction will be assessed for each student-initiated program adjustment. For the purpose of determining the program adjustment fee, one drop accompanied simultaneously by one add will be considered as one transaction.

Individual adds or individual drops will be considered as individual transactions and will be assessed \$10 each. At least 50 percent of the increased tuition resulting from adjustments must be paid at the time of adjustment in the fall/winter semesters, 100 percent in the spring/summer sessions. For final adjustment deadlines and coordinate fee schedules, see the Class Schedule Bulletin.

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

WITHDRAWAL FROM THE UNIVERSITY

A credit adjustment of 100 percent of the tuition assessment for the fall and winter semesters, less a late withdrawal fee of \$10, will be made to those students who cancel their registration or withdraw from the University prior to the sixth class day. For the spring and summer sessions, a 100 percent credit adjustment will be made during the first three days of classes. Actual dates are printed in the Class Schedule for each semester and session.

A credit adjustment of 50 percent of the tuition assessment for the fall and winter semesters will be made to those students who withdraw from the University between the sixth and fifteenth class day. For the spring and summer sessions, a 50 percent credit adjustment will be made during the fourth through seventh class days 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

A credit adjustment of 100 percent of the difference in tuition assessment for the fall and winter semesters will be made to those students who decrease their academic load prior to the sixth day of classes. For the spring and summer sessions, a 100 percent credit adjustment will be made during the first three days of classes. Actual dates are printed in the Class Schedule for each semester and session.

A credit adjustment of 50 percent of the difference in tuition assessment for the fall and winter semesters will be made for classes dropped between the sixth and fifteenth class day. For the spring and summer sessions, a 50 percent credit adjustment will be made during the fourth and seventh class days of the session. 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 Office in Pierce Hall (Ypsilanti, MI 48197). 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 Manager 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 solution is not achieved, a final written appeal may be made to the Vice President for Business and Finance (101 Welch Hall, Ypsilanti, MI 48197).

Tuition and fee appeal applications must be submitted as early in the semester as possible. Applications received later than 15 calendar days after the close of the semester and mailing of final grades may be denied on the basis of a lack of timeliness.

SERVICE FEES

Room and board fees are published by the Housing Office and are set by action of the Board of Regents. See the 1992-93 estimated fee schedules at the end of this section.

A Health Care fee is charged at the rate of \$1.85 per credit hour. 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 Student Government fee shall be assessed each student enrolling for one or more on-campus undergraduate courses. This fee shall be two dollars (\$2) for each of the fall and winter semesters and one dollar (\$1) for each of the spring and summer sessions and shall be collected by the University as a separate charge when tuition is paid. The fee provides operating funds for the Student Senate and student organizations.

A Student Activity/Facility fee of \$47 per semester for fall and winter semesters is assessed of all students not living in University housing taking four or more credit hours. All students paying this fee are eligible for free admission to home basketball and football games. All students not living in University housing are assessed a Student Activity fee of \$23.50 during the spring and summer terms. This fee is used to renovate and enhance campus facilities and the campus environment.

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

Undergraduate degree fee \$30
Master's and specialist's degrees \$35

A transcript fee charge of \$5 is made for each transcript ordered by students.

Parking your motor vehicle in University parking lots requires the proper parking decal. To purchase your parking decal, you must first register your motor vehicle with the Public Safety Department, located on the ground floor of the parking structure. The 1992-93 motor vehicle rates are as follows:

Permit Type	1992/93 Permit Cost
<i>Commuter Permit:</i>	
Fall/Winter	\$70
Evening Fall/Winter	40
Spring or Summer	17.50
<i>Resident Permit:</i>	
Apartment Housing (full year)	34
Fall/Winter Dorm	14
Brown-Munson Fall/Winter	60
Brown-Munson Spring/Summer	30
Spring or Summer Dorm	4
Staff/Faculty Annual Permit	48

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.

Further details are available in the Parking and Traffic Regulations brochure available from campus police.

SPECIAL FEES

Music fees are charged for private lessons according to the following schedule: (1989-90 fee schedule)

Music majors: \$60 per semester for all instruction.

Other University students: \$60 per semester for one-hour lesson, \$30 per semester for half-hour lesson.

Students from public schools, the community and EMU staff and families: \$90 per semester for one-hour lesson, \$45 per semester for half-hour lesson.

Lessons are arranged through the Music Department.

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.

Nursing fees of \$15 per credit hour for clinical laboratory courses are charged in addition to per credit hour fees. These courses are listed below:

NUR 251 Nursing Science I Clinical Laboratory (3)	\$45
NUR 305 Nursing Science II Clinical Laboratory (3)	\$45
NUR 341 Concepts of Professional Practice II Clinical Laboratory (3)	\$45
NUR 351 Nursing Science III Clinical Laboratory (4)	\$60
NUR 405 Nursing Science IV Clinical Laboratory (5)	\$75
NUR 451 Nursing Science V Clinical Laboratory (4)	\$60

Materials and extra costs are assessed at the close of the program adjustment period in certain courses. These courses are listed near the front of each semester's class schedule bulletin, as well as being identified individually within the bulletin with a bullet (•) before the course number.

SCHEDULE OF UNIVERSITY CHARGES PER SEMESTER

(University charges are set by action of the Board of Regents, are due in accordance with University payment plan, and may be changed without notice.)

Item Due	1992-93 Amount
Tuition for 15 hours	
Michigan resident	\$1,147.50
Out-of-state resident	\$2,940.00
Registration fee—All students	\$40.00
(Spring/Summer)	\$30.00
Student Government fee—All students	\$2.00
Health care fee—\$1.85 per credit hour	\$27.75
Student activity/facility fee	
<i>Fall or Winter</i> —students taking 4 or more credits	\$47.00
<i>Spring or Summer</i> —all students	\$23.50
Music fee—Music majors	\$60.00
Other students taking an applied music lesson	\$30-\$60.00
Residence hall room and board (double room with 20-meal plan)	\$1,925.00

STUDENT EXPENSES

Estimated Academic Year Costs (Residence Hall and Commuter Students)

The following budget represents typical expenses for a freshman student, Michigan or Ohio resident, taking 13 undergraduate credit hours each semester, living in a University residence hall or off-campus apartment, and attending the full academic year (fall and winter semesters).

Tuition and fees	\$2,260
Books and academic supplies	\$500
Residence hall room and board	\$3,965
Total direct educational costs	\$6,725
Estimated additional costs of personal, transportation, and miscellaneous expenses	\$1,200

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 total costs: tuition and fees, books, room and board, personal and miscellaneous expenses, and transportation for an eight-month academic year (based on projected 1993-94 costs):

Single dependent student (Residence hall with 20-meal plan)	\$7,925
Single dependent student (Commuting from home)	\$6,060
Single dependent student (Apartment)	\$7,925

The above budgets are based on Financial Aid average costs for 1992-93 with projected increases for 1993-94.

FINANCIAL AID

Four types of financial aid are available to Eastern Michigan University undergraduate students: academic scholarships, grants, work, and loans. All financial aid programs including federal, state, university, and private sources are administered by the Office of Financial Aid located on the fourth floor of Pierce Hall. During the 1992-93 academic year, more than 10,000 students received approximately \$38 million in financial assistance.

Scholarships and grants: Awards in these two categories range from \$200 to \$6,400 per academic year and may pay tuition, fees, room, board, books, transportation, and miscellaneous costs, depending on the type of the award and the amount. Scholarships are generally based on academic achievement; grants are generally based on financial need as determined by a federally approved formula.

Work and Loans: Awards in these two categories range from \$500 to \$5,500 per academic year and may pay tuition, fees, room, board, books, transportation, and miscellaneous costs depending on the amount of the award. These awards are generally based on financial need as determined by a federally approved formula. Beginning in January 1993, all students (regardless of income) are eligible to borrow through the unsubsidized Federal Stafford Loan program. Independent students may borrow through the Federal Supplemental Loan program, and parents of dependent college students may borrow on behalf of their children through the Federal Parent Loan Program.

APPLICATION FORMS

Federal and State Need-Based Aid

The Free Application for Federal Student Aid is available in high school guidance counselors' offices and the Office of Financial Aid. The free application requires 4-6 weeks for processing.

Academic Scholarships and University Awards

Applications are included on the Admissions application for new students and transfer students. Continuing students may apply annually (from late October through January) for academic scholarships and awards through the Office of Financial Aid.

NEED-BASED FINANCIAL AID

All federally funded student financial aid programs require the student to sign the following statements: Anti-Drug Statement, Statement of Educational Purpose, and Selective Service Registration. Students who are not making satisfactory progress toward completing a degree may be ineligible for aid. Students who are in default on a student loan or owe a refund from student financial aid received are also not eligible to participate in these federally funded student aid programs.

Federal Pell Grants: These federally funded grants are available to undergraduate students who are enrolled and have demonstrated financial need. Students must be U.S. citizens or permanent U.S. residents. Students must apply through a federally approved needs analysis system. Eligible students must submit an approved Student Aid Report to the Office of Financial Aid to receive funds. Awards range from \$400 to \$2,300 per year, based on enrollment status.

Federal Supplemental Grants: These federally funded grants are available to undergraduate students who are enrolled on at least a half-time basis and demonstrate financial need. Students must apply through a federally approved needs analysis system. Priority is given to students who receive a Federal Pell Grant. Awards range from \$100 to \$2,000 per year.

University Grants: These grants are funded by Eastern Michigan University and are available to undergraduate students who demonstrate need or have special circumstances. These funds are made available to students when Federal Supplemental Grant funds are not adequate to meet the needs of EMU students. Award amounts vary depending on the student's situation and funding levels.

Eastern Opportunity Grants: These grants are funded by Eastern Michigan University and are available to undergraduate students who demonstrate need and are enrolled on at least a half-time basis. Priority is given to students enrolled in the Summer Incentive Program. Award amounts vary depending on the student's situation and funding levels.

Federal Work Study: This federally funded work program is available to undergraduate and graduate students who demonstrate need. Students must be enrolled on at least a half-time basis. Employment is available on the college campus or in not-for-profit agencies off campus. Eligible students may work up to 20 hours per week during the academic year. Limited full-time work study is available during the summer term. The hourly rate of pay for a work study position is determined by the skills required for the job and the student's experience. Federal law requires at least minimum wage.

Federal Stafford Loans: This federally approved loan program provides funds through banks, savings and loan institutions, and credit unions to undergraduate and graduate students who are enrolled on at least a half-time basis. Undergraduate students may borrow up to \$2,625 per year for the freshman year; \$3,500 for the sophomore year; and \$5,500 per year for the next three years of undergraduate study up to a maximum of \$23,000. For graduate and professional study the aggregate limit on borrowing is \$65,500. Student borrowers must begin repaying the loan six months after graduation, withdrawal, or dropping below half-time enrollment status. Interest is capped at 9 percent and is set annually on July 1. The loan amount is based on the grade level, previous student loan indebtedness, and financial need.

Federal Perkins Loans: This loan program is a federally subsidized, low-interest, long-term loan available to undergraduate and graduate students who demonstrate need. Students must be enrolled on at least a half-time basis. Undergraduate students may borrow up to a cumulative maximum of \$15,000. The amount of the loan depends on the student's need, previous student loan indebtedness, and enrollment status. Repayment of the loan begins 9 months after graduation, withdrawal, or dropping below half-time status. Student borrowers have up to 10 years to repay the loan with 5 percent simple interest. Opportunities for deferment or forgiveness of the student loan are available. Contact the Student Loans Office in Pierce Hall for specific information.

EMU SCHOLARSHIPS/AWARDS

Not based on financial need

Eastern Michigan University offers scholarships and awards not based on financial need to recognize academic excellence and special talents. All undergraduate students are encouraged to apply annually. New incoming freshman and transfer students may apply for scholarship consideration on the admissions application. Some scholarships are available for part-time study. Schol-

arships require different GPAs, depending on the type and amount of the award. Scholarships may be credited to the tuition and/or residence hall room and board charges. Students must reapply annually for available scholarships. Applications are available the last week in October and are due by the third week of January. Contact the Office of Financial Aid for specific dates.

Presidential Scholarships: This scholarship program provides 10 full-ride academic awards valued at \$32,000 (\$7,300/year for four years). To compete for the Presidential Scholarship, a student must be a high school senior with a minimum 3.5 GPA and a 25 ACT/1050 SAT score. Students are invited to participate in a competitive examination on campus held in early December. The top 30 scorers from the examination are invited back to campus in January to participate in the written essay competition and personal interview. The scholarships are automatically renewed for up to eight full-time semesters as long as the student maintains a 3.5 GPA and completes a minimum of 15 credit hours per semester.

Regents Scholarships: This scholarship program provides an \$8,000 award for four years (\$2,000 per year). To be eligible for consideration, an incoming freshman must have a minimum 3.5 GPA and a 25 ACT/1050 SAT score, compete in the Presidential Scholarship Competition, and score in the top 100. Some awards are available to freshmen and transfer students who do not compete in the Presidential Scholarship Competition and have a minimum 3.5 GPA. The scholarships are automatically renewed for up to eight full-time semesters as long as the student maintains a 3.5 GPA and completes a minimum of 15 credit hours per semester. Continuing upperclass students at Eastern may apply for a Regents Scholarship through the annual scholarship application process. Awards are competitive, based on EMU GPA's and available annual funding.

Recognition of Excellence Scholarships: This scholarship program provides a \$1,500 award. To be eligible for consideration, an incoming freshman must have a 3.3 high school GPA. An upperclass student must have a minimum 3.3 EMU GPA to be considered. Students must reapply annually. Awards are competitively based.

Departmental Endowment Awards: These awards are based on funding through endowed scholarships. Each academic department determines its eligible students. Students must generally have a 3.0 GPA to be considered and identify a major field of study. In some cases, student may also be required to audition, provide letters of recommendation, write an essay, and provide portfolios of work and transcripts. Students must reapply annually. Awards vary from \$50 to \$2,200 per year.

Campus Leader Awards: These awards are given for outstanding leadership activities at EMU. Students must have a minimum 2.5 GPA and are strongly encouraged to participate in EMU's Student Leadership Conference. Students must reapply annually.

Service Awards: These awards are given for outstanding service and talent in the departments of Communications and Theatre Arts and Music.

Agency/Outside Donor Scholarships: These programs are sponsored by groups external to the University and may include civic organizations, churches, synagogues, clubs, professional organizations, foundations, and corporations. Qualifications and eligibility vary considerably. Some specialized books listing scholarships are available through the Office of Financial Aid and on reserve at the University Library.

STATE FUNDED FINANCIAL AID PROGRAMS

Michigan Competitive Scholarships: This state-funded scholarship program is based on a combination of competitive tests results from ACT and financial need as determined by a federally approved needs analysis system. Students initially apply by taking the American College Test no later than October of their senior high school year and having the test results sent to the State Scholarship Program. The second step of the application process is to submit the free application for Federal Student Aid. Eligible students must have a qualifying ACT score and demonstrate financial need. Students may annually renew the scholarship by maintaining a 2.0 GPA and demonstrating continuing financial need.

Three additional programs are available to Michigan residents—Michigan Adult Part Time Grant, Michigan Educational Opportunity Grant, and Michigan Work-Study. The basic requirements for these three programs are as follows: be enrolled at an approved public or private degree-granting Michigan college; demonstrate financial need for the funds; be a Michigan resident for at least 12 months; be a U.S. citizen or permanent resident; not be incarcerated in a corrections institution; not be enrolled in a program leading to a degree in Theology or Divinity; not be in default on a Michigan Guaranteed Student Loan or Michigan Auxiliary Loan; and be making satisfactory academic progress, as defined by the school.

To apply for the state need-based aid programs, students must apply through a federally approved needs analysis system.

Michigan Adult Part-Time Grant is need-based gift aid money available to undergraduates who enroll on a part-time basis. In addition to meeting the specific requirements listed above, students must qualify as self-supporting according to current federal criteria (be out of high school for at least two years, and be a part-time student). Grants of up to \$600 per year are available for not more than two years of study.

Michigan Educational Opportunity Grant is need-based gift aid assistance to undergraduates enrolled at least half-time. Students who meet the basic requirements for the Michigan programs are eligible. Grants of up to \$1,000 per year are available under this program.

Michigan Work-Study Program is a need-based program that provides work opportunities for undergraduates. Both non-profit and profit-based employers may sign agreements with Michigan colleges to participate in this program. Students who meet the basic requirements for the Michigan programs are eligible. MWSP awards range from \$800 to \$3,000 per year.

OTHER PROGRAMS

(Not based on financial need)

Michigan Indian Tuition Waiver Program is available to Native American students who are certified to have at least 25 percent native American blood. Eligible students may receive tuition payments for both an undergraduate and graduate degree. Students may be enrolled either part-time or full-time. Certification of eligibility and additional information may be obtained from the Michigan Indian Commission, 611 West Ottawa Street, Lansing, MI 48913, or contact Carolyn Kiogima at (517) 373-0654.

Michigan Veterans Trust Fund (Public Act 245) is a program available to children of disabled or deceased veterans (death/disability must have been as a result of wartime service). Eligible students may receive tuition payment for undergraduate or graduate study, must maintain a minimum 2.25 GPA, and make satisfactory progress. Students are eligible from ages 16 to 22 or for 36 months

of full-time equated education, whichever comes first. Students may receive an extension of tuition payments beyond their 22nd birthday if their education was interrupted for at least one month due to military service or illness. Certification of eligibility and additional information may be obtained from the Michigan Veterans Trust Fund Board of Directors, P.O. Box 30026, 611 West Ottawa Street, Lansing, MI 48909, or call at (517) 373-3130.

Michigan Veterans Emergency Loan is available to Michigan veterans to cover due or past due expenses such as room and board, car repairs, and utility bills. Loans cannot be made for direct educational expenses such as tuition and books. Loan amounts cannot exceed \$600, are interest free, and must be repaid in 180 days (six months). Contact the Michigan Veterans Trust Fund Board of Trustees, Ottawa Street Building, North Tower—Third Floor, P.O. Box 30026, Lansing, MI 48909 for additional information, applications, and eligibility requirements.

OTHER ARMED FORCES PROGRAMS

Army ROTC Scholarship Programs offer financial assistance to outstanding young men and women interested in completing the ROTC program and pursuing the Army as a career. Students must be citizens of the United States and meet the criteria specified under provisions of Public Law 88-647. For further information, contact EMU's Military Science Department, 18 Roosevelt Hall.

The four-year program is open on a selective basis to high school seniors who apply and intend to pursue ROTC at the University. One- to three-year scholarships are reserved for students enrolled in the EMU campus ROTC program, and a two-year scholarship program for transfer students is administered by a faculty board. All provide full tuition, textbooks, laboratory fees, and a \$100 per month stipend while the scholarships are in effect.

Air Force ROTC Scholarships are offered by the Air Force on a competitive basis to students interested in completing the AFROTC program and entering the Air Force as a commissioned officer. Two, three, and four-year scholarships are available. Scholarships pay full tuition and fees, a book allowance, and a \$100 per month stipend during the academic school year. EMU students receive AFROTC training on the University of Michigan campus. For information, call the AFROTC recruiting office at (313) 747-4093.

Veterans Benefits are administered under the new G.I. Bill by EMU's Veterans Services Office, 202 Goodison Hall. The applicant must furnish a Certificate of Eligibility (if available) at or prior to the start of classes. Students receiving benefits and not obtaining a satisfactory grade point average will be cut off from further certification for such benefits at a point no later than one consecutive semester after the student initially fails to maintain satisfactory academic progress.

Veterans must complete necessary registration with the University and pay full tuition and fees. Subsequent procedures will be explained at the Veterans Services Office.

UNIVERSITY SHORT TERM LOANS

Emergency Educational Expense Loans are 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 2.0 "C" undergraduate, 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. Loans are made available from memorials to groups or individuals. Applications may be obtained at the Student Loan Accounting Office, Pierce Hall. Loans are processed within 24 hours.

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

Adult Tuition Loans are tuition-only loans for up to \$500. Applicants must be 21 years of age or older; have an annual income of \$15,000 or more; and meet the same 5 requirements applicants for Emergency Educational Expense Loans must meet.

ACADEMIC PROCEDURES

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/session. The University calendar is printed at the front of this book.

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

Academic course load is the number of hours that a student carries in a semester/session. In the fall and winter semesters, the recommended full-time course load is 15 to 16 hours (15 with student teaching). In the seven and one-half week spring and summer sessions, it is six to eight hours and in the six-week summer session, five to six hours. Full-time enrollment for the fall and winter semesters is 12 hours or more. Full-time enrollment for the spring and summer semesters is six hours or more.

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 adviser. 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, 301 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. Pass/fail semester hours are included in the total course load.

Regular class attendance and active participation in classes are important elements in the learning process. Students are at the University primarily for the sake of their intellectual growth and development. Attendance and participation provide appropriate opportunities for the evaluation of the student's progress.

Each student is personally responsible for the satisfactory completion of the course work prescribed by his/her instructors. This means specifically that he/she is expected to attend classes regularly, and that he/she is responsible for the work assigned in class, the material covered in class and for participation in class activities (including discussion and listening) designed by the instructor as part of the learning experience. However, mere physical attendance should not be a criterion for evaluation of the student's performance.

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, faculty or faculty spouse, auditing under the staff benefits program. No credit will be given for work in courses not officially enrolled in or approved.

Auditing of courses is permitted for the student who wishes to hear the subject matter presented but does not desire to obtain credit for the course. The student must obtain a permission to audit card from registration, receive the approval of the head of the department offering the course, register by turning in the card, and pay the required tuition and fee as if enrolling for a credit course. Shifting from credit to audit or from audit to credit is not permitted after the last day for program adjustments for that specific semester.

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 Benefit Programs Office, 301-303 King Hall.

Credits are determined by the units of work completed. A semester hour is the credit granted in a course meeting once a week for one semester. Credits earned on the term or quarter-hours basis at other institutions are converted to EMU semester hours by multiplying by two-thirds.

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

Class	Semester Hours
Freshman.....	0-24
Sophomore	25-55
Junior	56-84
Senior	85 or over

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

Course Number	Academic Level*
100-199	Introductory
200-299	Intermediate
300-499	Advanced

Courses numbered 500 to 599 are intended primarily for graduate students but are open in some cases to seniors. To be eligible, an undergraduate student must acquire 76 hours or more of undergraduate credit, have a cumulative grade point average of 2.50 or better, and receive written permission from the Graduate School. The maximum number of graduate hours that an advanced undergraduate can take is 15. Courses numbered in the 600s and 700s are exclusively for graduate students.

*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 presume 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.

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

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. If a final examination is not given, the scheduled examination period shall be used for other class activity.

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 requisite 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 instructors 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 two 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:

Grade	Significance	Grade points per semester hour
A	Exceptionally high order	4.0
A-		3.7
B+		3.3
B	Distinctly above the average	3.0
B-		2.7
C+		2.3
C	Average	2.0
C-		1.7
D+		1.3
D	Below Average	1.0
D-		0.7
E	Unsatisfactory (denoting failure)	0
CR	Passing grade in credit/no credit courses	0
NC	Failing grade in credit/no credit courses	0
S	Passing grade in pass/fail elections and credit for certification in student teaching courses	0
P	Passing grade in student teaching but not at level sufficient for certification	0
U	Failing grade in pass/fail and in student teaching elections	0

Credits earned by student teaching, credit/no credit classes, or pass/fail options are not accorded grade points.

The use of "+" and "-" grades was introduced in the fall semester 1979.

An "E" grade will be assigned for any course when the student stops attending a class without officially withdrawing from the course. Credit for courses in which either "E" or "U" grades have been received can be earned only by repeating the course at Eastern Michigan University. See repeat policy for exceptions.

A credit/no credit option can be utilized in courses for which the standard system of letter grades does not seem appropriate. Departments wishing to offer a course on a credit/no credit option must secure approval of their dean and the vice president for academic affairs.

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, or basic studies requirements.
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 Pierce prior to the end of program adjustment.
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.
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:
 - a. Grades of "A," "B," "C," or "D," including "D-," will be converted to "S," and shall count as credit toward graduation.
 - b. 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 also should be fully aware of the possible implications of this option for acceptance into graduate schools and competition for financial aid there. It has been ascertained 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 Examination may be utilized to determine the student's acceptability. Graduate schools, in general, do tend to favor those applicants who have good letter grades on their transcripts.

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 reasons. It is never applied to poor work or to nonattendance of class by the student. It means that the student has informed the instructor of the reason for the requested incomplete, and the instructor has agreed to the request.

An "I" grade must be removed within one calendar year 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 as a permanent part of the student's academic record.

A "W" grade is assigned only when an official withdrawal has been completed. (See Withdrawals.)

Grade changes attempted by students must be initiated no later than the end of the eighth week of the next regular semester (fall or winter) following the semester or session in which the grade was given. A grade grievance must be initiated within five working days after the start of the next regular semester (see Grade Grievance

Procedure in Student Reference Section). For instructor-requested changes, this means that the appropriate form has been submitted to the department head. For student appeals, it means that the instructor has refused to make a change and the issue has been formally turned over to the departmental grievance board.

An extension beyond this limitation may be permitted only by the dean of the college in which the course was taken. Such extensions will be granted only on verifiable evidence of emergency circumstances, such as serious illness or military obligation, which prevented the petitioner from acting during the prescribed period.

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 Admissions Review/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 and 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 grade point average.
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, Registration, and Advising.

Grade reports are mailed by the University to the home address of the student normally within one week of the end of each semester/session. Undergraduate students' academic records are kept on permanent file in the Academic Records and Certification Office, Room 302, Pierce Hall. Unless there are past due financial obligations, students may get an official transcript of their complete records by requesting them in writing from that office and upon payment of the transcript fee specified.

The scholarship index or grade point average is the total number of Eastern Michigan University grade points acquired, divided by the total number of Eastern Michigan University semester hours taken which carry grade points. When a course is repeated, only the last grade is used in the computation of the 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 grade point average. Non-index courses are not included in the computation of the grade point average.

Calculation of GPA for returning former or transfer 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.

Academic distinction is awarded at graduation to students whose cumulative grade point average merits special recognition. A 3.90-4.00 grade point average is accorded *summa cum laude*; a 3.70-3.89, *magna cum laude*; and 3.50-3.69, *cum laude* on the diploma and permanent transcript record.

GRADE GRIEVANCE PROCEDURE

The grade grievance procedure provides each student with the opportunity to appeal formally a final grade in a course because he or she believes that the grade has been awarded

capriciously or unfairly. This procedure is not intended to handle disputes that may arise about the grading of individual exams or assignments during the semester. When such disputes arise, the student should contact the instructor immediately, rather than waiting until the end of the semester. Each grade grievance submitted according to this procedure must be an individual action by an individual student, and class action grievances by one student on behalf of several students or an entire class are not permitted.

STEP I

If a student wishes to appeal a final grade, the student must contact the instructor within **five (5) working days** after the start of the next semester; i.e., the semester following the one in which the disputed grade was given (see General Notes for the spring-summer policy). If the instructor is teaching on campus the next semester, but is temporarily unavailable or simply cannot be reached during this five-day period, then the student should deliver a written request for an appointment with him/her, stating the reason, to the department head no later than the final day of the five (5) day period. With the aid of the department head in scheduling an appointment, the instructor and student must then meet as soon as possible and discuss the disputed grade privately. In the event that the department head has difficulty in assisting the student in scheduling the appointment, a detailed written record of communication or attempts to communicate between the department head and the instructor will be maintained by the department head. Whenever possible, conflicts over grades should be resolved informally between the instructor and the student as a result of this Step I discussion.

If the instructor has left the University permanently or is not available for a period of sixty (60) days or more (e.g., if the instructor is away on sabbatical leave, medical leave, or is in his/her off semester on a Plan C appointment), then the department head shall act in his/her behalf and make a decision either in support of or against the grievance. In making this decision, the department head shall review all available grade records, discuss the matter with the student, and with the written consent of the student, request and evaluate a written statement submitted within ten (10) working days by the instructor concerning the disputed grade. The department head cannot act in this manner on behalf of the instructor during the spring-summer period simply because the instructor is not teaching during either the spring or summer session, unless the disputed grade affects the student's plans to graduate that year.

STEP II

If the grade dispute is not resolved in Step I to the student's satisfaction and he or she still believes that the grievance has merit based on the facts of the case, the student has the right to file a formal written grievance to the department head who will forward it immediately to the Department Grade Grievance Committee. Guidelines for filing a formal grievance are as follows:

1. A grievance must be based on evidence that the instructor has been capricious and/or unfair in awarding a grade. The written grievance must describe specifically the perceived capricious or unfair action of the instructor. The student also should present all other evidence or documentation in support of his or her allegations. Disagreement with an instructor's judgment in and of itself is not a basis for a grievance, nor is disagreement with an instructor's grading standards, if such standards have been described in advance for the class and have been applied fairly to all students in the class.
2. A grievance must be filed within **fifteen (15) working days** after the start of the next semester following the one in which the disputed grade was given.

Within ten (10) working days after receipt of the written grievance, the department head must schedule a hearing before the Department Grade Grievance Committee. The department head cannot simply make a personal judgment that the grievance is without merit, and thus refuse to give it to the Department Grade Grievance Committee. However, after scheduling the hearing, the department head may request a closed three-person meeting in his/her office with just the instructor and the student, to discuss informally the disputed grade one final time. If either the instructor or the student refuses to attend such a meeting, the department head shall act only as a facilitator or mediator. His/her role is restricted solely to promoting further discussion, not to imposing his/her judgment and/or making a decision in the case. If the dispute is resolved in this meeting, the written grievance shall be withdrawn and the scheduled hearing cancelled. If the dispute is not resolved, the grievance hearing is then held as previously scheduled. In such cases, the department head shall not communicate his/her opinions/judgments regarding the grievance and/or the discussions in the closed meeting to the members of the Department Grade Grievance Committee.

The Department Grade Grievance Committee shall be composed of three (3) faculty members and two (2) students. The faculty members shall be selected by appropriate department procedures. The students shall be selected from the list of representatives designated annually (no later than October 15 each year) by Student Government for that particular college. It is preferred that one student on the committee be a graduate student in those departments that offer graduate courses. In graduate student grievances, at least one of the student committee members must be a graduate student.

The student grievant may, however, request in advance in writing that the two (2) student be excused and that his or her grievance be heard only by the three (3) faculty members. The committee shall conduct a hearing according to the following guidelines:

1. Prior to the hearing, any written information of support for either the student or the instructor should be distributed to committee members.
 2. A detailed record shall be kept of the hearing, preferably a taped sound recording. If a written record is kept, that record should be signed by the Grievance Committee, asserting that the written record is a true record of the hearing proceedings. If a tape serves as the hearing record, the Grievance Committee shall sign a statement attesting that the tape is the true record of the hearing proceedings.
- Written or recorded records of any Step II Grievance shall be kept on file in the college dean's office and copies shall be provided, upon request, to the student who has filed the grade grievance or the faculty member against whom the grievance was filed. Costs associated with duplicating grade grievance records shall be borne by the individual(s) requesting copies.
3. The hearing shall be open unless the student or instructor requests a closed hearing. This request should be conveyed in writing to the department head prior to the hearing.
 4. Both the student and instructor shall be permitted an adviser. Advisers must be members of the University community, i.e., students or full-time faculty or staff members.
 5. The department grade grievance chair shall begin the hearing by beginning the tape recorder (or announcing the name of the person who will be taking minutes) and reviewing the guidelines and procedures under which the hearing shall be conducted.

The committee chair will then announce, "This Step Level II Grade Grievance Hearing is being held on (date). (Name of student) is grieving the grade of (grade) received during the (semester) in (class prefix, number, and section I.D. taught by (instructor)). The following committee members are in attendance today: (members give their names)."

6. In order, the student and the instructor will present their cases. Both the student and the instructor may call witnesses, and the student, instructor, adviser(s), and committee members all have the right to question any witnesses that are called. The student and the instructor should be asked for brief closing statements.
7. The chair will then close the hearing with "This Step Level II Grade Grievance Hearing is now concluded. The committee will meet in executive session and will present its findings, in writing, to the department head within (5) working days. The written decision/recommendations must contain a numerical report of the vote and must be signed by the members of the committee. The department head will notify the student and the instructor of this committee's decision/recommendation."
8. Either the student or the instructor may appeal the decision/recommendations of the Department Grade Grievance Committee to the University Grade Grievance Committee under the conditions listed below. This appeal must be filed within five (5) working days of receipt of the decision.

STEP III

Either the instructor or the student grievant may submit a written appeal of the prior decision at Step II by the Department Grade Grievance Committee within five (5) working days of written receipt of that decision, if one of the following conditions is met:

1. The Office of the Provost determines that there is evidence that established procedures for Step II were violated; or
2. There was at least one dissenting vote at the Step II level; or
3. New evidence or new witnesses not previously considered or heard at Step II become available.

In the absence of 1, or 2, or 3 above, simple disagreement with the decision rendered at Step II is not sufficient basis for an appeal. In other words, there is no automatic right of appeal in every case requiring that the University Grade Grievance Committee reconsider the entire grievance case. If the appeal is based on new evidence or new witnesses, the written appeal statement must explain precisely how this evidence or testimony relates directly to the alleged unfair or capricious awarding of the disputed grade. If said evidence or witnesses had been available prior to the Step II hearing, the hearing shall be remanded back to the Step II departmental committee. Only newly discovered evidence and/or witnesses may be introduced at the Step III hearing level (it shall be the responsibility of the petitioner to demonstrate that the evidence and/or witness were not available at Step II).

The appeal shall be submitted to the associate provost, (or a substitute designated by the provost) with a copy to the dean of the appropriate college. The University Grade Grievance Committee shall be chaired by the associate provost and shall have the following additional members: the dean of the involved college or his/her designee; two (2) faculty members, one of whom is from the involved college, but not from the department in which the grievance originated; and one (1) student, appointed by Student Government. The two faculty members shall be selected by the associate provost from an available pool of nominees representing all the colleges.

The University Grade Grievance Committee shall review all written documents which were available to the Department Grade Grievance Committee, the written or taped recording of the Step II hearing, and the final report and decision of the Step II Committee. The University Grade Grievance Committee may reconvene the participants in the Step II hearing to answer questions, if desired.

Within **twenty (20) working days** of the receipt of the appeal, the University Grade Grievance Committee shall issue a written Step III decision to both the instructor and the student. This decision shall be final; no further appeal is possible.

RECORDS

When the Grade Grievance Procedure results in an instructor's grade being changed without his or her agreement, then all University records containing that grade in which the name of the instructor appears shall be identified by an asterisk (*). On these records, the asterisk will be footnoted with the following statement: "This grade is a result of an appeal procedure." On those records in which the instructor's name does not appear, the grade will not be asterisked, nor will there be any other indication that the original grade was changed.

GENERAL NOTES

1. The time limits/deadlines for submitting grievances/appeals, holding meetings, and making decisions are to be followed by all parties. However, extensions of the time limits may be requested in writing by any of the involved parties. Such requests must originate prior to the expiration of the stated time limit. The dean of the involved college will make the decision to approve or to deny each request for a time limit extension at Step I or Step II. Decisions regarding Step III time limit extensions will be made by the Office of the Provost.
2. Each academic department shall select the faculty members for the Department Grade Grievance Committee at the beginning of the academic year in September. The committee will hear all grade grievances during the next 12 months. Substitute members shall be selected to replace any committee member who is involved in a grade grievance. Also, substitute members shall be selected to replace any faculty committee member who is unavailable for an extended period of time (e.g., spring and/or summer).
3. Each college shall select two (2) faculty members plus one alternate who will be available over a 12-month period for assignment to the University Grade Grievance Committee. These selections shall be made by the appropriate college-level faculty advisory council/committee at the beginning of the academic year in September. Unlike the Department Grade Grievance Committee, this Step III University Grade Grievance Committee may of necessity have a different membership for each grievance.
4. Grievances relating to grades awarded for the winter semester ending in April shall normally be pursued the next fall, measuring all stated deadlines with respect to the start of the fall semester in September. However, if the instructor is teaching on campus during the spring or summer session and the student is enrolled on campus during the same session, then with their mutual agreement, the grievance can be pursued during the spring or summer. However, should either the instructor or the student prefer to wait, then action of the grievance will be postponed until the fall semester. The only exception in which the grievance shall be pursued during the spring or summer session without the consent of the instructor

who is teaching on campus is for any case in which the disputed grade affects the student's plans to graduate that year. In such cases, if the instructor is unwilling to participate, the department head may act on his/her behalf.

5. Throughout this procedure, the title department head shall be interpreted to include program directors or program coordinators for appropriate academic units in which there is no administrator with the title of department head.
6. Students are encouraged to seek advice from the REACT office.

ACADEMIC RETENTION AND DISMISSAL

Academic probation occurs when the student's cumulative grade point average at EMU is less than 2.00 (a "C" average). Placement on academic probation is automatic and applies even if the student states that official notification of probation has not been received from the University.

A student's probationary status results from his/her academic record for the semester just completed, viewed in relation to the student's total Eastern Michigan University academic record.

University action in placing a student on academic probation should make the student aware that satisfactory progress is not being made toward completing degree requirements. The student also should realize the need to take steps, such as seeking additional help and advice, to improve the quality of his/her academic performance.

For this reason, the Academic Advising Center notifies students in writing that within the first 30 days of the semester—preferably within the first week of the semester—they are required to have a conference with an assigned academic adviser to review the student's program of classes and individual plans made for that semester. The adviser may require further conferences, restrict the student's academic load or stipulate special conditions to help ensure the student's satisfactory progress toward graduation.

While on academic probation, a student must earn a semester grade point average of at least 2.0 (a "C" average) in each succeeding period of his/her enrollment (including spring and summer sessions) until probation is removed. Probation is removed when the student's cumulative grade point average at EMU is at least 2.0.

The College of Education restricts its students placed on academic probation from registering for, remaining in, or receiving credit for professional education courses offered by the following departments or divisions: Teacher Education, Student Teaching, Guidance and Counseling, Special Education, and methods classes listed by cross-reference in these departments. The restrictions do not include these introductory courses: EDP 106 Introduction to University Studies, G&C 100 Career Exploration and Decision-Making, SGN 271 Introduction to Speech Pathology, and SGN 251 Education of Exceptional Children.

No credit may be earned in any graduate level course (500 level) on or off campus while an undergraduate student is on academic probation. A 2.5 GPA is required to enroll.

Academic dismissal may result when students on probation fail to meet the required grade point average of 2.0 in each enrollment period.

Students not on academic probation whose cumulative grade point deficit at the end of any enrollment period is 13 or more also may be dismissed for academic reasons.

Exceptions to the above policies may be made, provided the student submits an appeal to the Admission Review/Academic Standards Committee, under the following conditions:

1. A student on academic probation who earns less than the required grade point average of 2.0 (a "C" average) in any semester or session of enrollment may be retained on aca-

- demarcation provided that is the recommended judgment of the Admissions Review/Academic Standards Committee.
2. A freshman may, with the approval of the Admissions Review/Academic Standards Committee, be permitted two full semesters of enrollment even though the grade point deficit is greater than 13 during the first semester. This is not automatic.
 3. A student on academic probation, whose grades for the current enrollment period include an "I," will be retained only at the discretion of the Admissions Review/Academic Standards Committee. An academic dismissal remains in effect pending the outcome of any appeal.

Readmission of a student dismissed from the University cannot take place until two successive enrollment periods (including one full semester) have elapsed unless unusual or extenuating circumstances exist. This waiting period is designed to help the student gain the needed maturity for pursuing a degree through work experience, travel or course work at other accredited collegiate institutions.

Readmission is not automatic, but requires the student to seek a readmission interview with an adviser in the Academic Advising Center to determine if the student is ready to return.

Students will be required to support their eligibility for readmission through:

1. Documentation of their activities during the dismissal period that relates to the reasons for dismissal and that supports their readiness to resume their academic career at Eastern Michigan University.
2. Earning a minimum grade point average of 2.0 ("C" average) if courses are taken at other accredited collegiate institutions. (See restrictions on repeating courses.)

A student who is readmitted and is dismissed a second time normally will not be readmitted again.

To apply for readmission a student must:

1. Obtain a petition for readmission form in the Academic Advising Center, 301 Pierce Hall; complete the form and return it by the deadline established on the petition.
2. If any courses have been completed at another collegiate institution since leaving EMU, transcripts of such work must be included with the petition for readmission. If a student is enrolled in such courses at the time of petition, the transcripts must be received in the Academic Advising Center no later than the first day of classes in the session for which the student first returns. The grade point average for all such work must be at least 2.0 ("C" average) or readmission will be cancelled.
3. Students who have been discharged from active military duty must include a copy of their separation record (DD Form 214) with the petition for readmission. If students apply for readmission prior to discharge, they may be readmitted conditionally pending receipt of their separation records.

Veterans whose academic records prior to entry into the U.S. Armed Forces do not qualify them for readmission are placed on probation if desiring to renew their education. Subsequent to readmission, the veteran is subject to current University dismissal-probation (DP) procedures.

WITHDRAWALS

Withdrawals from class are permitted students according to the following stipulations:

*First three weeks: Any change in the student's program occurring during this period is accomplished through the Registration Office as a part of the registration adjustment process. Such changes are not recorded in the student's permanent record.

*Fourth through tenth week: All student-initiated withdrawals are accepted automatically and recorded as "W." A withdrawal form must be obtained from the Registration Office, 302/303 Pierce Hall. The instructor's signature must be secured on the form as evidence that the instructor and student have discussed the contemplated action, including possible alternatives and consequences. (In some cases, other signatures are required.) Withdrawals initiated during this period are not eligible for tuition adjustment and are submitted for processing at the Registration Office. (See Tuition and Fee information and Appeal Process.)

*After tenth week—until beginning of final exam period: The student must initiate the withdrawal request at the Academic Advising Center. The decision made on the request will be communicated in writing both to the student and the instructor in question. Students should not stop attending class until they have received official notification that their withdrawal has been approved. If a student stops attending class without officially withdrawing from the class and does not take the final examination, University policy requires that the instructor assign a grade of "E" for the course.

A "W" may be granted to students under either of the following conditions:

1. The student's work in the course at the time of the withdrawal request is "A" through "C-."
2. Unexpected, emergency circumstances have arisen after the tenth week of the semester and prevent the student from completing the course work. These circumstances must be specific and verifiable.

The decision to award the "W" will be made by the Academic Advising Center associate director or designee based upon evidence submitted and in conference with the student. If the application is denied and the student fails to complete the course work successfully, a grade of "E" will be recorded by the instructor.

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.

*These procedures and University withdrawal procedures also apply to spring and summer sessions. The exact withdrawal and deadline dates are printed in the current Class Schedule Bulletin for the session concerned.

Withdrawal from the University and all classes currently being taken is accorded students who apply in person at the Registration Office. If students are unable to accomplish the withdrawal in person, they may send a written request to the Registration Office indicating the reasons for withdrawal. Any tuition/fee adjustment responding to written communication is based on the postmark date (see also Tuition and Fees).

The policy for withdrawal from the University is:

1. Students who drop during the first seven calendar days of the semester (three calendar days for spring/summer) will receive a 100 percent tuition credit adjustment and no grades will be posted. An adjustment fee of \$10 is charged.

2. Students who drop during the next 14 calendar days of the semester (the next four calendar days for spring/summer) will receive a 50 percent tuition credit adjustment and no grades will be posted.
3. Students who drop after 21 calendar days of the semester (seven for spring/summer) through the day prior to the first day of University final examinations will receive no tuition credit adjustment and grades of "W" will be posted.
4. No withdrawal will take place after the official University final examination period has begun.

The EMU Class Schedule Bulletin published each term gives exact dates for tuition credit adjustment and withdrawal deadlines.

Retroactive withdrawal from the University may be requested by a student when unexpected circumstances arise after the completion of classes for a term. Normally, the request will be considered only for the preceding term.

The retroactive withdrawal policy is dependent on one or both of the following reasons:

1. Administrative. Through an administrative problem or error, the student received an "E" grade.
2. Mental or physical stress. Subsequent to awarding the term grades, the student claims that severe physical or psychological stress was present during the semester. Documentation must be presented by or on behalf of the student and a consultation may be required. In this case, the decision will affect all the classes the student was registered for during the term in question. In cases of severe mental or physical stress, it is usually assumed that students are so incapacitated they were not able to carry on with University responsibilities.

In either situation, the student must initiate the request at the Academic Advising Center, 301 Pierce Hall. Upon review of the documented evidence and possible further consultation, the director or designee will recommend action to the office of the vice president for academic affairs.

The approval of a retroactive withdrawal does not constitute approval of a tuition refund. Grades of "W" will be posted on the official academic record.

STUDENT CONDUCT/GRIEVANCES

Grade grievance procedures also may be obtained from the academic department involved. Student employment grievance procedures may be obtained from the Career Services Center, fourth floor, Goodison Hall.

COURSE PREFIXES

A department prefix or code is used to identify courses offered by Eastern Michigan University:

	PREFIX
ACADEMIC AFFAIRS DIVISION	AAD
COLLEGE OF ART AND SCIENCES	
African American Studies	AAS
Art	FA
Art Education	FA
Art History	FA
Studio Art	FA
Biology	BIO
Botany	BOT
Elementary Science	ESC
Microbiology	MIC
Zoology	ZOO
Chemistry	CHM
Computer Science	CSC
Communication and Theatre Arts	CTA
Activity	CTA
Communication	CTA
Drama/Theatre for the Young	CTA
Interpretation/Performance Studies	CTA
Telecommunications and Film	CTA
Theatre Arts	CTA
Speech	CTA
Economics	ECO
English Language and Literature	
English	ENG
Journalism	JRN
Linguistics	LIN
Literature	LIT
Foreign Language and Bilingual Studies	
Classics Courses	CLA
English as a Second Language	ESL
Foreign Language	FLA
French	FRN
German	GER
Greek	GRK
Japanese	JPN
Language	LNG
Latin	LAT
Spanish	SPN
Teaching English as a Second Language (TESOL)	TSL
Geography and Geology	
Earth Science	GES
Geography	GEO
Geology	GLG
Historic Preservation	GHP
History and Philosophy	
History	HIS
Philosophy	PHI
Mathematics	MTH
Music	MUS
Applied Music	AMU
Physics and Astronomy	
Astronomy	AST
Physics	PHY
Political Science	PLS
Psychology	PSY
Sociology, Anthropology, and Criminology	
Anthropology	ANT
Criminology	CRM
Sociology	SOC
Women's Studies	WMS

COLLEGE OF BUSINESS	COB
Accounting	ACC
Finance and Computer Information Systems	
Finance	FIN
Insurance	INS
Operations Research and Information Systems	ORI
Management	MGT
Marketing	MKT
Law	LAW
Real Estate	RES
COLLEGE OF EDUCATION	
Leadership and Counseling	
Educational Leadership	EDL
Guidance and Counseling	G&C
Health, Physical Education, Recreation and Dance	
Athletics	ATH
Dance	DAN
Health Education	HED
Physical Education	PED
Physical Education Activity—General	PEG
Physical Education Activity—Majors	PEP
Recreation	REC
Special Education	
Emotionally Impaired	SEI
General	SGN
Hearing Impaired	SHI
Learning Disabled	SLD
Mentally Impaired	SMI
Physically and Otherwise Health Impaired	SPI
Speech and Language Impaired	SLI
Visually Impaired	SVI
Student Teaching	EDU
Teacher Education	
Curriculum and Instruction	CUR
Educational Media	EDM
Educational Psychology	EDP
Educational Technology	EDT
Reading	RDG
Social Foundations of Education	SFD
COLLEGE OF HEALTH AND HUMAN SERVICES	HHS
Associated Health Professions	AHP
Clinical Laboratory Sciences	CLS
Health Administration	HAD
Occupational Therapy	OT
Human, Environmental, and Consumer Resources	
Dietetics	HEC
Hospitality Management	DTC
Family and Consumer Science	HM
Fashion Merchandising	FCS
Interior Design	FM
Nursing	IDE
Social Work	NUR
Gerontology	SWK
GRT	GRT
COLLEGE OF TECHNOLOGY	
Business and Industrial Education	
Business Education	BE
Industrial Education	IE
Industrial Technology	IT
Interdisciplinary Technology	IDT
Military Science	MS

GRADUATION REQUIREMENTS

To graduate from Eastern Michigan University, students must fulfill basic studies requirements, satisfy major and minor requirements, and earn a bachelor of science or bachelor of arts degree or one of the baccalaureate degrees pertinent to their fields of study as authorized by this University (see below).

The minimum number of credit hours required for graduation is 124. To earn a degree, students must complete the basic studies (which follow), complete a major of 30 to 36 hours and a minor of 20 to 24 hours, as specified in their fields of study, and electives to equal the minimum total of 124 hours.

The catalog requirements in effect at the time of the student's initial registration at a college or university 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. In the event the student does not complete degree requirements within seven years of the date of his/her original registration, the student may be required to have his/her credits re-evaluated by the Office of the Registrar in keeping with more recent catalog requirements. (See special time requirements in the description of the nursing program.)

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 also are awarded in fine arts (B.F.A.) and art education (B.A.E.)—see Department of Art, College of Arts and Sciences; business administration (B.B.A.)—see College of Business; Bachelor of Business Administration and Bachelor of Arts in language and world business (B.B.A./B.A.)—see College of Business or Department of Foreign Languages, College of Arts and Sciences; business education (B.B.E.)—see Department of Business and Industrial Education, College of Technology; music education (B.M.E.), music-performance (B.Mu.), and music therapy (B.M.T.)—see Department of Music, College of Arts and Sciences; nursing (B.S.N.)—see Department of Nursing Education, College of Health and Human Services.

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 this 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 Individualized Studies, Master of Science in organizational behavior and development, and Master of Liberal Studies. In addition, there is a Specialist in Arts degree and a post-master's program called Certificate of Advanced Study in Curriculum and Instruction (CASCI) and a doctorate in educational leadership. All are listed in the Graduate Catalog.

Bachelor's degree programs require all students to take courses in the various subject areas listed below as specified both in the basic studies requirements and in departmental majors and minors.

These subject group areas are:

Language and Literature (Group I)

Ancient language and literature, modern language and literature, speech communication, library science, theatre arts.

Science and Mathematics (Group II)

Astronomy, biology, botany, chemistry, science-oriented geography/geology (earth science), mathematics and computer science, physics, physiology, psychology, zoology.

Social Sciences (Group III)

Anthropology, economics, social science-oriented geography, history, philosophy, political science, sociology.

Education (Group IV)—Teacher Education only

Education (including methods courses and student teaching).

Fine Arts (Group V)

Art, music.

Practical Arts (Group VI)

Business administration; business education; health administration; human, environmental and consumer resources; industrial education; industrial technology; medical technology; military science; nursing education; occupational therapy; social work.

Physical Education and Health Education (Group VII)

Dance, health education, military science, physical education, recreation.

BASIC STUDIES PROGRAM

History

In February 1985, the provost commissioned a Basic Studies Review Committee and charged the members "with conducting a comprehensive re-examination of our present basic studies requirements and with determining what changes should be made to provide the most effective 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 on 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

Effective fall semester 1990, the new basic studies program applies to all entering first time freshmen students at EMU who begin their college work in fall 1990 or thereafter. It also applies to transfer students who begin their college work at another institution in fall 1990 or thereafter. Transfer students must consult the Academic Advising Center to determine the degree to which their transfer credits may be applied toward the EMU basic studies requirements.

Rationale

The basic studies program is designed to provide you with a core of knowledge about people, things, and processes. The program also seeks to teach you how to evaluate the work of others, to add to your store of ideas and ideals, and to communicate your discoveries and insights. The basic studies courses are intended as more than introductions to fields of study; they also should develop your capacity for independent thought. The basic studies 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: 16 courses

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 lists 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 theatre arts. For further information, consult the Honors Courses in Basic Studies on page 30.

Special Note 3: A number of majors and minors specify precisely which courses must be taken to satisfy the following basic studies requirements. It is extremely important that you confer with the Academic Advising Center and/or your departmental adviser prior to making your basic studies choices.

AREA I: SYMBOLICS AND COMMUNICATION

Requirements: 5 courses

- 1. A course in written composition.
- 2. A course in speech communication.
- 3. A course in one of the following areas:
 - a. an upper-level course in written composition.
 - b. an upper-level course in speech communication.
 - c. a course in foreign language composition.
- 4. A course in mathematical reasoning.
- 5. A course in computer literacy.

A. Rationale

Human beings need to know how to use symbols to communicate effectively. Writing requires a command of verbal symbols; speech uses both verbal and non-verbal symbols. Using written and spoken symbols, we construct, interpret, and influence human experiences and behavior. Mathematical symbols are used to communicate the extent, dimension, and structure of things and allow us to reason efficiently. The traditional competencies in speech, writing, and mathematics will be enhanced by your use of computer technology.

B. Meeting the Requirements in Area I (Symbolics and Communication)

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

1. A course in written composition

Note: For those students who do not submit test scores, placement will be determined by the Academic Advising Center.

ENG 120 Basic English Composition

You must enroll in this course in your first semester if your ACT score is below 19 on the enhanced ACT (or below 17 on the old ACT) or your SAT score is 400 or lower.

When you have completed ENG 120, you must then complete ENG 121.

ENG 121 English Composition

All students must complete ENG 121 in order to satisfy this requirement. Unusually competent students are eligible for a waiver from this requirement if they have a score of 550 or above on the SAT or 29 or above on the English section of the enhanced ACT (or 25 on the old ACT).

International students may substitute ESL 412 with permission of the Foreign Languages and Bilingual Studies department.

2. A course in speech communication

Complete one of the following courses:
CTA 121 Fundamentals of Speech (2 sem hrs.)
CTA 124 Fundamentals of Speech (3 sem 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**

Complete one of the following courses:
ENG 225 Intermediate English Composition
ENG 324 Principles of Technical Communication
ENG 227 Writing about Literature
ENG 326 Research Writing

3b. An upper level course in speech communication

Complete one of the following courses:
CTA 224 Public Speaking
CTA 225 Listening Behavior
CTA 226 Non-Verbal Communication
CTA 227 Interpersonal Communication
*CTA 374 Intercultural Communication

3c. A course in foreign language composition

Complete one of the following courses (initial placement in language courses depends upon previous student and/or placement examinations).

LAT 121/122 Beginning Latin
GRK 121/122 Beginning Ancient Greek
FRN 121/122 Beginning French
FRN 233/234 Intermediate French Conversation, Composition, and Grammar
GER 121/122 Beginning German
GER 233/234 Intermediate German Conversation, Composition, and Grammar
JPN 121/122 Beginning Japanese
JPN 211/212 Intermediate Japanese
SPN 121/122 Beginning Spanish
SPN 201/202 Intermediate Spanish

4. A course in mathematical reasoning

Complete one of the following courses:
MTH 109 Functional Mathematics II
MTH 118 Mathematical Analysis for Social Sciences I
MTH 119 Mathematical Analysis for Social Sciences II
MTH 120 Calculus I
MTH 121 Calculus II
MTH 122 Elementary Linear Algebra
MTH 150 Mathematical Reasoning
MTH 270 Elementary Statistics
MTH 341 College Geometry
SOC 250 Social Statistics I

Note: Students are entitled to a waiver of this requirement if they have submitted a score of 22 or above on the mathematics portion of the enhanced ACT or a score of 500 or above on the SAT. A waiver form must be obtained from the Academic Advising Center. Curriculum or major requirements must still be satisfied.

5. A course in computer literacy

Complete one of the following courses:
BE 201 Microcomputers for Business Applications
CSC 136 Computers for the Non-Specialist
CSC 137 Introduction to FORTRAN Programming
CSC 138 Computer Science I

CSC 237 Computer Programming and Numeric Methods
HHS 226 Computers for Health and Human Services
IT 105 Computer Applications for Industry
IDT 201 Microcomputer Applications in Technology
ORI 215 End-User Computing

AREA II: SCIENCE AND TECHNOLOGY**Requirements: 3 courses**

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 unit course in high school with a grade of "C" or above.
 - b. If you have submitted proof of having completed a one unit high school course in chemistry or physics, you may satisfy this requirement by choosing among chemistry, earth science/geology, or physics/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.

A. Rationale

The sciences study the physical character of the universe and the nature of its living organisms, including the human species. Learning to use the scientific method will expand your knowledge and understanding of the universe.

Observation of the natural world leads to theories, from which hypotheses are generated. These hypotheses are then checked against the empirical data collected by systematic observation and experimentation. Science enables you to understand the world better and, where appropriate, to modify your thinking about nature.

The study of technology enables you to understand how scientific knowledge is employed to solve practical problems. Knowledge of scientific and technological methods will help you to be an active problem-solver rather than a mere spectator.

B. 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**

Complete one of the following courses:
PHY 100 Science for Elementary Teachers
PHY 110 Physical Science
PHY 221 Mechanics, Sound, and Heat
PHY 223 Mechanics, Sound, and Heat
CHM 105 Survey of Chemistry
CHM 115 Chemistry and Society (no laboratory)
CHM 115-116 Chemistry and Society
CHM 119 Fundamentals of Chemistry
CHM 120 Fundamentals of Organic and Biochemistry
CHM 121-122 General Chemistry I

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

Complete one of the courses listed in 1a, or one of the following courses:
AST 203 Exploration of the Universe (no laboratory)
AST 203-204 Exploration of the Universe

AST 205 Principles of Astronomy (no laboratory)
 AST 204-205 Principles of Astronomy
 GES 108 Earth Science
 GLG 120 The Fossil Record (no laboratory)
 GLG 160 Physical Geology

2. A course in life science

Complete one of the following courses:
 BIO 105 Biology and the Human Species
 BOT 221 General Botany
 ESC 303 Science for the Elementary Teacher
 ZOO 222 General Zoology
 PSY 101 General Psychology (no laboratory)
 PSY 102 General Psychology

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 your three courses in this area from three different departments.

3b. You also may choose your third course from the following list:

CHM 101 Science for Elementary Teachers
 IDT 150 Understanding Technology (no laboratory)
 IT 240 Science, Technology, and People (no laboratory)

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 of 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 course in cross-cultural or international studies.

A. Rationale

As an informed person you should understand the structure and dynamics of groups of human beings and be able to study group behavior.

Analysis of American government and comparisons with other governments will help you understand how to influence your government in positive ways.

Your study of the development of human institutions and practices through time will increase your understanding of how earlier societies met challenges and adjusted to changing circumstances. You will learn how those successes and failures led to the problems and opportunities which face us now.

Learning how a given social science gathers and interprets its data will help you understand that good public decisions depend on adequate information about issues.

A knowledge of the history, social settings, values, and perceptions of other sub-cultures, cultures, and nations will broaden your appreciation of different ways of organizing social life and looking at the world.

B. Meeting the Requirements in Area III (Social Science)

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

1. A course in U.S. government

Complete one of the following courses:

PLS 112 American Government
 PLS 113 American Government Honors

2. A course in history

Complete one of the following courses:
 HIS 101 Western Civilization to 1648
 HIS 102 Western Civilization, 1648 to World War I
 HIS 103 Twentieth Century Civilization
 HIS 106 Asian and African Civilizations
 HIS 123 The United States to 1877
 HIS 124 The United States, 1877 to the Present

Note: Some students may be eligible to fulfill the requirements in history by pursuing options described in the Honors Courses in Basic Studies on page 30.

3. A course in anthropology, economics, geography, or sociology

Complete one of the following courses:
 ANT 135 Introduction to Cultural Anthropology
 ECO 201 Principles of Economics I
 GEO 107 Introduction to Geography
 GEO 110 World Regions
 SOC 105 Introductory Sociology

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

4a. A second course in a two-course history sequence

Complete one of the following courses:
 HIS 102 (follows 101) Western Civilization, 1648 to World War I
 HIS 103 (follows 102) Twentieth Century Civilization
 HIS 124 (follows 123) The United States, 1877 to the Present

4b. A second course in a two-course sequence in anthropology, economics, geography, or sociology

Complete one of the following courses:
 ANT 140 (follows 135) Introduction to Prehistoric Anthropology
 ECO 202 (follows 201) Principles of Economics II
 GEO 111 (follows 110) Regions and Resources
 SOC 202 (follows 105) Social Problems

4c. A course in cross-cultural or international studies

Complete one of the following courses:
 *AAS 101 Introduction to African American Studies
 *ANT 205 Minority Women in the United States
 *ANT 233 Peoples and Cultures of Mexico
 *ANT 234 Peoples and Cultures of Latin America
 *ANT 236 Peoples and Cultures of Africa
 *ANT 237 Indians of North America
 *ANT 245 Culture of Japan
 *ANT 214 Racial and Cultural Minorities
 *ANT 355 Anthropology of Women
 *ECO 321 Minority Workers in the Labor Market
 *ECO 328 Economics of Women
 *HIS 305 Indians of the United States
 *HIS 315 History of Black Americans
 *HIS 336 History of Women in the United States and Great Britain, 1800 to the Present
 *HIS 341 The Middle East, 1798 to Present
 *HIS 342 North Africa, 1798 to Present
 *HIS 348 Twentieth Century Africa
 *HIS 356 Latin America: National Period
 *HIS 375 Modern India
 *SOC 205 Minority Women in the United States
 *SOC 214 Racial and Cultural Minorities
 *SOC 344 Sociology of Sex Roles
 *WMS 200 Introduction to Women's Studies

AREA IV: ARTS AND HUMANITIES**Requirements: 4 courses**

1. One of the following:
 - a. a course in literature
 - b. an intermediate or advanced foreign language literature course
2. One of 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 course in cross-cultural or international studies
3. A course in philosophy or religion
4. A course in art, dance, music, or theatre arts

A. Rationale

The arts and humanities help you to probe the meaning of human experience and imagine how that experience could be altered. Such probing and imagining lead to new insights and visions.

Exposure to the arts and humanities increases the repertoire of ideas, images, and sounds that you can enjoy. Training in criticism will help you analyze your own reactions to various art forms and develop educated tastes and values. The arts and humanities include literature, aural and visual media, philosophy, religion, and the plastic and performing arts.

B. 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 Courses in Basic Studies on page 30.

1. Complete a course from one of the following options (1a or 1b):
 - 1a. A course in literature
Complete one of the following courses:
LIT 100 The Reading of Literature
LIT 101 The Reading of Literature: Fiction
LIT 102 The Reading of Literature: Poetry
LIT 103 The Reading of Literature: Drama
 - 1b. A course in intermediate or advanced foreign language literature
Complete one of the following courses:
FRN 221/222 Intermediate French Reading
FRN 341/342 Survey of French Literature
GER 221/222 Intermediate German Reading
GER 341/342 Survey of German Literature
SPN 221/222 Intermediate Spanish Reading
SPN 341/342 Survey of Spanish Literature
SPN 351/352 Survey of Spanish American Literature
2. Complete a course from one of the following options (2a, 2b, 2c, or 2d):
 - 2a. A second course in literature
Complete one of the following courses not previously chosen under 1a:
LIT 101 The Reading of Literature: Fiction
LIT 102 The Reading of Literature: Poetry
LIT 103 The Reading of Literature: Drama
 - 2b. A course in intermediate or advanced foreign language literature

Take any course not already completed from the list under 1b above.

- 2c. A course in oral interpretation
Complete CTA 210 Interpretative Reading
- 2d. A course in cross-cultural or international studies
Complete one of the following courses:
*FLA 215 The Culture of the Latino Groups in the United States
*LIT 204 Native American Literature
*LIT 260 African American Literature
3. Complete a course from one of the following options (3a or 3b):
 - 3a. A course in philosophy
Complete one of the following courses:
PHI 100 Introduction to Philosophy
PHI 110 Philosophies of Life
PHI 130 Introduction to Logic
PHI 132 Introduction to Critical Reasoning
PHI 212 Philosophy of Art
PHI 215 Philosophy of Religion
PHI 220 Ethics
PHI 221 Business Ethics
PHI 225 Political Philosophy
*PHI 226 Philosophy of Women
 - 3b. A course in the study of religion
Complete one of the following courses:
HIS 100 The Comparative Study of Religions
PSY 225 Psychology of Religion
4. Complete a course from one of the following options (4a, 4b, 4c, or 4d):
 - 4a. A course in art
Complete one of the following courses:
FA 100 Art Appreciation
FA 101 Introduction to Art
FA 107 Art History Survey I
FA 108 Art History Survey II
FA 122 Two-Dimensional Design
FA 123 Drawing I
FA 165 Graphic Design for Non-Majors
FA 166 Ceramics for Non-Majors
FA 167 Jewelry for Non-Majors
*FA 222 African and African American Art
 - 4b. A course in dance
Complete DAN 106 Introduction to the Performing Arts
 - 4c. A course in music
Complete one of the following courses:
MUS 100 Introduction to Music Theory
MUS 106 Introduction to the Performing Arts
MUS 107 Music Appreciation
 - 4d. A course in theatre arts
Complete one of the following courses:
CTA 106 Introduction to the Performing Arts
CTA 145 Introduction to Film Appreciation
CTA 150 Introduction to Theatre
*CTA 151 Black Theatre: An Introduction
CTA 158 Fundamentals of Acting
CTA 222 Drama and Play in Human Experience

CROSS-CULTURAL OR INTERNATIONAL STUDIES

Requirement: 1 course selected from Areas 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 foregoing Areas I-IV. Approved courses are designated with an asterisk(*).

A. Rationale

An understanding of significant U.S. minority groups, related foreign cultures, and women is important to gain an appreciation of the cultural diversity in this country. Relating each group or culture to the larger cultural and political context within this country enhances understanding of contemporary events and conditions.

B. Meeting the Requirements

This requirement may be fulfilled while also meeting the requirements in Areas I-IV. Select an approved course from Areas I-IV. Approved courses are designated with an asterisk (*).

HONORS HUMANITIES COURSES

Honors courses in basic studies 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 grade point average of at least 3.0 may enroll by permission of the Honors Director.

Available honors humanities courses (see departmental listings for course description) and the areas satisfied are:

CLA 104/HIS 104 Quest for Power: Famous Figures in History
3 credits Area: LIT or HIS

CLA 106/LIT 106 Rome and America
6 credits Area: LIT

HIS 127 The Splendid Centuries of Austria
3 credits Area: HIS

HIS 128/LIT 128 Russia in the Age of Tolstoy and Dostoevsky
3 credits Area: LIT or HIS

FA 151/HIS 151 Reason and Revolution
3 credits Area: FA or HIS

HIS 152/LIT 152 From the Gay Nineties to the Crash
3 credits Area: LIT or HIS

PHI 155/LIT 155 Narrative in Literature and Film
3 credits Area: LIT or PHI

179, 279, 379, 479 Special Topics
3 credits Area: Varies

FUTURE CHANGES IN THE BASIC STUDIES PROGRAM

Additional courses may be approved and refinements made periodically in the basic studies program.

Basic studies 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.

THE MACRAO AGREEMENT

Eastern Michigan University is a signator of the MACRAO (Michigan Association of Collegiate Registrars and Admissions Officers) agreement. The purpose of this agreement is to ensure that students who complete a specified distribution of general education courses at a community college will have satisfied

general education requirements at signatory four-year colleges. Eastern Michigan University accepts the MACRAO agreement with the following provision:

"All students who graduate from EMU should have the same number and distribution of general education courses. For transfer students, EMU recognizes courses completed as part of the MACRAO agreement as satisfying comparable courses in EMU's basic studies but students must satisfy all EMU program requirements or equivalents."

MAJORS/MINORS

Each student must complete a major subject of at least 30 semester hours and a minor subject of not less than 20 semester hours with the following exceptions:

1. A student on the elementary teaching curriculum may present three minors of not less than 20 semester hours each of which at least two are subject fields taught in the elementary grades.
2. A student who completes the specialized programs for teachers of art, business education, industrial education and music, or the professional programs in applied science, business administration, criminal justice, nursing, music therapy, industrial technology, occupational therapy, health administration, language and international trade, and social work 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. Basic studies 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 Eastern Michigan University the following minimum requirements in advanced courses numbered 300 or above in their majors and minors, unless specifically exempted by the department concerned:

1. At least nine hours in majors.
2. At least six hours in minors.
3. At least 15 hours in curricula that encompass both major and minor requirements.

DEGREE REQUIREMENTS

Residency: Candidates for the bachelor's degree must earn at least 30 semester hours at Eastern Michigan University. Of these 30 hours, a minimum of 15 hours must be taken on the Ypsilanti campus. The remaining 15 hours may be taken off campus.

Of the *last* 30 semester hours prior to the granting of the degree, at least 10 hours must be taken in courses offered by EMU. These 10 hours may be taken either on or off campus.

Students with credit from a junior or community college must earn a minimum of 60 semester hours exclusive of physical activity or junior/community college credit. When a student has earned a total of 75 semester hours from community colleges and/or four year institutions, courses should not be taken at a junior or community college for transfer to Eastern Michigan University.

Subject Limitation: No more than 60 semester hours in any one area of concentration may be applied toward the minimum of 124 hours required for a bachelor's degree.

Correspondence Credit: No more than 15 semester hours of correspondence credit may be applied toward a bachelor's degree, nor may correspondence credit be applied to meet any of the residence requirements.

Correspondence course grades will be included in figuring the scholarship index (grade point average).

Minimum GPA: Students will not be graduated if their scholarship index (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: All students shall present two semester hours of physical education activity credit for graduation. This requirement may be met in one of the following ways:

1. Students may elect to complete two hours of physical education activity from the wide range of classes offered each semester.
2. Veterans with at least one year of active duty may substitute their military service in lieu of the physical education activity requirement.
3. Any two Military Science courses may be applied in fulfillment of the physical education requirement.

This requirement may be modified or waived if, for reason of physical disability, the student is unable to participate in physical education activity courses. Physical disability shall be determined by the Health Service and, in conference with the department chair of Health, Physical Education, Recreation and Dance, 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 semester hours of credit earned in physical education activity courses to the minimum 124 credit hours required for graduation.

Students majoring in physical education, recreation 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 grade point average.

Military Service/Science: Students who have been in military service will be granted credit in Military Science 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; those who have served for six months in service will be given credit for the first year of Military Science.
2. Students who have completed two years Junior ROTC will be given credit for the first year of Military Science with departmental approval; those who have completed three years will be given credit for the first two years of Military Science with departmental approval.

Veterans who are awarded credit for Military Science under 1. above are, nevertheless, eligible to enter the advanced course voluntarily if qualified and should consult the Military Science Department on special opportunities that are available (see Military Science Department Advanced Program).

Military Science 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 Academic Records Office, 302 Pierce Hall, must be submitted with the \$30 graduation fee to the Cashier's Office, 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 in the Academic Records Office.

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.

Certificates always expire on June 30 of the calendar year; those issued in January are valid for only five and one-half years. The two certificates issued are:

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

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

*A holder of this certificate who has completed EMU's curricular requirements in art, home economics, industrial arts, music, or physical education is normally eligible to teach in the speciality 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 allocated for that purpose. The three vocational certificates issued are:

State Secondary Provisional Vocational Certificate in Consumer Home Economics Education

State Secondary Provisional Vocational Certificate in Office and/or Distributive Education

State Secondary Provisional Vocational-Certificate in Trade and Industrial Education.

Information on continuing certification may be obtained from the coordinator of continuing certification, 101 Boone Hall.

PROFESSIONAL CERTIFICATE

As of July 1, 1992, the Continuing Certificate will be discontinued. It will be replaced by the Professional Certificate.

Qualifications and procedures for the Continuing and Professional Certificates are the same. However, the Professional Certificate is issued for a period of only five years. Renewal of the Professional Certificate requires an additional six hours of credit.

Other professional certificates and procedures are as follows:

Registration in Dietetics: The American Dietetic Association issues a certificate of membership in dietetics upon successful completion of the coordinated dietetics curriculum. Successful completion of the national examination administered by the American Dietetic Association results in professional registration status with the American Dietetic 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 Technologists, and (4) American Medical Tech-

nologists. Because there can be differences in hiring 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 American Occupational Therapy Association (AOTA) requires successful completion of all academic requirements and fieldwork experiences and recommendation by faculty for candidates for certification 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 AOTA for certification and registration.

Registration in Music Therapy: The National Association for Music Therapy, Inc. (NAMT) grants the Registered Music Therapist (RMT) status. Upon successful completion of the approved curriculum in music therapy and a continuous six-month, 1,040-hour clinical training (internship) period at an NRMT-approved clinical training center, the student is eligible to apply for registration as a music therapist.

Certificate in Speech Pathology: The American Speech and 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. *Note:* The program at Eastern Michigan prepares 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 at Eastern Michigan University. Candidates should be enrolled in the Language and International Trade curriculum or in the Business French major.

The Carl Duisberg Society, in cooperation with the Goethe House, awards a "Zertifikat Handelsdeutsch" upon successful completion of examinations held at Eastern Michigan University. Candidates should be enrolled in the Language and International Trade curriculum or in the Business German major.

Examinations leading to the "Diploma de español comercial" and the "Certificado de español 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 the Business Spanish major.

Licensure in Nursing: Graduates of the nursing program receive a Bachelor of Science in Nursing degree and are eligible to qualify as registered nurses through the Michigan Board of Nursing licensure examination. This examination is given at times and paces 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.

GRADUATION AUDIT

Students who have completed 95 credit hours or more should request a graduation audit by completing the required form at graduation audit in Room 302 Pierce Hall or completing the form printed in the Class Schedule Book each semester.

The form requires the student to record their expected date of graduation, legal name, local and permanent mailing address, social security number, curriculum in which enrolled, and major and minor elected. In addition, a check list is provided for degree expected and teacher certification required. Accurate information is essential.

Forms are filed in the Academic Records Office 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 at least a semester before they apply for graduation.

Students may return the forms by mail or in person in Room 302 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.

STUDENT SERVICES

ACADEMIC ADVISING

Patricia Williams
Associate Director
301 Pierce Hall
487-2170

The Academic Advising Center provides help and guidance to students in a variety of circumstances. It has three major areas of responsibility: academic advising, academic support services and academic actions, each of which is concerned with the student's total welfare.

Academic advising is the central coordinating service for academic advising activities for all new and currently enrolled students and is the first formal academic contact on campus for new students. Academic advisers assist students in evaluating academic goals and objectives, designing programs, and selecting majors; counsel students on career choices; and provide faculty advisors with information and assistance.

Academic support services address the specific needs of students by:

1. Administering the PASS program (Promote Academic Survival and Success) for a limited number of freshman students. During their first college year, PASS students are required to take a two-semester intensive writing sequence and Introduction to University Study (EDP

106) in addition to other University courses. This program offers smaller classes, special tutoring assistance, and an intrusive advising program.

2. Organizing annual meetings to assist students who plan to apply to certain health occupation programs (i.e. nursing and occupational therapy) and providing workshops on program application and alternative decision-making to students competing for admission to these limited enrollment programs.
3. Providing special advising services for other groups such as undeclared students and returning adult students.

Academic support services is responsible for implementing University policies in the following areas:

1. Low scholarship, academic probation, dismissals and readmissions.
2. Late withdrawals from individual classes.
3. Pass/fail option, overload approval, retroactive withdrawals from the University.

Students have a number of other sources that can help their academic and career planning, enhance and develop their skills, and aid in dealing with academic problems and choices.

The Instructional Support Center of Learning Resources and Technologies (Room 102 Library, 487-1380) provides a variety of services for currently registered students such as tutoring, a writing clinic, non-credit classes in reading, study skills, mathematics, and ready access to non-print materials for class assignments and personal use.

ADVISING: SEQUENCE OF COURSES

Use the following program plan to organize the sequence in which courses are likely to be taken:

Fall Semester	Winter Semester	Spring/Summer Semester
FIRST YEAR		
Fall Semester	Winter Semester	Spring/Summer Semester
SECOND YEAR		
Fall Semester	Winter Semester	Spring/Summer Semester
THIRD YEAR		
Fall Semester	Winter Semester	Spring/Summer Semester
FOURTH YEAR		

Advising Contact: (Academic Advising Center) _____

Department Advisor: _____ Office #: _____ Building: _____

Handicapped students are encouraged to pre-register as early as possible in order to consult with the appropriate faculty members concerning course requirements and the identification of special needs. Students who have such special needs should make them known, in writing, to the dean of students, 218 Goodison Hall (487-3118), at least two weeks before the beginning of the semester or session in which the courses are to be taken.

The residence hall program offers assistance through academic support programs such as peer tutoring and group study sessions as well as professional and paraprofessional individual assistance from residence hall program staff living in each residential unit (professional resident unit administrators and student staff advisers).

The Department of Leadership and Counseling in the College of Education, 13 Boone Hall, provides individual counseling for all students seeking personal or career information or who need assistance in making decisions related to personal, educational and vocational goals. Graduate students administer the Strong-Campbell Inventory Tests to help students determine career interests. The service is available in the evenings during the fall, winter and spring semesters and during the day in the summer session. Appointments can be made by calling 487-3270.

Career planning information also is available at the following:

Academic Advising Center, which provides information on credit courses useful to students exploring careers, such as G&C 100 Career Exploration and Decision-Making, AHP 196 Introduction to Health Careers, BE 100 Contemporary Business, and AAD 179 Academics, Affiliation, and Achievement.

The Biology Career Center, 306 Mark Jefferson, which offers self-help career materials. (The office is open only during posted laboratory hours in the fall, winter, and summer terms.)

Career Services, Goodison Hall, provides a Career Resource Center, described in the following section.

Instructional Materials Center, Department of Human, Environmental and Consumer Resources, 110 Roosevelt Hall, a research center. (For admission to the room, see the department secretary or an instructor.)

Mini-Career Resource Centers located in residence halls.

CAREER SERVICES CENTER

J. Michael Erwin, Ph.D.

Director

Fourth Floor, Goodison Hall

487-0400

Adjunct Office: 210 Owen

487-4099

The Career Services Center (CSC) provides a centralized service to help students plan their careers, develop job search skills, obtain employment during their academic career and secure a job upon graduation. Services are available to enrolled students and, to a more limited extent, to EMU alumni.

In the area of career planning, CSC provides diagnostic testing, computerized career guidance services and personal career counseling. In addition, the CSC Resource Center contains an extensive collection of reference materials on career opportunities, self-assessment, job vacancy announcements, employer literature and hundreds of other career-related items.

CSC offers an innovative freshman career planning program called Career Choice. CSC, in conjunction with a number of other EMU departments, focuses on helping students select their majors and careers early on in their academic careers. One unique feature of Career Choice is the computer-based "Career Track" system. Using Career Track, CSC is able to store academic and career information on all students. This information can then be used to monitor each student's progress toward his or her career goal and

recommend activities, work experiences and academic courses that will increase the student's chance of career success.

Through its nationally recognized Professional Experience Programs (PEP), CSC assists students in obtaining career-related work experiences such as internships and Cooperative Education placements. These experiences help students gain exposure in their chosen career fields and gain the work experience that most employers now expect from college graduates. Academic credit can be earned for many of the PEP jobs. Students should begin participation in PEP as early as freshman year.

Additional work opportunities are offered through CSC's Student Employment office. This office is the central clearinghouse for all on-campus job openings for students and for job openings near campus and in other nearby cities. CSC also maintains an extensive listing of summer employment jobs available with camps, parks, resorts, businesses and government agencies throughout the country. As with other student employment, these jobs give students practical work experience and a chance to earn money toward college expenses.

CSC placement services assist seniors, graduate students, and alumni in seeking employment after graduation and obtaining professional advancement throughout their careers. Available services include:

- Résumé, interviewing and job search strategy workshops
- "Career Search" manual available to all seniors
- "Job-Line" phone-in service that lists available education job openings
- On-campus interview program
- Candidate referral programs, including two national services
- "Perfect Résumé" software packages
- A number of annual Job Fairs that attract hundreds of employers
- Free drop-off résumé critiquing service

Finally, each year CSC posts more than 30,000 job listings and has more than 250 employers participate in the on-campus interview program.

UNIVERSITY HEALTH SERVICES

Ellen Gold
Director
 Snow Health Center
 487-1122

Linda Vengroff
Associate Director
 Snow Health Center
 487-1122

Recognizing that good health in its broadest sense of physical, emotional, and social well-being is an essential component for the success of the academic endeavors at Eastern Michigan University, University Health Services provides students, staff, and faculty a healthy environment by offering programs and services to support their educational goals, personal development, effectiveness, and well-being.

HEALTH SERVICES

Diane Sobell
Clinical Administrator
 Snow Health Center
 487-1122

Health Services, located in Snow Health Center, provides professional, quality, and confidential on-campus health care to the University community. Services include:

- General Medicine
- Allergy Injections
- Health Risk Assessment
- Dermatology
- Gynecology
- Drug and alcohol abuse prevention
- TB Testing
- Health education
- Immunizations
- Physical exams

In addition to the above services, Health Services also provides on-site pharmacy, laboratory and X-ray. If your personal physician or family doctor orders an X-ray or lab work, Health Services can perform these tests. The University Pharmacy fills prescriptions written by any physician licensed in the State of Michigan and provides non-prescription medicines and sundries.

Students may call Health Services to make appointments for needed services. Students generally can see a physician the same day they call or the following day. For urgent care, it is possible to be treated on a walk-in basis. Allergy injections and TB skin tests are given without appointments during specified hours.

All students are encouraged to carry some form of health insurance during their years at Eastern Michigan. A voluntary student health insurance plan is available to students at the Student Government Office or the Health Services Insurance Office.

Students should always bring their student ID cards and have their insurance information available for the Health Services staff.

Payment for all services is expected at the time of service. The following methods of payment are accepted:

- Charge to student account
- Visa/MasterCard
- Cash/check

COUNSELING SERVICES

Rosalyn L. Barclay
Associate Director
 Snow Health Center
 487-1118

Counseling Services provides individual and group counseling to students and their spouses who are experiencing stress, relationship problems, anxiety, depression or other personal problems. Special workshops, programs and support groups are offered on a wide variety of topics, including test anxiety, communication, assertion and family issues. Programs are offered in classrooms, residence halls, Snow Health Center and at other campus locations. The staff is composed of highly trained psychologists. Senior level graduate students from the departments of Psychology and Guidance and Counseling are also available. All services are confidential and free of charge.

Self-help books and audiotapes are available on many topics, including relationships, anxiety management, sexual concerns, family issues, and eating concerns.

The Campus Peer Program, sponsored by Counseling Services and Health Services, offers student volunteers the opportunity to assist their peers with a variety of personal and social concerns, sexual health and substance abuse issues. Campus Peers receive extensive training to prepare them to present programs and lead discussions throughout the campus.

Counseling Services is located on the top floor of Snow Health Center. Students may make appointments or initiate counseling during walk-in hours on Monday or Thursday, beginning at 12:30 p.m. Hours are 8 a.m. to 12 noon, 1 p.m. to 5 p.m. Monday through Friday.

HEALTH RESOURCE CENTER

Snow Health Center
 487-2226

The Health Resource Center, located on the third floor of Snow Health Center, serves as the health education unit of University Health Services. Health educators with expertise in college health issues provide workshops and lectures to student organizations and academic classes; plan and implement special health education events; and, when appropriate, schedule individual consultations with students. Currently, the primary health education foci are personal growth and development issues, sexual health concerns, and alcohol and other drug information.

The Health Resource Room contains health education brochures, pamphlets, journals, books, and videotapes available to students for personal use, research papers, and class presentations.

All services are free to students.

CHILDREN'S INSTITUTE

Lindy Buch
Associate Director
 Snow Health Center
 487-1126

Rackham Building
 487-2348

The EMU Children's Institute provides developmentally appropriate full- and half-day early childhood education programs and child care for children 18 months through 6 years of age year round. A full-day or morning-only kindergarten is offered along with an afternoon kindergarten enrichment program. The Institute operates as a service to student, staff and faculty families, and is also available for community families as space permits. Hours are 7:30 a.m. to 5:30 p.m. Monday through Friday. Hours may be reduced during University breaks and holidays. The Children's Institute also serves as the

practicum placement site for training undergraduates in the fields of Early Childhood Education and Child Development.

An extensive parent education and family activity program is offered for enrolled families and the University community.

Flights of Imagination, the summer day camp offered at the Children's Institute, operates from 9 a.m. to 4 p.m. Monday through Friday with two-week sessions offered throughout the summer. The camp features a variety of activities including swimming, gym, outdoor play, arts and crafts and nature study. Children entering kindergarten through fifth grades are invited to attend. Extended care is available from 7:30 a.m. to 9:00 a.m. and from 4:00 p.m. to 5:30 p.m.

The toddler (18-30 months) and young preschool programs are housed on the lower level of the Snow Health Center. The older preschool/kindergarten and day camp are housed on both the lower level and the upper level of the Rackham Building.

Please call the Children's Institute office at 487-1126 for complete program and registration information.

ALCOHOL AND OTHER DRUG ABUSE PREVENTION

Snow Health Center
487-2226

Eastern Michigan 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 who have attained the legal drinking age of 21 years of age may possess and consume alcoholic beverages only at approved University functions or in residence hall rooms of students who have attained the legal drinking age. Those under 21 years of age are not permitted to consume or possess alcoholic beverages at any time. Violations of this policy are subject to both prosecution and punishment by civil authorities and to disciplinary proceedings by the University.

EMU's active commitment to observing and enforcing the University's alcohol and other drug policy is implemented through "Checkpoint." Checkpoint is a six-hour educational program for policy offenders and other interested students, which is designed to address participants' attitudes and knowledge concerning alcohol and other drugs and to encourage responsible decision making.

University Health Services offers several other alcohol and other drug and abuse prevention programs and services. A program coordinator provides professional assessment and referrals to those in need. Group counseling in the form of support groups such as Adult Children of Alcoholics (ACOA) are offered through Counseling Services.

Several student-run programs exist: Student Action Team uses student leadership to coordinate campus-wide special events; Campus Peers use trained peers to educate and encourage students to make their own informed decisions about involvement with alcohol and other drugs; and Golden Key National Honor Society coordinates outreach programs to local public school children.

The Health Resource Center lending library located in 330 Snow Health Center has a ready reference area with informational files to help students find alcohol and drug-related topics for their writing and speaking assignments. The library also has videos, posters and audio cassettes.

The Alcohol and Other Drug Programs are housed in the Health Resource Center office, located on the third floor of Snow Health Center. This office is the primary location for the distribution of substance abuse prevention information and for the coordination of program activities. All services are free to students and student involvement is encouraged.

HOUSING & DINING SERVICES

Rebecca Figura
University Housing Director

Michael Crabb
University Dining Services Director
Lower Level Dining Commons #1
487-1300

Eastern Michigan University Housing and Dining Services welcomes all students. Housing on campus accommodates 5,500 students and families and is considered by many to be the heartbeat of the campus. Living on campus offers students convenience, friendships, college life, and academic resources.

Thirteen residence halls are open to all students. First year students and sophomores are expected to live in University housing. There are two ways to reserve residence hall space.

By Mail:

1. Contact the Housing Office and request a Housing Packet.
2. Read all of the materials in the packet including the Housing and Dining Services brochure, the Residence Hall/Dining Service Contract and the Assignment Request form.
3. Select a lifestyle option and hall that accommodates that choice. Select a meal plan.
4. Record selections on the Residence Hall/Dining Service Contract and the Assignment Request form.
5. Mail the completed forms along with a \$100 prepayment envelope provided to Cashier's Office.
6. Hall assignments are mailed during the latter part of July through August.

At Fast Track Programs or In Person:

1. Students participating in Fast Track have the opportunity to reserve residence hall space as part of the program.
2. Students coming to campus can reserve a space by completing steps 1-6 above in person.

First year students and sophomores wishing to commute must complete an Exemption Form and attach supporting documentation. Exemption requests should be sent to the Housing Office, where it will be reviewed.

The University reserves all rights regarding the assignment and reassignment of rooms or the termination of occupancy in accordance with University policies, regulations and procedures. It is the policy of the University not to discriminate in the assignment of residence hall rooms. The University is not responsible for lost, stolen or damaged property. Students living in University housing assume responsibility for their own hours.

Alternative choices among the special living options in the residence halls are:

- **Center for First Year Students:** Open only to new first year students. Offers special programs, services, and staff for new students.
- **Upperclass and Over 21:** Designed for the older student.
- **International Center:** A blend of international and American cultures.
- **Community of Scholars:** Reserved for those students who are part of the Honors Program or who have a college GPA of at least a 3.0 or a 3.3 high school GPA.
- **Alcohol-Free Rooms and/or Floors:** For those students who desire an environment free from alcohol.

- **No-Meal Plan Option:** Students can elect a no-meal plan in selected halls only.
- **Year Round Halls:** Designed for those students who find it difficult to go home during University scheduled breaks and during the spring and summer.
- **Barrier Free Rooms:** Rooms for people with special needs.

SINGLE STUDENT APARTMENT PROGRAM

On-campus apartments operated by the University for single students are available in Brown and Munson halls. Preference for leasing these apartments is given to upperclass and graduate students.

The number and type of apartments available in the Brown/Munson complex are as follows:

- 180 two-person, one-bedroom apartments
- 20 one-person efficiency apartments
- Four six-person, two-bedroom apartments

Experience with rental requests indicates that the single efficiency apartments are usually opted for by students who are residents of Brown/Munson apartments at the time a single becomes available (residency establishes first priority for assignment to any particular apartment type).

Residents desiring to apply for a two-person apartment are encouraged to apply together with the other student with whom they desire to share an apartment.

Upperclass and graduate students who wish to apply for a Brown/Munson apartment should obtain an application form from Brown 107, the manager's office, complete the application and return it to the University Cashier's Office with the \$45 non-refundable apartment deposit.

FAMILY HOUSING PROGRAM

The University owns and operates 449 furnished one- and two-bedroom apartments for student families. To apply for a University apartment, either a husband or a wife must be a full-time student or accepted for a full academic program. The number of children in the family establishes priority for a two-bedroom apartment assignment. However, families with more than three children cannot be accommodated.

Priority for assignment is given to applicants who have been on the waiting list for the longest period of time for the particular date involved. Students with families who wish to apply for a University apartment should obtain an application from the University Apartments Office, complete the application and return it to the University's Cashier's Office with a \$45 non-refundable application payment.

OFF-CAMPUS HOUSING

A variety of living arrangements are available for upperclass students who desire to live in the off-campus community and who meet the eligibility requirements to do so. Those students who plan to live off-campus are responsible for making their own arrangements to secure housing, as the Housing Office does not rate or inspect off-campus facilities.

The REACT Office in Goodison Hall assists students who desire advice on finding off-campus housing and/or addressing any problems that might be associated with off-campus apartment living.

UNIVERSITY DINING SERVICES

University Dining Services provides several options to meet the varying appetites, dining habits and scheduling needs of today's on-the-go commuters and residential students.

Eastern Eateries is a sleek, contemporary fast food mall, offering several distinctive food options, including burgers, pizza, deli, chicken and confections. Students on the meal plan who choose to "transfer" their meals to the Eateries can select from hot breakfast, lunch and dinner specials in each shop. Open 7 a.m. to

midnight Monday through Friday, and 9 a.m. to midnight on weekends.

Located on the lower level of the Eateries is **QUICKFIXX**, the main convenience store for campus, offering grocery items, greeting cards, video and VCR rentals, refrigerator rentals, toiletries and snack foods. Plenty of comfortable seating at tables and booths on both levels, with video games on the lower level, make this an exceptional, exciting dining experience on campus. **QUICKFIXX** is open seven days a week.

Dining Commons One, our primary residence hall dining facility, reflects the dynamics of contemporary dining. Offering a variety of 3-4 hot entrees daily (lunch and dinner) through four serving lines, "DC ONE" also takes pride in its homemade soup, extensive super salad bar, sandwich and dessert lines. An adjunct to this operation is **FASTLANE**, offering hot or cold sack lunches to go. Both are open Monday through Friday.

HillTop Cafe, a recently renovated brass and chrome-plated facility, offers an all-you-can-eat format to residence hall diners (breakfast, lunch and dinner), but on a slightly smaller scale than DC ONE. HillTop is especially convenient for students living in Hill, Pittman and Hoyt halls. An adjunct to this operation is **FASTSTOP**, offering hot or cold lunches and dinners to go. Both are open Monday through Friday.

Pittstop, our little convenience store on "the hill," offers deli sandwiches, some grocery items, ice cream and beverages, and caters to those late-night, last-minute urges.

Courtside is our "food for fitness" snack shop located within the Rec/IM building, offering deli sandwiches, yogurt, nachos, hot dogs, salads, fresh fruit and a variety of beverages.

Located within McKenny Union is **Pumpernickle's Deli**, offering a variety of sandwiches, salads, ice cream, and desserts. There is also a **Wendy's**, a **Domino's Pizza Shop**, and the **Club Cappuccino**, a coffee and yogurt shop. Coming soon will be a burger franchise, a deli shop and an expanded lobby shop.

University dining facilities accept the **Eastern Express** card, a debit card available to students on campus, which gives them a 5 percent discount on all purchases. The Eastern Express card is also good at Wendy's, Domino's, and the Bookstore, but there is no 5 percent discount for non-University-owned operations.

STUDENT HOUSING

University residence halls and student apartments are operated on a self-liquidating plan; i.e., construction is financed from revenue bonds, which together with operational costs are paid from rental revenue.

Residence Halls:

The Jones-Goddard Community of Scholars serves approximately 400 students and is the headquarters for the University Honors Program. Goddard Hall also provides classroom space for Industrial Education in a converted cafeteria. The residence halls, traditional in design, enclose a central courtyard. They are named for Lydia Jones, EMU's first full-time dean of women, who served from 1924-39, and Mary Goddard, professor of botany from 1900-1939. The Office of Research Development is located in the basement of Goddard Hall.

Downing-Buell-Wise-Best comprise a four-unit complex of separate buildings adjoining a central dining commons. Located in the heart of campus, they provide space for approximately 1,200 students. Estelle Downing was professor of English from 1898-1938; Bertha G. Buell was professor of history, English literature and political science, 1899-1937; Margaret E. Wise, a first grade teacher trainer during her tenure from 1893-1939, also served as director of placement, 1927-1939; and Martha Best was professor of biology and bacteriology from 1924-1952.

Phelps-Sellers-Walton-Putnam, a second four-unit complex, has physically attached buildings that share a common dining area. Also built to accommodate 1,200 students, the com-

plex honors Jessie Phelps, professor of zoology, physiology and hygiene from 1898-1939; John A. Sellers, professor of chemistry from 1921-1961 and department head from 1958-1961; Genevieve Walton, head librarian from 1892-1932, who planned the initial Mark Jefferson Library and co-founded the Michigan Library Association; and Daniel Putnam, first head of the Education Department, the University's first librarian from 1875-87 and considered EMU's sixth president for his services in this capacity from 1868-1870 and 1871-1906.

Pittman-Hill-Hoyt are contemporary 11-story, high-rise towers and the most recently constructed campus residential units. All halls have ample social and study space on each floor and each room offers a panoramic view of the campus and surrounding area. Marvin Pittman was director of rural education and a teacher trainer from 1921-1934; Susan B. Hill was dean of women from 1939-1962, then dean of students from 1962-1969 and also served as a Ypsilanti city councilwoman.

Student Apartments:

The Brown-Munson Apartments were remodeled from a residence hall facility to 207 single-student apartments in the early 1970s. They are designed primarily for two tenants, although some single and multiple occupancy units are available. Apartments are furnished, carpeted and air-conditioned, and all utilities except telephone are included in the monthly rent. The apartments carry the names of James M. "Bingo" Brown, football and baseball coach from 1923-29 and the first dean of men from 1925-

1962, and John M. Munson, an EMU graduate who served as president from 1933-1948.

Pine Grove Terrace, on the northwest corner of main campus, is the closest family housing unit to campus and has 140 one-bedroom apartments and 29 two-bedroom apartments in two-story masonry units. Each building contains laundry and storage facilities, provides exterior balconies and private furnaces. Constructed in the late 1950s, the apartments are furnished.

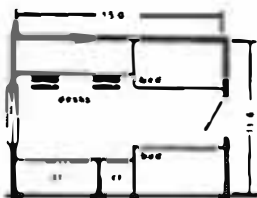
Cornell Courts Apartments, west of Pine Grove and across Oakwood Avenue, offer 69 one-bedroom and 66 two-bedroom apartments in two-story masonry buildings. Each apartment is furnished; laundry facilities are in each building unit and courtyards provide family social areas.

The Westview Apartments, completed in the late 1960s, are approximately one mile west of main campus near the intercollegiate athletic facilities. They are built in the townhouse style with bedrooms generally located on the second floor above living areas. Occupants have both a front and back yard. A total of 73 one-bedroom and 72 two-bedroom furnished apartments are available.

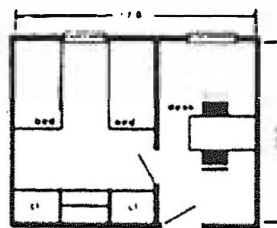
Note: In the three student family housing areas, a limited number of unfurnished units are available for those desiring to provide their own furnishings, but early reservations must be made with the Housing Office for these unfurnished units.

Typical Residence Hall Room Floor Plans

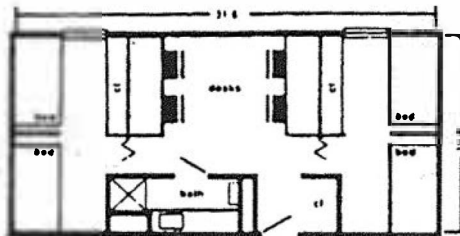
Wise Hall



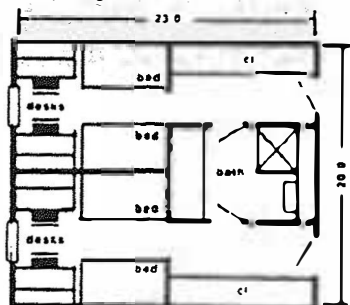
Jones Hall



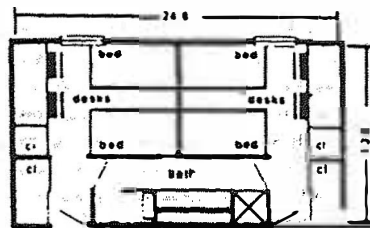
Downing, Buell, and Goddard Halls



**Residence Hall Towers
Hill, Hoyt, and Pittman Halls**



**Best, Phelps-Sellers and
Walton-Putnam Halls**



CAMPUS LIFE

The campus climate at EMU is one of vitality, energy and involvement. Students are offered an extensive variety of opportunities for out-of-classroom social contact, leisure-time activities, group participation, intellectual challenge, cultural enrichment, government and media experience, organized athletic and recreational activities.

OFFICE OF CAMPUS LIFE

Glenna Frank Miller
Director
11 McKenny Union
487-3045

The Office of Campus Life serves as a central resource for students seeking special opportunities for involvement both outside and inside the classroom. The Office of Campus Life organizes and schedules University-wide extracurricular and co-curricular events throughout the school year. The Campus Life Council serves as the student programming board.

Office of Campus Life student development services include leadership training, student organization support services (for more than 150 student organizations), and freshman and parent orientation programs. The new volunteer program, The V.I.S.I.O.N. Project, offers service opportunity to students and staff.

Other program offerings are the traditional all-campus celebrations such as the First Week Fling, Family Day, Martin Luther King Jr. Day and Founders Day. Additionally, the Office of Campus Life provides coordinative programming support to campus departments including the Equity Office's Lecture Series, and the programs offered through academic departments such as the Poetry Symposia, art exhibits, and the performing arts. Campus Life also coordinates campus lectures, concerts, and collegiate entertainment.

Below please find a list of the more than 150 registered student organizations. Students interested in exploring these and other groups or in starting a new organization should contact the Office of Campus Life directly.

Academic/Professional

Administrative Management Society
 Advertising Association
 Alpha Epsilon Rho National Broadcasting Society
 Alpha Kappa Psi Professional Business Fraternity
 Alpha Phi Alpha Fraternity, Inc.
 American Center for Design
 American Production and Inventory Control Society
 American Society of Interior Designers
 Anthropology Club
 Army ROTC Huron Guard Drill Team
 Association for Prospective Teachers
 Association for the United States Army
 Athletic Trainer's Club
 Beta Alpha Psi
 Beta Beta Beta Biological Honor Society
 Beta Gamma Sigma
 Chemistry Club
 Collegiate Deca
 Computer Information Systems Club
 Eastern Constructors
 English Club
 Entrepreneurs' Association
 Family and Consumer Education Society
 Finance Club
 French Club
 Graduate Business Student Association
 Health Administration Student Organization
 Hospitality Management Club

Intermedia Gallery/Group
 International Facility Management Association
 Legal Assistance Club
 Legal Careers Association
 Living History Club
 Macintosh User's Group (MUG)
 Marketing Students Association
 Michigan Teacher of Emotionally Disturbed Children
 National Association of Black Accountants
 Phi Alpha Theta History Honor Society
 Philosophy Club
 Pi Omega Pi
 Pi Theta Epsilon
 Premedical Student Association
 Preservation Eastern
 Professional Association for Industrial Distribution (P.A.I.D.)
 Recreation Organization
 Semper Fidelis Society
 Sigma Tau Gamma
 Silversmith's Guild at EMU
 Society for Creative Anachronism
 Society for Technical Communications, Inc.
 Society for the Advancement of Management
 Society of Consumer Affairs Professionals
 Society of Plastic Engineers
 Student Council for Exceptional Children
 Student Dietetic Association
 Student Michigan Education Association
 Student Nurses Association
 Student Occupational Therapy Association
 Student Organization for Educators of Hearing Impaired
 Student Psychology Association
 Student Social Work Organization
 Students Against Hunger and Homelessness
 Turkish Student Association
 United Ministries in Higher Education
 University Organists' Association
 Women in Communication

Advisory

Campus Life Council
 Collegiate Deca
 Exercise Science
 Older & Wiser
 Paddling Organization of Eastern Michigan
 Student Government at EMU
 Student Occupational Therapy Association

Athletic/Recreational

Aiki Hei jo Shin Dojo (Aiki Club)
 Ballroom Dance Club
 Bujinkan Ninjustu Club at EMU
 Flying Club
 Hockey Club
 Rifle Team at EMU
 Ski Club
 Water Polo Club
 Women's Soccer Club

Communications

Alpha Epsilon Rho National Broadcasting Society
 Association of Black Communicators
 Eastern Times
 English Club
 Macintosh User's Group (MUG)
 Society for Technical Communication, Inc.
 Society of Physics Students
 Spirit and Truth Fellowship
 Wo/Men in Communications, Inc.
 WQBR 640 AM Ypsilanti

Cultural/Entertainment/Coordinating

African American Dance Company "Eclipse"
 African Students Association
 Alpha Phi Alpha Fraternity, Inc.
 B'nai B'rith Hillel Extension
 Campus Life Council
 Caribbean Student Association
 Chess Club
 Crossroads
 Eastern People of Color Coalition
 English Club
 Gamers of Eastern Michigan
 General Union of Palestinian Students
 Hong Kong and Macau Student Association
 Honors Student Organization
 INDUS (Indian Student Association)
 Intermedia Gallery/Group
 International Student Association
 Jazz Alive
 Latino Student Association
 Legal Careers Association
 Living History Club
 National Association for the Advancement of Colored People (NAACP)
 National Organization to Reform Marijuana Laws (NORML)
 Pakistan Student Association
 Palestine Democratic Youth Organization
 Phi Beta Sigma Fraternity, Inc.
 Phi Beta Sigma Sweethearts
 Phi Eta Psi Fraternity, Inc.
 Premedical Student Association
 Residence Hall Association
 Society for Creative Anachronism
 Society of Physics Students
 Spanish Club
 Student Action Team
 Student Dietetic Association
 Student Organization for African-American Unity
 Student Organization United for Peace (SOUP)
 Student Psychology Association
 Table Top Entertainment
 Time & Relative Dimensions Around Ann Arbor (TARDA3)
 Turkish Student Association
 United Ministries in Higher Education
 Yemeni Students Union

Ethnic/Minority

African American Dance Company "Eclipse"
 Alpha Kappa Alpha Sorority
 Alpha Phi Alpha Fraternity, Inc.
 Association of Black Communicators
 Association of Black Social Workers
 Black Greek Council
 Black Student Union
 Caribbean Student Association
 Chinese Student Association of P.R. China
 Chinese Student Association of Taiwan
 Crossroads
 Delta Sigma Theta Sorority
 Eastern People of Color Coalition
 Gay Rights Advocates for Social Progress (GRASP)
 Gay, Lesbian, and Bisexual Student Union (GSU)
 Indonesian Student Association
 Japanese Student Association
 Korean Student Association
 Latino Student Association
 Lesbian, Gay, and Bisexual Student Association (LGBSA)
 Malaysian Student Association

National Association for the Advancement of Colored People (NAACP)

National Association of Black Accountants
 Native American Indian Student Organization
 Omega Pearls
 Palestine Democratic Youth Organization
 Phi Eta Psi Fraternity, Inc.
 Phi Eta Psi Emeralds
 Student Organization for African-American Unity
 Thai Student Association
 Turkish Student Association

Honorary

Beta Beta Beta
 Beta Gamma Iota Veterans Society
 Golden Key National Honor Society
 Kappa Delta Pi
 Mortar Board, Inc.
 Phi Sigma Pi National Honor Fraternity
 Stoic Society

Political

Black Student Union
 College Republicans
 Gay, Lesbian, and Bisexual Student Union (GSU)
 National Organization to Reform Marijuana Laws (NORML)
 Student Huron Restoration Alliance
 Student Organization for African-American Unity
 Student Organization United for Peace (SOUP)

Religious

Bahai Club at EMU
 B'nai B'rith Hillel Extension
 Brothers and Sisters in Christ (BASIC)
 Campus Crusade for Christ
 Christ With-in Ministries
 Christian Life Center
 Christian Science College Organization
 Christians in Action
 Fellowship of Christian Athletes
 Gospel Choir
 Holy Trinity Chapel Peer Ministers
 Interservice Christian Fellowship
 Latter-Day Saint Student Association
 Muslim Students Association
 Spirit and Truth Fellowship
 Students for Christ at EMU
 Students of the Church of Christ
 United Ministries in Higher Education
 University Lutheran Chapel

Service

Alpha Phi Omega
 Army ROTC Huron Drill Team
 Arrival (Handicap Issues)
 Black Student Union
 Caribbean Student Association
 Christ With-in Ministries
 Circle K Club
 English Club
 Fellowship of Christian Athletes
 Golden Key
 Holy Trinity Chapel Peer Ministers
 Hong Kong and Macau Student Association
 International Student Association
 Latino Student Association
 Mortar Board
 National Association for the Advancement of Colored People (NAACP)

Older and Wiser
 Omega Pearls
 Omega Xi
 Phi Beta Sigma Fraternity, Inc.
 Phi Beta Sigma Sweethearts
 Phi Eta Psi Emeralds
 Phi Theta Epsilon
 Players at EMU
 Spirit and Truth Fellowship
 Stoic Society
 Student Council for Exceptional Children
 Student Huron Restoration Alliance
 Student Organization for African-American Unity
 Students Against Hunger and Homelessness
 Turkish Student Fellowship
 United Ministries in Higher Education
 University Ambassadors Society
 Wo/Men in Communications, Inc.
 Ypsilanti Food Co-op

Social/Environmental Awareness

Amnesty International
 B'nai B'rith Hillel Extension
 Bahai' Club
 Black Student Union
 Chi Gamma Iota Veterans Society
 Eastern Constructors
 English Club
 Gay Rights Advocates for Social Progress (GRASP)
 Honors Student Organization
 International Student Association
 Latino Student Association
 Lesbian, Gay, and Bisexual Student Association (LGBSA)
 National Association for the Advancement of Colored People
 (NAACP)
 Omega Xi
 Panhellenic Council
 Phi Beta Sigma Fraternity, Inc.
 Phi Beta Sigma Sweethearts
 Phi Eta Psi Fraternity, Inc.
 Residence Hall Association
 Student Council for Exceptional Children
 Student Organization for African-American Unity
 Student Organization United for Peace (SOUP)
 Student Psychology Association
 Students Against Hunger and Homelessness
 Tau Kappa Epsilon
 Turkish Student Association
 United Ministries in Higher Education
 Womynspace
 Ypsilanti Food Co-op
 Zeta Phi Beta Sorority

Fraternity—All subclassifications

Alpha Epsilon Pi
 Alpha Eta Rho
 Alpha Kappa Psi Business
 Alpha Phi Alpha
 Alpha Phi Omega
 Beta Alpha Psi
 Black Greek Council
 Delta Sigma Phi
 Inter-Fraternity Council
 Kappa Alpha Psi
 Kappa Delta Pi
 Lambda Chi Alpha
 Omega Psi Phi
 Phi Alpha Theta

Phi Beta Sigma
 Phi Delta Kappa
 Phi Eta Psi
 Phi Sigma Kappa
 Phi Sigma Phi
 Phi Sigma Pi
 Pi Sigma Alpha
 Pi Theta Epsilon
 Sigma Phi Epsilon
 Sigma Nu
 Sigma Tau Gamma
 Tau Kappa Epsilon
 Theta Chi

Sorority—All subclassifications

Alpha Gamma Delta
 Alpha Kappa Alpha
 Alpha Sigma Tau
 Alpha Xi Delta
 Delta Pi Epsilon
 Delta Sigma Theta
 Delta Zeta
 Kappa Diamonds
 Omega Phi Alpha
 Panhellenic Council
 Phi Beta Sigma Sweethearts
 Sigma Delta Tau
 Sigma Gamma Rho
 Sigma Kappa
 Sigma Nu Phi
 Sigma Sigma Sigma
 Sigma Sweethearts
 Zeta Phi Beta

DEAN OF STUDENTS

Bette C. White
Dean

Gregory A. Peoples
Associate Dean
215 Goodison Hall
487-3118

The Office of the Dean of Students serves undergraduate and graduate students through the combined offices of Foreign Student Affairs, Veterans Services, Handicapped Student Services and the Multi-Cultural Center. The activities of Greek letter organizations are monitored by the Dean of Students Office.

The Conduct Code and Judicial Structure is adjudicated through the Dean of Students Office.

OFFICE OF FOREIGN STUDENT AFFAIRS

Paul Dean Webb
Coordinator
209 Goodison Hall

487-3116

The Office of Foreign Student Affairs extends a hand of welcome to all foreign students pursuing their educational goals at Eastern Michigan University. Concerned, responsible and professional staff assist students in any matter, including orientation, legal advice (immigration), academic, financial, employment and personal concerns. Personnel also provide help with the preparation of documents needed to maintain favorable status in this country.

The office serves as a consultant to faculty and staff on foreign student affairs and acts as a catalyst for the development of various international connections in the University and/or community to promote international education and understanding. It initiates enhancement programs such as cross-cultural activities on and off-campus.

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

VETERAN SERVICES OFFICE

Robert E. Teehan
201-202 Goodison Hall
487-3119

The Veteran Services Office coordinates all campus services for veterans entering or returning to the University to complete their education. It is the resource center for veterans' benefits and the office to which veterans must report successful academic progress to maintain benefits, class drops and adds, or changes in personal status affecting benefits.

The office assists veterans also in housing and financial aid, and works closely with disabled veterans to provide full educational benefits. Any questions veterans may have should be directed to a representative in this office.

HANDICAPPED STUDENT SERVICES

Bette C. White
Dean
215 Goodison Hall
487-3118

Handicapped Student Services utilizes resources of both the campus and the community and its agencies to meet the needs of handicapped students and to support them in meeting their educational goals. Michigan Vocational Rehabilitation and the Michigan Commission for the Blind are both used as supportive agencies in assisting some students.

Students may also request aid in finding notetakers, relocating classrooms, assistance with wheelchairs, special housing accommodations, and procedures for applying for interpreters. Since it is the intent of the office to respond to students' unique needs, they are urged to contact the office personally for information and/or assistance.

MULTI-CULTURAL CENTER

Gregory A. Peoples
Associate Dean
216 Goodison
487-2377

The Multi-Cultural Center is our office of minority affairs with an exciting menu of programs and events planned to enlighten students to the cultural diversity that exists at Eastern Michigan University and the nation as a whole. The center was established to help enrolled African American, Hispanic American, and Native American students prosper at the University.

The center provides the following services:

1. A furnished lounge to host programs, events, and meetings. The lounge can be used free of charge; however, its use is restricted to registered groups and enrolled Eastern Michigan students.
2. Ombudsman service to assist students and organizations with problems and concerns.
3. Referral service for student retention, tutorial and academic services.
4. *The Multicultural Times*, published by student staff on a monthly basis, reporting national, state and campus news for the three ethnic groups.

OFFICE OF EQUITY PROGRAMS

Lynette Findley, Ph.D.
Director

Patrick Pieh, Ph.D.
Coordinator
204 Pierce Hall
487-2133

The Office of Equity Programs provides support services to African American, Hispanic American, Native American and Asian American (underrepresented) students. The programs and services provided range from College Days to doctoral scholarships. The **KCP College Days Program** serves junior high school through senior high school students. Each component orients participants to college life, helps build self-esteem and motivation, and exposes them to a variety of career options. The **Wade McCree Scholarship Program** awards 30 general fund scholarships annually in the fall to underrepresented students entering the ninth grade. The **Summer Incentive Program** allows high school graduating seniors with high academic potential the chance to take classes at the University during the summer and, if successful, enroll in the fall. The **Select Student Support Services** is a retention program that provides academic support services to all underrepresented students to help them succeed and graduate from EMU. The **Minority Teacher Initiative Program** is designed to increase the number of underrepresented teachers by providing a transition from the community college to EMU. The **Future Faculty Program** offers scholarships to underrepresented master's and doctoral candidates to offset the expenses of earning a master's or Ph.D.

STUDENT GOVERNMENT

233 Goodison Hall
487-1470

Student government at EMU is committed to improving the quality of life on campus. The student body each spring elects a president, vice president and 21 senators who, along with repre-

representatives appointed from various organizations, comprise the Student Senate. Its 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, and its student services office, known as REACT, provides personal 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.

The University Judicial Board (UJB) is the first level of appeal in disciplinary cases at EMU. It has five student representatives, two appointed faculty members and two appointed administrator members.

The Judicial Appeals Board, the appellate board from UJB, has two student representatives, two faculty representatives and two administrative appointees.

STUDENT MEDIA

Chris Colcer

Director

**121 Goodison Hall
487-1010**

The Student Media office provides both information and creative outlets for the total University community. The *Eastern Echo* is the student newspaper published thrice-weekly in the fall and winter semesters and weekly during spring and summer sessions. The *Aurora* is the University yearbook, and *Cellar Roots* is the literary arts magazine. Editors are selected each spring following interviews by the Student Media Board, a policy-review board comprised of persons both internal and external to the University community, including many in professional journalism-related fields. Students are encouraged to join publication staffs or to submit literary and art for magazine publication.

- The *Eastern Echo* focuses on issues and events and also serves as an outlet for opinions of the University and surrounding community. It offers hands-on training and experience for those interested in the field of journalism, business, marketing, advertising, graphic design and photography. It is written and edited by student editors and reporters.
- The *Aurora* focuses on the events, moods and atmosphere encompassing the Eastern Michigan University community within a single year of a student's experience on campus. Its pages offer a piece of history which might otherwise be forgotten among the many memories in the hectic life of a university student.
- *Cellar Roots* has become the major outlet for student creativity, whether it be photographs, paintings, fiction pieces or poetry. Published once a year, its contents are chosen by a selection committee comprised of faculty and students.

All three publications consistently win national awards for both design and content. Students who participate gain valuable experience, which leads to a high job placement percentage.

RADIO STATIONS

WQBR

**129 Quirk
487-2228**

WQBR, under the auspices of the Department of Communication and Theatre Arts, is both an instructional and activity program for students studying or interested in radio broadcasting. The station offers both music and student-generated programs emanating from the Quirk Studios and is "on air" from 1 p.m. to 1 a.m. Monday through Friday.

WEMU

Arthur J. Timko

Director

**426 King Hall
487-2229**

WEMU, founded in 1965 as a student station, remains highly reliant on EMU student employees to maintain its professional operation. WEMU has been affiliated with National Public Radio since 1978. It is under the auspices of the executive vice president and serves a broadcast coverage area from Detroit to Jackson and Flint to Toledo, 24 hours a day, seven days a week. Operating at 89.1 FM with 16,000 watts of power, WEMU offers concentrations of local and national NPR news and jazz music featuring national and local performers. During the football and basketball seasons, all EMU games are broadcast.

The station accommodates interns and employs several students in addition to its full-time staff.

INTERCOLLEGIATE ATHLETICS

Eugene D. Smith

Director

Carole Huston

Associate Director

Bruce Zylstra

Assistant Director

Bowen Field House

487-1050

The Department of Intercollegiate Athletics offers a well-rounded program of varsity sports for men and women that will develop the academic and athletic skills, understanding, knowledge, attitudes and values that will contribute to the student-athlete's success in today's complex society.

Eastern Michigan is a member of the National Collegiate Athletic Association (NCAA) and competes at the Division IA level in both men's and women's sports.

In 1971, EMU joined the Mid-American Conference (MAC), which is composed of 10 schools, including EMU's sister institutions, Central and Western Michigan, and Akron, Ball State, Bowling Green, Kent State, Miami, Ohio, and Toledo.

The mission of Eastern Michigan University's intercollegiate athletic program is to sponsor competitive men's and women's sports. These sports represented by the team members shall strive within the contest rules and regulations to acquire the ultimate competitive goal—athletic success.

To be eligible to participate in intercollegiate athletics, the student-athlete must satisfy all University, MAC and NCAA requirements. NCAA regulations for participation in intercollegiate athletics require that the student-athlete earn an average of 12 hours per semester or 24 semester hours of additional credit between seasons of competition. These credits must be applicable toward the individual student-athlete's declared degree program.

RECREATION AND INTRAMURAL SPORTS

Robert England

Director

**Olds Student Recreation Center
487-1338**

The Olds Student Recreation Center, opened in 1982, provides recreational activities for the total campus community, including intramural sports programs, inter-university sports competitions, personal physical development and skill activities. All persons regardless of age, sex, skill level or sport interest are afforded the opportunity to participate in a wide range of activities.

The indoor, multi-purpose building has 13 racquetball courts; a gymnasium with four basketball courts, six volleyball courts and 12 badminton courts; two swimming pools (one 50-meter and one club pool); an indoor jogging track; four weight areas; a fitness area; combatives room; utility gym; sauna; whirlpool; aerobic studio; and an Outdoor Recreation Center (487-1025) that checks out equipment ranging from backpacks to cross country ski packages for Rec/IM members.

Student membership is automatic with a fee assessed within the tuition and entitles the membership card holder to all facility uses. There are optional fees for such things as lockers, towel rental, outdoor equipment rental and guests. Others desiring to regularly use the facilities may purchase a membership card during building hours. A Pro Shop on the premises sells all types of sports equipment and clothes.

The Intramural Sports Program, which utilizes the Olds Student Recreation Center facilities as well as outdoor fields and tracks, provides activities in which all students may participate. Selected sports are offered on a co-educational basis or for either men or women as follows:

Coeducational activities include basketball, bowling, cross country, track, paddleball, softball, tennis and two-person volleyball competitions; free throw and sports trivia contests.

Men's activities include basketball, bowling, floor hockey, football, golf, softball, swimming, tennis, track, volleyball, weightlifting and wrestling sports competitions, and field goal kicking and home run contests.

Women's activities include basketball, bowling, football, golf, softball, swimming, tennis and volleyball sports competitions.

Club sports, sponsored by the program, include competition in eight sports. These inter-university sports competitions are organized and operated as a student club. They include ice hockey, gymnastics, water polo, racquetball, and bowling.

In addition, there are instructional martial arts classes in aiki, aikido, karate, and tae kwon do. Other instructional classes (fees are charged) include kayaking and scuba.

A new addition to the facility beginning in 1993 is the outdoor lake area. The lake is a constructed freshwater facility for swimming, boating, and ice skating. The project includes a sunning slope, picnic area, three lighted volleyball courts, two lighted basketball courts, a one mile jogging trail, and a meeting lodge equipped with a fireplace, equipment checkout room, lockers, and a food service short order grill.

RESOURCE CENTERS

CENTER FOR ENTREPRENEURSHIP

Patricia Weber
Director
34 N. Washington
487-0225

The Center for Entrepreneurship was established in January 1986 to provide training and build a network of peer support for entrepreneurs and heads of high-growth companies. Its services are based on a foundation of applied research designed to increase our knowledge of entrepreneurship and growth management.

The primary purpose of the center is to increase the number and success rate of Michigan entrepreneurs and of entrepreneurially managed firms. The desired end result is the stimulation of greater job creation as well as greater job stability in Michigan's economy.

The key objectives of the Center for Entrepreneurship are:

- To provide entrepreneurs and growth managers with success tools and skills.
- To foster public recognition and understanding of the achievements and accomplishments of entrepreneurs, and
- To foster interest in and appreciation of entrepreneurship among our youth.

Talented entrepreneurs cannot be created by universities. But they can be helped to be more successful if trained in the use of the tools and skills required to run a growing business. The center is a vehicle for helping to develop and disseminate these tools and skills.

CORPORATE EDUCATION CENTER

Marcia D. Harrison
Director
1275 Huron Street
487-0600

The Corporate Education Center is an entrepreneurial organization owned and operated by EMU that serves both the public and private sectors.

The center has 38,000 square feet of conference and seminar space designed to accommodate multiple meeting needs with advanced communications and audio-visual equipment. Such features include:

- two auditoriums seating 100 and 200 respectively, complete with audiovisual systems including rear screen projection, a simultaneous translation system, and closed circuit teleconferencing.
- a networked computer laboratory with 15 stations
- seven conference rooms and five seminar rooms
- an executive boardroom
- an outdoor court area for informal gatherings during the spring, summer and fall seasons.

The center is located on Ford Lake at the Huron Street exit off I-94 in Ypsilanti. It is part of a 186-acre development that includes a 236-room Radisson hotel and the Eastern Michigan University Huron Golf Club, featuring an 18-hole championship golf course.

INSTITUTE FOR COMMUNITY AND REGIONAL DEVELOPMENT (ICARD)

Charles M. Monsma
Director
34 N. Washington
487-0243

ICARD is a public service unit of Eastern Michigan University. Its purpose is to make the expertise and capabilities of the University available to governments, community agencies, and businesses. It is part of an overall effort by EMU to establish a closer working relationship with the communities it serves and to aid them in meeting their needs and in solving their problems.

Eastern Michigan University, through ICARD, can provide expertise and resources for the identification of problems, the assessment of needs and the development of solutions in a wide variety of settings. By drawing upon University-wide resources for project development and implementation, faculty, staff, and students with appropriate skills and experience are brought together from a variety of disciplines. When needs cannot be met within an organization or from outside commercial sources or private consultants, ICARD can fill the gap.

ICARD staff develops projects through personal and professional contacts and responds to requests from clients outside the University. Once a project has been identified, support staff and methodologies are determined. Individual faculty members serve as project directors, using additional faculty and student help in project implementation.

Examples of ICARD activities include economic development and planning efforts for local communities, economic and environmental impact assessments, management analysis, evaluation of personnel systems, and scientific analysis of environmental concerns. Twice a year, ICARD publishes an economic forecasting report, available by subscription, *Regional Economic Forecasts for Michigan*. Also published twice a year is the newsletter *Michigan Economic Notes*. Each spring, ICARD hosts an Economic Forum on campus.

Since 1991, ICARD has offered training programs for public sector employees in cooperation with the Government Educational Institute. Through ICARD's Public Service Education Program, a monthly series of open subscription workshops has been offered. In addition, educational and training programs are customized under contract to meet the needs of specific communities or employee groups.

Another integral part of ICARD is the SER-GEM Center (Southeast Regional Groundwater Education in Michigan), funded in part by the Kellogg Foundation. SER-GEM's capabilities include environmental educational services, environmental audits, and computerized database assembly.

For further information, contact ICARD at 487-0243 or the Consortium at 487-0920.

INSTITUTE FOR THE STUDY OF CHILDREN AND FAMILIES

Patricia Ryan and Bruce L. Warren
Directors
102 King Hall
487-0372

The Institute for the Study of Children and Families was established in 1979 for the purpose of providing focus and support to the study of children and families through research, demonstration projects, non-credit educational activities and consultation concerned with the determinants and/or consequences of childhood and family life.

The institute promotes and encourages interdisciplinary study of children and families throughout the University and offers opportunities for undergraduates and graduate students interested in research or demonstration projects relating to children and families. Cooperative interaction extends beyond the University to other organizations, agencies and institutions.

Institute-sponsored programs include the National Foster Care Resource Center, the Teaching-Learning Community Intergenerational Program, and the Behavioral Medicine Project. The institute cooperates in workshops sponsored with other University departments and community organizations. Its Child and Family Publications Division disseminates 46 publications based on institute projects.

NATIONAL INSTITUTE FOR CONSUMER EDUCATION

Rosella Bannister
Director
207 Rackham
487-2292

The National Institute for Consumer Education, formerly called Michigan Consumer Education Center, was established in 1973 and is a professional development center in consumer and economic education. It provides an interdisciplinary program and involves faculty from all of the colleges within the University.

Among the Institute's patrons are students and faculty at this and other universities, classroom teachers (elementary through adult) and representatives of business, labor, government, clergy, and community groups. It also maintains networks with leaders in consumer affairs at the local, state, and national levels through advisory groups, newsletters, and professional associations, and is an affiliated center of the National Council on Economic Education.

Its objectives are to provide program development services, including courses, conferences and publications for educators; consultant and cooperative activities; and a clearinghouse of education resources in consumer and economic education.

The Institute houses the nation's leading collection of consumer education resources. The publication *Classification of Concepts in Consumer Education* is distributed internationally for use by educators in program planning and curriculum development.

Program funding in excess of nearly \$2 million has been received from external public and private sources since 1973.

CORPORATE SERVICES/CENTER FOR QUALITY

34 N. Washington
487-2259

Corporate Services, established in 1988 through a consolidation of the college service centers, is an agency within the Executive Division. Its primary responsibility is to carry out the University mission of service through contract learning. Corporate Services provides business, industry, education, health, and human services agencies with short- and long-term assistance in training, research and development. Corporate Services' staff, including select University faculty and contracted outside experts, are involved in training both hourly and salaried personnel in a large number of diverse industries. To date this assistance has been provided in locations across the country as well as in Toronto, Canada; Sao Paulo, Brazil; London, England; and Cardiff, Wales. Contracts have ranged from one day to one year, with much of Corporate Services' activities relating to workforce training-on-site in manufacturing plants.

Major areas of programming include:

- Workplace literacy; basic skills enhancement
- Quality science consulting and training
- Environmental technology
- Computer training
- Hazardous waste management
- Nurse aid training
- Cross-cultural communication
- Health and safety training
- Technical writing
- Office automation and information technology
- JIT inventory systems
- Marketing and management training
- Communication skills

Corporate Services is currently regarded as one of the premier agencies capable of providing comprehensive training and consultation in workplace literacy, statistical process control (SPC), and experimental design/industrial statistics.

LEARNING RESOURCES AND TECHNOLOGIES

Morell D. Boone
Dean

Jennie Meyer Howard
Associate Dean, Learning Technologies

Sandra G. Yee
Library Department Head

487-3316

Professors: Fred Blum, Morell D. Boone, George Grimes, Twyla Mueller Racz, Sandra G. Yee

Associate Professors: Sarell W. Beal, Mary Clare Beck, Margaret A. Eide, J. Ronda Glikin, Joanne J. Hansen, Walter P. Hogan

Assistant Professors: Ann Andrew, Margaret E. Best, Rita Bullard, Ronald P. Colman, Raymond A. Lukasavitz, Mary A. Meernik, Keith J. Stanger, Rosina Tammany

Instructors: Sarah Cogan, Edna Ewell, Barbara Glover, Rhonda Fowler-Holland, Carolyn Kirkendall, Glenn Mensching, Heidi Mercado, Trudie A. Root

Learning Resources and Technologies, housed in the University Library building, has two major responsibilities: Learning Resources (including the Library, Media Services and Instructional Support Center) and Learning Technologies (academic computing activities for faculty and students). Learning Resources and Technologies supports the academic mission of the University through its services, collections, facilities, and equipment.

The Library is essential to the instructional programs of the University. It houses more than 600,000 volumes, 195,000 government documents and 665,000 microforms. The library is fully automated and provides a variety of electronic reference sources.

Special collections include an Instructional Materials Center in conjunction with the educational and psychology holdings, a map library in the science and technology unit, government documents and University archives. Special library features include small study rooms, faculty and student seminar rooms, and a Copy Services Center with rental typewriters, photocopy machines, and print from microforms. Reserve reading materials assigned for use in course work may be checked out at the Materials Access Services Desk. Each library unit maintains pamphlet files for ephemeral materials, such as newspaper clippings and pamphlets.

The Access Services Office (Room 214) provides an active orientation program designed to acquaint all students with basic and subject-oriented resources. Library instruction is given progressively to prepare students for life-long learning after their formal education has been completed.

The LOEX (Library Orientation/Instruction Exchange) Clearinghouse, a national office collecting and sharing data and materials on teaching library skills, was established at Eastern Michigan University over 10 years ago and currently provides services to more than 2,000 U.S. libraries.

The Media Services Center, on the first floor of the Library, assists departments and/or faculty in integrating media within their instructional programs. Consultation is usually followed by the selection of appropriate existing media and/or production of original media to achieve educational goals.

The center is responsible for the purchase, storage and circulation of non-print materials which include films and videocassette recordings. Other services include providing the equipment required to utilize the non-print materials, a pool of audio-visual

machines to check out, preview rooms for viewing video materials, and a campus instructional television system.

The center is equipped to produce charts, graphs, photographic slides, mounted and laminated materials, overhead visuals, and computerized visuals.

The Instructional Support Center (Room 102) provides individual and group assistance to registered students with a well-equipped facility, including an expanded microcomputer laboratory. Through these services, students receive not only tutoring assistance for classes, but also training to master academic skills. More specifically, the Instructional Support Center offers:

1. Free tutoring in a variety of basic studies areas (current schedules are posted in Room 102).
2. Individualized academic assistance.
3. Audio-tape recordings and phono discs with available stereo and video equipment for personal use or class assignment.
4. A Foreign Language Laboratory equipped with audio-aural assignments for students taking classes in the Department of Foreign Languages and Bilingual Studies.

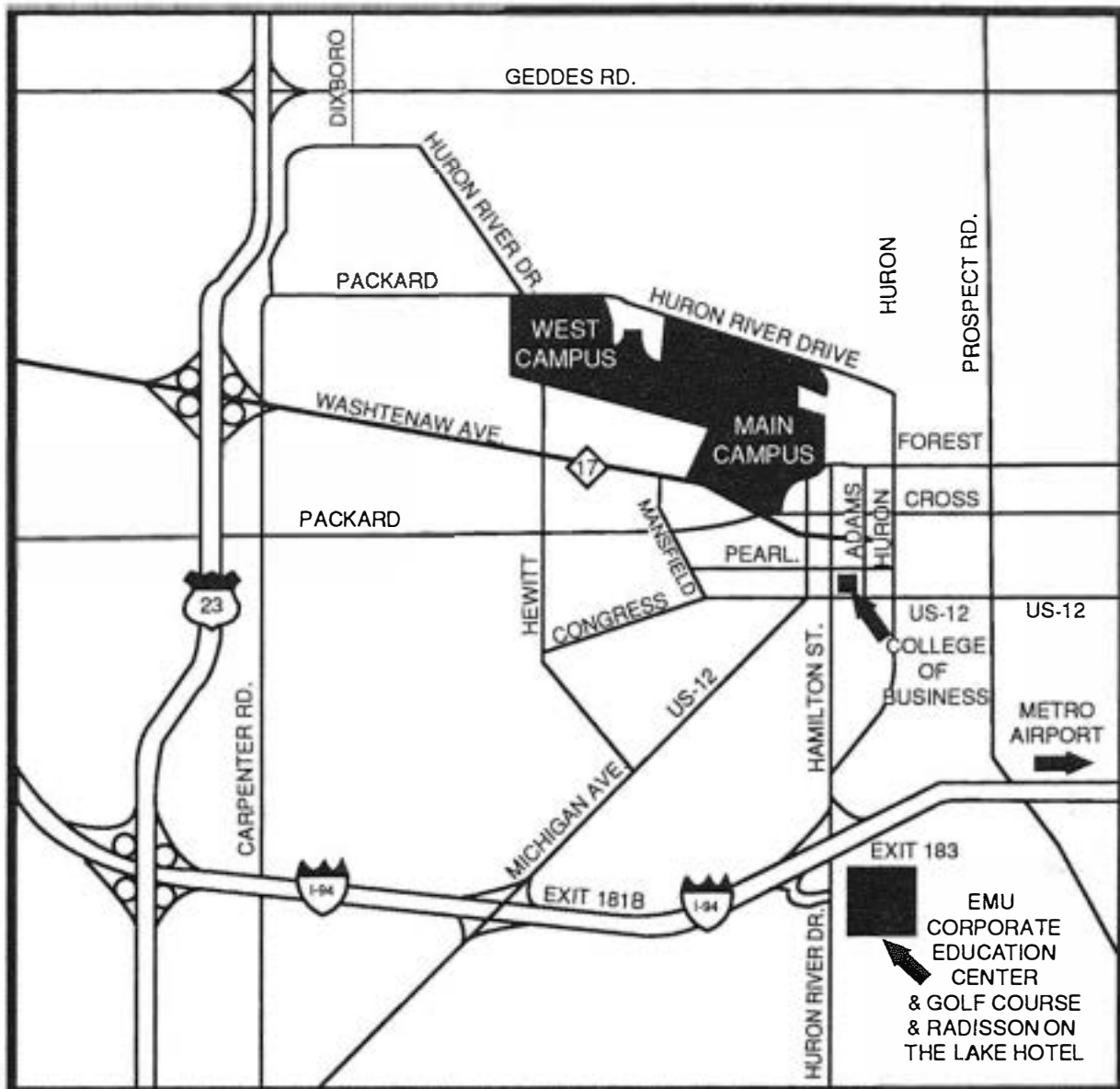
Learning Technologies provides support for research and instructional computing for students and faculty by managing mainframe and workstation services and facilities.

Learning Technologies operates computing labs open to all EMU students in the Library's Instructional Support Center, the College of Business, Goddard Hall, and McKenny Union.

The CIC (Center for Instructional Computing), housed in Room 215 University Library, is a computing development center for use by faculty.

The Learning Technologies Resale Program, Room 208 University Library, offers discounted Apple Macintosh computers, IBM computers, and WordPerfect and Microsoft software. These programs are available to individual students, faculty, and staff.

ACCESS MAP TO EASTERN MICHIGAN UNIVERSITY





COLLEGE OF ARTS AND SCIENCES

Barry Fish, Dean
Barbara Richardson, Associate Dean
James Waltz, Acting Associate Dean
Velma Clark, Administrative Associate II
411 Pray-Harrold
487-4344

DEPARTMENTS

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
Physics and Astronomy
Political Science
Psychology
Sociology, Anthropology and Criminology
Women's Studies Program

COLLEGE OF ARTS AND SCIENCES

Departments and programs of the College of Arts and Sciences offer most of the courses forming traditional university liberal arts or basic studies requirements. These courses provide the foundation for further work in the college's wide range of major and minor programs, or for specialized curricula in the university's other colleges. The College offers students additional opportunities for enrichment and career exploration through independent study, research projects and special activities, internships and cooperative education placements, and the University Honors Program.

BACCALAUREATE DEGREES

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 basic studies requirements, a major and a minor, and a *minimum* total of 124 credit 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 greatest 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.E.), Bachelor of Music Education (B.M.E.), Bachelor of Music-Performance (B.Mu.), and Bachelor of Music Therapy (B.M.T.). These specialized degrees are described more fully within the individual departments.

Several professional certificate and pre-professional 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, German, and Spanish; certified actuarial science (CAS); pre-dental hygiene; pre-dentistry; pre-forestry and a joint curriculum in natural resources (with the University of Michigan); pre-law; pre-medicine and pre-osteopathic medicine; pre-mortuary science; pre-pharmacy; and pre-religious careers. Two other preparatory programs are shared with the College of Technology: pre-architecture and pre-engineering.

BASIC DEGREE CURRICULA

BACHELOR OF SCIENCE AND BACHELOR OF ARTS

Patricia L. Williams
Associate Director
Academic Advising Center
301 Pierce Hall
487-2170

In symbolics and communication, science and technology, social science, and arts and humanities listed below, the usual number of semester hours to be completed is given, but it is the courses that must be completed, not a minimum or maximum number of semester hours in each. (A course must be awarded a minimum of two semester hours of credit.)

Area	Sem hours
Symbolics and communication	14-18
One course in written composition.	
One course in speech communication.	
One course in one of the following:	
a. an upper-level course in written composition.	
b. an upper-level course in speech communication.	
c. a course in foreign language composition.	
One course in mathematical reasoning.	

One course in computer literacy.

Science and technology	9-14
One course in physical science.	
a. You must complete a course in chemistry or physics unless you submit appropriate evidence that you completed a one unit course in high school with a grade of "C" or above.	
b. If you have submitted proof of having completed a one unit high school course in chemistry or physics, you may satisfy this requirement by choosing among chemistry, earth science/geology, or physics/astronomy.	
One course in life science (biology or psychology).	
One course in science or technology, chosen from a department other than ones in which you have completed your physical and life science requirements.	

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 of 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 course in cross-cultural or international studies.	

Arts and humanities	11-12
One of the following:	
a. A course in literature.	
b. An intermediate or advanced foreign language literature course	
One of 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 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	3
One course selected from basic studies areas I-IV.	

(The B.A. degree requires completion of one year college credit in a foreign language.)

Major (minimum)	30
Minor (minimum)	20
Physical education and health	2
(Any two courses in military science may be applied.)	
Electives	20-39
Total	124

INDIVIDUALIZED INTERDISCIPLINARY CONCENTRATION

Charles Fulford
Assistant Director
Academic Advising Center
301 Pierce Hall
487-2170

An optional, individualized interdisciplinary concentration may be designed to replace the major and minor for students

whose educational, vocational, or professional goals cannot be met by majors and minors currently available at Eastern Michigan University. Because of its individual design, this program is especially attractive for non-traditional students and for those with a clear personal goal.

There are specific criteria for completing this program. The basic elements are:

1. Three distinct discipline areas
2. A concentration of 60-63 credits,
3. At least 15 hours at EMU in 300-400 level courses, and
4. Approval from representative departments.

All students who apply for such a program will still be responsible for other graduation requirements, such as basic studies, physical education, and residency policies. Students interested in this program should meet with the assistant director of the Academic Advising Center to discuss their goals. The following should be summarized in a written statement submitted to the assistant director:

1. Reasons the student cannot complete a traditional major offered by the university,
2. The immediate goals of the proposed program, and
3. The way in which the proposed program will operate to fulfill stated educational and life objectives.

The student and the assistant director will then draft a program of study, which must be reviewed and approved by appropriate faculty advisers. This approved program is forwarded by the assistant director to the Director of Records and Registration and Advising.

COLLEGE OF ARTS AND SCIENCES COURSES

AAD 179 Academics, Affiliation, and Achievement 3 hrs
Restricted to first-time entering freshman only. This course provides students the information and skills which 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 team members and other students in the class. This class prepares students for success at EMU and beyond.

AFRICAN AMERICAN STUDIES

Ronald C. Woods
Department Head
620 Pray-Harroid
487-3460

Professor: Ronald C. Woods
Associate Professor: Clovis E. Semmes
Assistant Professor: Melvin T. Peters

African American Studies examines the evolution and current status of persons of African descent in the United States. It studies the African American experience as an entity in its own right and as a microcosm of dynamics operating in the domestic and global setting.

Objectives of the department are 1) to cultivate and disseminate knowledge about the African American experience, 2) to provide students the skills needed to confront the future world, and 3) to increase understanding of the role of multiple factors in shaping the social order.

Programs of Study

Major:

African American studies

Minor:

African American studies

Advising is available through the African American Studies department head and faculty.

AFRICAN AMERICAN STUDIES MAJOR

	Sem hours
Major in African American Studies	33
1. Required courses	9
AAS 101 Introduction to African American Studies	3
AAS 201 Foundations of Knowledge in African American Studies	3
AAS 401 African American Studies Research Seminar ...	3
2. Restricted electives	21
Choose twenty-one credits from the following:	
AAS 221 African American Social Movements, AAS 231 Urbanization and the African American Community, AAS 311 The African Diaspora, AAS 351 The Social Context of African American Health, AAS 361 The African American Family, AAS 441 Law in the African American Experience, HIS 315 History of Black Americans, LIT 260 African American Literature	
3. Elective	3
Choose one course from the following: Any course offered by the African American Studies Department, including independent studies and special topics; or:	
CTA 151 Black Theatre: An Introduction, CTA 251 Black Theatre: Creative Problems, FA 222 African and African American Art, ANT 236 Peoples and Cultures of Africa, ECO 321 Minority Workers in the Labor Market, ECO 332 Urban Economics, GEO 322 Geography of Africa, GEO 332 Urban Geography, HIS 342 North Africa, 1798 to Present, HIS 347 Sub-Saharan Africa to 1885, HIS 348 Twentieth Century Africa, HIS 365 The Old South, PLS 372 Government and Politics of Sub-Saharan Africa, PSY 340 Psychological Perspectives on Prejudice and Discrimination, SOC 214 Racial and Cultural Minorities, SOC 306 The Urban Community	

MINOR OFFERED IN THE AFRICAN AMERICAN STUDIES DEPARTMENT

AFRICAN AMERICAN STUDIES

Sem hours

- Minor in African American Studies 21
1. Required courses 9
 - AAS 101 Introduction to African American Studies 3
 - AAS 201 Foundations of Knowledge in African American Studies 3
 - AAS 401 African American Studies Research Seminar ... 3
 2. Restricted electives 9

Choose nine credits from the following:

 - AAS 221 African American Social Movements, AAS 231 Urbanization and the African American Community, AAS 311 The African Diaspora, AAS 351 The Social Context of African American Health, AAS 361 The African American Family, AAS 441 Law in the African American Experience, LIT 260 African American Literature, HIS 315 History of Black Americans
 3. Elective 3

Choose one course from the following: Any course offered by the African American Studies Department, including independent studies and special topics; or:

 - CTA 151 Black Theatre: An Introduction, CTA 251 Black Theatre: Creative Problems, FA 222 African and African American Art, ANT 236 Peoples and Cultures of Africa, ECO 321 Minority Workers in the Labor Market, ECO 332 Urban Economics, GEO 322 Geography of Africa, GEO 332 Urban Geography, HIS 342 North Africa, 1798 to Present, HIS 347 Sub-Saharan Africa to 1885, HIS 348 Twentieth Century Africa, HIS 365 The Old South, PLS 372 Government and Politics of Sub-Saharan Africa, PSY 340 Psychological Perspectives on Prejudice and Discrimination, SOC 214 Racial and Cultural Minorities, SOC 306 The Urban Community

AFRICAN AMERICAN STUDIES COURSES

AAS 101 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.

AAS 201 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.
Prereq: AAS 101.

AAS 221 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 structured inequality.
Prereq: AAS 101.

AAS 231 Urbanization and the African American Community. 3 hrs
Examines the urban African American community. Studies relevant migratory patterns, and the impact of urbanization on the culture, politics, and economic status of African Americans. Considers public policy issues involving African Americans in an advanced industrialized society.
Prereq: AAS 101.

AAS 277/278/279 Special Topics in African American Studies. 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.
Prereq: AAS 101 or department permission.

AAS 297/298/299 Independent Study in African American Studies. 1/2/3 hrs
Independent study of a selected topic under the supervision of the staff. Possible approaches include library research, field research, and participant-observer experiences.
Prereq: AAS 101 or department permission.

AAS 311 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 selected diasporic communities, and considers the impact of the African presence on world development.
Prereq: AAS 101 or department permission.

AAS 351 The Social Context of African American Health. 3 hrs
Examines the health status of African Americans. Explores the interplay between environment, biology, and culture; folk and popular health practices; and the organization and delivery of health care.
Prereq: AAS 101 or department permission.

AAS 361 The African American Family. 3 hrs
Examines the historical and contemporary forces shaping the African American family. Analyzes urbanization, economic transformations, and institutionalized racism. Studies the role of the family in human survival and progress.
Prereq: AAS 101 or department permission.

AAS 377/378/379 Special Topics in African American Studies. 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.
Prereq: AAS 101 or department permission.

AAS 401 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.
Prereq: AAS 201 and jr./sr. standing, or department permission.

AAS 441 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 law as a social process.
Prereq: AAS 101 and jr./sr. standing, or department permission.

AAS 477/478/479 Special Topics in African American Studies. 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.
Prereq: AAS 101 or department permission.

AAS 497/498/499 Independent Study. 1/2/3 hrs
Independent study of a selected topic under the supervision of the staff. Possible approaches include library research, field research, and participant-observer experiences.
Prereq: AAS 401 and junior standing, or department permission.

ART

John E. Van Haren
Department Head
114 Ford Hall
487-1268

Professors: Marvin C. Anderson, Barry Avedon, Igor Beginin, Robert E. Chew, Richard T. Fairfield, Jan Field, Lawrence L. Freeman, Fredrick C. Hunter, Sheldon Iden, John P. Loree, John N. Pappas, James Sandall, Ellen Schwartz, David W. Sharp, Patricia Williams, Jay R. Yager, John E. Van Haren, Michael Zahratka

Associate Professors: Christopher Bocklage, Douglas Kisor, Gretchen Otto, Richard Rubinfeld, Richard E. Washington

Assistant Professors: Diana Kulisek, George LaRou, Julia R. Myers, Andrea Witczak

Instructor: Carole Judy

The Art Department administers programs leading to the Bachelor of Fine Arts degree, the curriculum for teachers of art, an art major and minor, and a minor in art history. The department also participates in the arts group major and minor for elementary and special education teachers.

Advanced placement is available to students having up to six semester hours of advanced placement credit as elective art credits. Students contemplating the application of advanced placement credits toward an art degree should contact the department for complete information.

Degrees:

- Bachelor of Fine Arts
- Bachelor of Fine Arts plus teacher certification
- Bachelor of Art Education
- Bachelor of Science in art

Programs of Study

Curricula:

- Art Education
- Fine Arts
- Fine Arts plus teacher certification

Major:

- Art
- Art for K-12 education

Minors:

- Art
- Art for K-12 and special education-K-12
- Art history

Advising Coordinators:

- Art major and minor, fine arts curriculum: Igor Beginin
- Art education curriculum: Christopher Bocklage, Gretchen Otto
- Art history minor: Ellen Schwartz, Richard Rubinfeld, Julia Myers
- Honors in art: Lawrence Freeman

Graduate programs under the auspices of the department lead to the master's degree in art education and studio art. The M.A. (studio or art education) and M.F.A. degrees are described in the Graduate Catalog.

CURRICULUM FOR FINE ARTS

The fine arts curriculum, leading to a Bachelor of Fine Arts degree, is designed for students who plan to enter occupations in which a substantial background in art is required. Students completing the 54-60 semester hours within this curriculum will have satisfied all major and minor requirements for graduation.

Basic Studies

Refer to the basic studies requirements in the catalog on pp. 26-30. One course in art, dance, music, or theatre arts will automatically be met by the fine arts courses below.

	Sem hours
Fine arts	54-60
1. Required courses	27
FA 107-108 Art History Survey I-II	6
FA 122 Two-Dimensional Design	3
FA 123-124 Drawing I-II	6
FA 210 Life Drawing	3
FA 215 History of 19th-Century Art	3
FA 216 History of Contemporary Art I	3
FA 231 Three-Dimensional Design	3
2. Area of concentration	12
Choose a sequence of four courses in the major area ...	12
3. Electives in fine art	15-21
Physical education and health	2
Physical education activity courses	2
(Any two courses in military science may be applied.)	
Electives	9-25
Total	124

CURRICULUM FOR FINE ARTS PLUS TEACHER CERTIFICATION AND CURRICULUM FOR ART EDUCATION K-12 TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in art, certification code "LX." The certification test covering this field is #41, "Art Education." See page 288.

MAJORS OFFERED IN THE ART DEPARTMENT

ART

K-12 TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in art, certification code "LX." The certification test covering this field is #41, "Art Education." See page 289.

ART

Students may elect the following 30 semester hour major, but the preceding 54-60 semester hour Fine Arts major is advised. Teacher certification in art is not obtainable using this major.

	Sem hours
Major in art	30
1. Required courses	18
FA 107-108 Art History Survey I-II	6
FA 122 Two-Dimensional Design	3
FA 123-124 Drawing I-II	6
FA 231 Three-Dimensional Design	3
2. Electives	12
Choose 12 credits from art studio and/or art history courses in consultation with the advising coordinator.	

MINORS OFFERED IN THE ART DEPARTMENT

ART

K-12 AND SPECIAL EDUCATION-K-12 TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in art, certification code "LX." The certification test covering this field is #41, "Art Education." See page 289.

ART

	Sem hours
Minor in art	21-25
1. Required courses	9
FA 101 Introduction to Art or FA 123 Drawing I	3
FA 122 Two-Dimensional Design	3
Elect one art history course (FA 108 Art History Survey II suggested)	3
2. Electives	12
Elect 12 additional hours in studio art and/or art history offerings, of which at least 6 hours must be in advanced courses numbered 300 or above.	
FA 100 Art Appreciation; FA 101 Introduction to Art; FA 165-167 Studio Experience for Non-Majors; FA 300 Art Integration for the Elementary Teacher may be used as electives.	

ART HISTORY

Students with an art major who elect the art history minor must replace FA 107-108 Art History Survey I-II, FA 215 History of 19th-Century Art, FA 216 History of Contemporary Art I on the major with studio courses.

	Sem hours
Minor in art history	20
1. Required courses	14
FA 107-108 Art History Survey I-II	6
FA 215 History of 19th-Century Art	3
FA 216 History of Contemporary Art I	3
FA 428 Seminar: Modern Art	2
2. Restricted electives	6
Choose six credits from art history courses in consultation with art history minor advising coordinators.	

ART COURSES FOR NON-MAJORS

- FA 100 Art Appreciation.** 3 hrs
The aim is to acquaint students with art philosophies, their elements, principles, and values. Non-art majors or minors only.
- FA 101 Introduction to Art.** 3 hrs
Studio and lecture course designed to develop seeing 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.
- FA 151 Reason and Revolution.** 3 hrs
An examination of the transition in political history, philosophy, art, literature, and music from Puritan England and Louis XIV's France to Napoleon. Team taught by members of the Art and History departments. *This course satisfies one art or one history requirement.* Note: See Honors Humanities Courses, page 30.
- FA 165 Graphic Design for Non-Majors.** 3 hrs
Introduction to typography and illustration. Problems will explore fundamental design and basic production considerations and the development of a professional design thought process.
- FA 166 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, the use of the potter's wheel will be introduced the latter part of the semester.
- FA 167 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.

FA 179 Special Topics in Humanities. 3 hrs
This special topics course will be used to teach some aspects of the humanities that would not regularly be explored. A new course may be taught on an experimental basis using this heading. Dependent on the course offered, the special topic may satisfy a basic studies requirement. *Note:* See Honors Humanities Courses, page 30.

ART EDUCATION COURSES

Art education courses cannot be substituted for studio or art history requirements.

FA 300 Art Integration for the Elementary Teacher. 4 hrs
Understanding, appreciation, and awareness of art in its varied contemporary and multi-cultural contexts. Emphasis on three main areas: a) appreciation and understanding of the subject, b) art concepts and processes, aesthetic education, and their relationship to general education, c) integration of art into the general classroom procedures to enhance learning. Non-art majors only.

FA 317 Teaching of Art. 2 hrs
Focuses on discipline-based 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.

FA 377/378/379 Special Topics: Art Education. 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.

FA 416 Art Methods and Materials. 2 hrs
Designed to prepare students for their role in the classroom from the inception of an idea to the development of a unit of study. Planning, revising, and presenting specific units which incorporate the four disciplines. Not open to students on academic probation.
Prereq: FA 317, junior standing.

FA 477/478/479 Special Topics: Art Education. 1/2/3 hrs
An exploration of topics not covered in other departmental offerings. Students may elect more than one provided different topics are studied.
Prereq: Department permission.

FA 497/498/499 Independent Study: Art Education. 1/2/3 hrs
Advanced study on an individual basis in areas in which the department does not have regular course work.
Prereq: Department permission.

STUDIO ART COURSES

- FA 122 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, pattern, texture, and form.
- FA 123 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.
- FA 124 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: FA 123.

- FA 201 Graphic Design.** 3 hrs
Introduction to lettering, type design, and illustration. Problems examine design considerations, production services processes used in newspaper and magazine advertising, covers, and posters.
Prereq: FA 122 and FA 123.
- FA 205 Letterforms and Typography.** 3 hrs
Includes free-hand lettering, constructed alphabets, invented signs; emphasizes the importance of typographic design.
Prereq: FA 201.
- FA 210 Life Drawing.** 3 hrs
Study of the human form through drawing. Primarily nude models are used for subject matter. Various media are explored in search of the figurative element.
Prereq: FA 123 and FA 124, or department permission.
- FA 231 Three-Dimensional Design.** 3 hrs
Basic study of three-dimensional structures and systems.
- FA 232 Representational Drawing.** 3 hrs
A course in analytical drawing emphasizing the use of volume, light, and structure in the construction of a variety of representationally illusionistic objects and environments.
Prereq: FA 124.
- FA 235 Textiles.** 3 hrs
An introductory textiles class dealing with concepts of design as they relate to fiber structures and fabric processes.
Prereq: FA 122 and FA 123.
- FA 302 Graphic Design.** 3 hrs
Advanced design and illustration as applied to multicolor magazine and book illustration, direct mail advertising, and other areas of two-dimensional commercial design.
Prereq: FA 201.
- FA 304 Beginning Photographic Imagery.** 3 hrs
Introduction to photography as an art form. Basic camera and darkroom techniques demonstrated, with emphasis on exhibition printing. Student must furnish own camera equipment.
Prereq: FA 122 and FA 123.
- FA 305 Printmaking.** 3 hrs
Acquaintance with graphic techniques; woodcut and silkscreen.
Art majors only.
Prereq: FA 210.
- FA 306 Printmaking.** 3 hrs
Advanced graphic techniques with emphasis on development of individual style through experimentation with etching and processes.
Prereq: FA 305. Art majors only.
- FA 307 Ceramics.** 3 hrs
Basic ceramics, including wheel throwing and handbuilding techniques, compounding earthenware and stoneware clay bodies, formulating glazes, firing electric and gas kilns.
Prereq: FA 231 or department permission.
- FA 308 Ceramics.** 3 hrs
Advanced ceramic techniques, emphasis on personal expression, compounding of individual clay bodies and glazes, loading and firing of kilns.
Prereq: FA 307. Art majors only.
- FA 310 Sculpture.** 3 hrs
Exploratory experiences in volume and space; the use of clay, stone, wood, metal, etc.
Prereq: FA 231. Art majors only.
- FA 311 Sculpture.** 3 hrs
Continuing experiences in volume and space; development of further skills with sculpture materials and concepts.
Prereq: FA 310. Art majors only.
- FA 313 Painting.** 3 hrs
Painting problems; development of technique and concepts through experimentation with painting media.
Prereq: FA 122 and FA 124. Art majors only.
- FA 314 Watercolor I.** 3 hrs
Intensive exploration of watercolor techniques with emphasis on developing individuality and self-expression related to the medium.
Prereq: FA 122 and FA 124. Art majors only.
- FA 316 Life Drawing.** 3 hrs
Advanced study problems; the human form as composition and design; varied media.
Prereq: FA 210. Art majors only.
- FA 320 Jewelry.** 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: FA 231 or department permission. Art majors only.
- FA 321 Jewelry.** 3 hrs
Processes and techniques applied toward a professional development in jewelry design. Advanced processes, casting, setting of precious stones.
Prereq: FA 320 or equivalent.
- FA 323 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: FA 304. Art major or department permission.
- FA 324 Design and Development of Public Works of Art.** 3 hrs
An experimental studio course in which students and instructors will design, plan, and execute urban environmental murals, sculpture, parks, and malls.
Prereq: Department permission.
- FA 346 Advertising Layout Design.** 3 hrs
Deals intensively with conceptual and technical issues, concentrating on mastery of the tools, materials, and techniques in producing layouts and comprehensives.
Prereq: FA 205.
- FA 348 Logos and Symbols.** 3 hrs
Designing of logos and their market application to various media. Analysis of the creative and mechanical problems in the design of symbols.
Prereq: FA 205.
- FA 355 Textiles.** 3 hrs
An intermediate textiles class dealing with concepts and design as they relate to fiber structures, created either on or off the loom.
Prereq: FA 235. Art majors only.
- FA 356 Textiles.** 3 hrs
An intermediate textiles class dealing with concepts and design as they relate to basic fabric processes of surface decoration and manipulation.
Prereq: FA 235. Art majors only.

- FA 377/378/379 Special Topics: Studio Art.** 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.
- FA 387 Cooperative Education: Studio 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.
- FA 405 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: FA 306. Art majors only.
- FA 406 Printmaking.** 3 hrs
An advanced laboratory course for art majors taking their sequence in graphics. Projects could include lithography, etching, and aquatint processes plus individual assignments.
Prereq: FA 405. Art majors only.
- FA 407 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: FA 308. Art majors only.
- FA 408 Ceramics.** 3 hrs
Summation of the undergraduate ceramics program; emphasis on individual style, production techniques, studio management, exhibition programs.
Prereq: FA 407. Art majors only.
- FA 409 Advanced Photographic Imagery.** 3 hrs
The contextual development of personal vision is emphasized through discussion of the student's work in relationship to established photographers' work.
Prereq: FA 304, FA 323.
- FA 410 Metal Casting Techniques.** 3 hrs
An advanced sculpture course covering all aspects of the lost wax casting process. Includes information on other metal casting processes and on construction and operation of an inexpensive sculpture foundry.
Prereq: FA 310 or department permission.
- FA 411 Sculpture.** 3 hrs
Advanced sculpture problems, including steel and open form construction; intensive study of contemporary methods and techniques of sculpture.
Prereq: FA 311 or department permission. Art majors only.
- FA 412 Sculpture.** 3 hrs
Advanced sculpture problems; development of individual style in three-dimensional form.
Prereq: FA 411. Art majors only.
- FA 413 Painting.** 3 hrs
Further development of painting skills and aesthetic understanding of the two-dimensional surface complex. Emphasis on development of individual style.
Prereq: FA 313. Art majors only.
- FA 414 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: FA 314. Art majors only.
- FA 418 Portraiture.** 3 hrs
Emphasizes analytical drawing and painting of the volume and structure of the human form; also those specifics of detail and gesture necessary to illusionistically represent a person.
Prereq: FA 210.
- FA 419 Life Drawing.** 3 hrs
The study of the human form as part of the development of a personal style in art.
Prereq: FA 316. Art majors only.
- FA 423 Watercolor III.** 3 hrs
Further development of individual style in watercolor.
Prereq: FA 414. Art majors only.
- FA 424 Watercolor IV.** 3 hrs
Further development of individual style in watercolor.
Prereq: FA 423. Art majors only.
- FA 432 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.
Prereq: FA 210. Art majors only.
- FA 439 Life Drawing.** 3 hrs
The study of the human form as part of the development of a personal style of art.
Prereq: FA 419. Art majors only.
- FA 441 Studies in Clay and Glazes.** 3 hrs
Research and experimentation with earthenware, stoneware, and porcelain clays and slips. Students will examine, formulate, calculate, vary, and correct glazes for low and high temperatures, in electric and gas firings.
Prereq: FA 407 or department permission.
- FA 442 Jewelry.** 3 hrs
Advanced problems such as raising metal into hollow forms, cutting and polishing of gem stones, gem identification, and advanced metal joining and forming processes.
Prereq: FA 321. Art majors only.
- FA 443 Jewelry.** 3 hrs
Individual advanced problems in jewelry and metalworking.
Prereq: FA 442. Art majors only.
- FA 449 Photography Portfolio** 3 hrs
Development of a unified body of work representing the undergraduate photographic experience and culminating in a photographic project.
Prereq: FA 409.
- FA 455 Textiles.** 3 hrs
Advanced problems in fiber structure and fabric processes. Emphasis on innovative development of images.
Prereq: FA 355 or FA 356. Art majors only.
- FA 460 Advanced Graphic Design.** 3 hrs
Advanced work in design and research of promotional brochures, annual reports and other communicational print. Portfolio development in preparation for job placement.
Prereq: FA 348.
- FA 462 Advanced Illustration.** 3 hrs
Deals with attitudes, philosophies, aesthetics, techniques, and experiences as demonstrated in contemporary illustration. Emphasis on problems confronting a professional illustrator.
Prereq: FA 302 and FA 346.

FA 464 Corporate Identity and Graphic Systems. 3 hrs
Formulation of a corporate image reflecting the function and philosophy of a corporation. Emphasis on the establishment of a uniform graphic system used in a campaign including print.
Prereq: FA 348.

FA 477/478/479 Special Topics: Studio Art. 1/2/3 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.

FA 480/481 Painting. 3 hrs each
Further development of individual painting style.
Prereq: FA 413. Art majors only.

FA 487 Cooperative Education: Studio Art. 3 hrs
Continuation of FA 387 Cooperative Education: Studio Art.
Prereq: FA 387. Approval by graphic design area.

FA 497/498/499 Directed Studio Problems. 1/2/3 hrs
Advanced study on an individual basis in areas in which the department does not have regular course work.
Prereq: Department permission.

ART HISTORY COURSES

FA 107 Art History Survey I. 3 hrs
A survey of the development of the visual arts from cave art to the early Renaissance.

FA 108 Art History Survey II. 3 hrs
A continuation of Art History Survey I from the Renaissance through modern times.

FA 215 History of 19th-Century Art. 3 hrs
Begins with a survey of European art in the late 18th century as the beginning of the modern period, and concludes with Post-Impressionism at the end of the 19th century.
Prereq: FA 107 and FA 108.

FA 216 History of Contemporary Art I. 3 hrs
A survey of the visual arts of the 20th century, from Post-Impressionism through the latest contemporary developments.
Prereq: FA 215 or department permission.

FA 222 African and African American Art. 3 hrs
Surveys the visual arts of African and African American artists. Discussion of the form and content of African art in relation to its function in tribal life. Historical survey of African American artists with emphasis on current works.

FA 335 American Painting and Sculpture Prior to World War II. 3 hrs
A survey of American art, including European influences and the evolution of native American characteristics.
Prereq: FA 107 and FA 108, or department permission.

FA 336 History of Impressionism and Post-Impressionism. 3 hrs
Focuses on an understanding and appreciation of the painting, sculpture, and graphic arts of the last three decades of the 19th century.
Prereq: FA 108 or FA 215.

FA 340 History of Classical Art. 3 hrs
A study of the art and architecture of the classical civilization of Greece and Rome.
Prereq: FA 107 or department permission.

FA 341 History of Renaissance Art. 3 hrs
A history of art from the Proto-Renaissance (about 1250 A.D.) through the period of mannerism (1600).
Prereq: FA 107 or FA 108.

FA 377/378/379 Special Topics: Art History. 1/2/3 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.

FA 421 History of Oriental Art. 3 hrs
A survey of the art of the Far East, with significant examples chosen from India, China, Japan; investigation of the influences forming their styles.

FA 422 Chinese and Japanese Art History. 3 hrs
A detailed study of the major figure and landscape painters of China and Japan along with the ceramic, jade, and bronze traditions.
Prereq: FA 107 or FA 108 or FA 421 or department permission.

FA 428 Seminar: Modern Art. 2 hrs
Readings, reports, and group discussions of painting and sculpture from 1900 to the present.
Prereq: FA 216. Art majors only.

FA 429 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, Greek Revival, International Style, will be traced back through their origins and development.
Prereq: FA 107 or FA 108 or department permission.

FA 430 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. 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.
Prereq: Junior or senior standing, department permission.

FA 436 Women in Art. 3 hrs
A 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.
Prereq: FA 108 or department permission.

FA 440 History of Contemporary Art II. 3 hrs
A study of contemporary art from 1940 to the present with an intensive concentration on recent developments in art. A continuation of FA 216 History of Contemporary Art I.
Prereq: FA 216.

FA 477/478/479 Special Topics: Art History. 1/2/3 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.

FA 497/498/499 Independent Study: Art History. 1/2/3 hrs
Advanced study on an individual basis in areas in which the department does not have regular course work.
Prereq: Department permission.

BIOLOGY

Douglas Y. Shapiro
Department Head
316 Mark Jefferson
487-4242

Professors: Howard D. Booth, Najati S. Ghosheh, Gary L. Hannan, Edith M. Hurst, Dennis C. Jackson, Stephen C.Y. Liu, Merlyn C. Minick, Douglas Y. Shapiro, Suzanne J. Stevens, Paul A. Volz, Glenn K. Walker, Shih-An Yu

Associate Professors: Catherine E. Bach, Allen Kurta, Paul W. Milske, Robert K. Neely, John A. Novak, P. George Simone, James L. Vanden Bosch, Elizabeth L. Waffle

Assistant Professors: Jamin Eisenbach, William L. Guy, Peter Reinthal

The department of biology offers a major in biology with four specified fields of concentration: ecosystem biology, general biology, microbiology, and physiology; and four minors: biology, botany, zoology, and conservation and resource use. The department also provides programs in pre-forestry, pre-medicine (allopathic and osteopathic), pre-optometry, and pre-podiatry. In addition, there is an adviser for veterinary medicine.

Modern laboratories for course work and research under personal supervision of faculty are located in the Mark Jefferson building, and the J. Milton Hover laboratory and greenhouse. The adjacent Loesell Field Laboratory, nearby Huron River, and Ford Lake are available for field course work and research.

Field-oriented courses are taught at EMU's Kresge Environmental Education Center in Lapeer County (described under University Campuses at the back of this catalog) and at the Conservation Training School at Higgins Lake under joint auspices of EMU, Central Michigan University, Western Michigan University, the University of Michigan, and the Michigan Department of Conservation.

Registration for any courses offered by any of the participating universities at Higgins Lake is handled by EMU's Office of Continuing Education. Courses are normally a week long during the summer and carry one or two semester hours of credit. Only one course can be elected at a time. Students must apply in advance; enrollment is limited and acceptance is in order of application. Students desiring to receive credit from EMU and who indicate this on their application will be enrolled on EMU forms, eliminating the need for transcripts. Room and board are available. Information can be obtained from the Office of Continuing Education in Goodison Hall.

Coursework in tropical ecology is offered by the department when justified by demand and when arrangements can be made in a tropical area for laboratory facilities and living quarters for staff and students.

The department supports a student chapter of Beta Beta Beta, the national biological honorary society. All biology majors and minors are encouraged to participate in its activities.

Degrees:

Bachelor of Science
Bachelor of Arts

Programs of Study

Major in Biology

Biology for elementary education
Biology for secondary education
Concentrations:
Ecosystem biology (aquatic and terrestrial)
General biology
Microbiology
Physiology

Minors:

Biology
Biology for elementary education
Biology for secondary, K-12, and special education-
secondary
Botany
Zoology
Conservation and resource use

Pre-professional programs:

Pre-chiropractic
Pre-forestry
Pre-medicine (allopathic and osteopathic)
Pre-optometry
Pre-podiatry

Departmental advising procedures are posted opposite 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 majors/minors 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 adviser to select one of the areas of concentration in the major. 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 adviser during their first semester at EMU.

Biology majors who elect a botany or zoology minor must file an approved program of required/elective courses for the minor with their faculty adviser and undergraduate coordinator. Program changes will require prior written approval of the faculty adviser and undergraduate coordinator. Minors in either 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 listed below. Substitutes on the approved program will count toward its completion only if approved by the coordinator.

Pre-medical and pre-osteopathic medical students must meet with the advising coordinator to take advantage of the Pre-Medical Advisory Committee system for expediting medical school admission testing and recommendation.

Advising Coordinators:

Undergraduate coordinator: Paul W. Milske
Conservation and resource use: Catherine E. Bach
Ecosystem biology: Robert K. Neely
Elementary science education: Suzanne J. Stevens
General biology: Paul W. Milske
Microbiology: Stephen C.Y. Liu
Physiology: P. George Simone
Pre-forestry: Gary L. Hannan
Pre-medicine (allopathic and osteopathic), pre-optometry,
pre-podiatry, and pre-chiropractic: Edith M. Hurst
Pre-veterinary medicine: Elizabeth L. Waffle
Secondary biology education: John A. Novak

Graduate study leads to a Master of Science degree in biology with concentrations in community college biology teaching, ecosystem biology, general biology, physiology, and molecular/cellular biology. These programs are described in the Graduate Catalog.

BIOLOGY MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in biology, certification code "DA." The certification test covering this field is #17, "Biology." See page 291.

BIOLOGY MAJOR SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies 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 studies meets all requirements of the National Science Teachers Association. The certification test covering this field is #17, "Biology." See page 290.

BIOLOGY MAJOR

Majors should start with BOT 221 General Botany and ZOO 222 General Zoology in their freshman year. Majors without a strong high school biology preparation should take BIO 105 Biology and the Human Species before electing either BOT 221 or ZOO 222. (BIO 105 will not count toward the biology major or minor, although credit earned in this course will count toward the 124 hours required for graduation.)

Chemistry Requirement: The minimum requirement in chemistry for all biology majors is CHM 121-124 General Chemistry I-II with labs, CHM 270-271 Organic Chemistry with lab (or CHM 371-373). A course in biochemistry with laboratory is highly recommended.

Physics Requirement: The minimum requirement in physics for all biology majors is PHY 221 Mechanics, Sound, and Heat and PHY 222 Electricity and Light.

Mathematics Requirement: The minimum requirement in mathematics for all biology majors is a basic studies course in mathematical reasoning. It is strongly recommended that students who plan to pursue graduate work in biology take MTH 120-121 Calculus I-II.

The following courses may NOT be counted toward a biology major or minor: ESC 302 Elementary School Science, ESC 303 Science for the Elementary Teacher, BIO 205 Field Biology, and BIO 403 Methods and Materials for Teaching Biology.

	Sem hours
Major in biology	30-62
1. Required basic courses	11
BOT 221 General Botany	4
ZOO 222 General Zoology	4
BIO 301 Genetics	3
2. Field of concentration	19-51

ECOSYSTEM BIOLOGY CONCENTRATION (AQUATIC AND TERRESTRIAL)

In addition to the 11 semester hours of basic course work required of all biology majors, this concentration includes 20 semester hours of required courses and a required group science minor of 31 semester hours.

Honors courses requiring that students meet certain qualifications are available with this concentration. These are listed at the end of this concentration and can be explained by the advising coordinator.

	Sem hours
Ecosystem biology concentration (aquatic and terrestrial) ...	54
1. Required courses	23
BIO 314 Energy Analysis and Environmental Decision-Making	3
BIO 320 Introduction to Cell Physiology	4
A botany taxonomic field course*	3
A zoology taxonomic field course*	3
BIO 420 General Ecology	4
Approved electives	6

*See list at end of general biology concentration.

2. Required group science minor	31
CHM 121-124 General Chemistry I-II with labs	8
CHM 270-271 Organic Chemistry with lab	5
PHY 221 Mechanics, Sound, and Heat	4
PHY 222 Electricity and Light	4
GLG 160 Physical Geology	4
GES 324 Weather	3
CSC 137 Introduction to FORTRAN Programming, CSC 138 Computer Science I, or CSC 237 Computer Programming and Numeric Methods	3

Honors courses

BIO 387/487 Cooperative Education in Ecosystem Biology	3/3
BIO 488 Honors Practicum in Ecosystem Biology	2
BIO 497/498/499 Special Problems in Ecosystem Biology ...	1/2/3

GENERAL BIOLOGY CONCENTRATION

Students entering pre-professional programs in chiropractic medicine, dentistry, medicine, osteopathic medicine, podiatry, veterinary medicine, or optometry; specializing in field biology or plant and animal taxonomy, cell biology, pre-forestry, laboratory, or museum research may select the general biology concentration as preparation for continuing in a professional or graduate school program.

Students who are uncertain about a concentration may prefer the flexibility of the general biology concentration, which allows a broad spectrum of biology courses to explore without precluding later specialization.

Note: Within this 30 semester hour major there MUST be at least seven hours each in botany (may include microbiology) and at least seven hours in zoology. An experience at a biological station is recommended.

	Sem hours
General biology concentration	19
1. Required courses	11
BIO 320 Introduction to Cell Physiology	4
One taxonomic field course* (in either botany or zoology)	3
BIO 420 General Ecology	4
*See list at end of concentration.	
2. Electives	8
Choose eight semester hours in biology, botany, microbio- logy, or zoology <i>except</i> BIO 105 Biology and the Human Species, BIO 205 Field Biology, BIO 207 Elements of Ecology, ZOO 326 Human Physiology, ESC 302 Elementary School Science, ESC 303 Sci- ence for the Elementary Teacher, and BIO 403 Meth- ods and Materials for Teaching Biology.	

Courses designated as botanical taxonomic field courses:

BOT 354 Trees and Shrubs
BOT 450 Aquatic Tracheophyta
BOT 451 Freshwater Algae
BOT 453 Taxonomy and Ecology of Diatoms
BOT 455 Systematic Botany

Courses designated as zoological taxonomic field courses:

ZOO 300 Natural History of Invertebrates
ZOO 310 Natural History of Vertebrates
ZOO 421 Entomology
ZOO 422 Ichthyology
ZOO 425 Ornithology
ZOO 474 Herpetology
ZOO 480 Protozoology
ZOO 482 Aquatic Entomology
ZOO 485 Mammalogy

MICROBIOLOGY CONCENTRATION

Students selecting this concentration will be prepared for an entry-level position in microbiology and for entry into a professional program in biotechnology, medicine (allopathic and osteopathic), dentistry, veterinary science, pharmacy, or public health. It is a good second major for students in medical technology.

This program of study meets the educational requirements established by the American Academy of Microbiology (AAM). Students who complete this program and then meet the additional experience requirements set by the academy are eligible to make formal application for the examinations to become a registered microbiologist RM (AAM).

A biochemistry minor is required. Mathematics courses are specified. Students with a GPA of 3.0 or better and those planning on graduate work in microbiology are encouraged to take the higher level organic chemistry courses (CHM 371-373), biochemistry courses (CHM 451-453), and physics courses (PHY 223 and PHY 224) rather than the lower numbered courses.

	Sem hours
Microbiology concentration	29
1. Required courses	17
MIC 329 General Microbiology	5
MIC 333 Principles of Immunology	3
MIC 335 Immunology and Serology Laboratory	2
MIC 444 Microbial Physiology	3
MIC 452 Advanced Microbiology	4
2. Electives	12
Choose at least one course from each of the following:	
<i>Group A—Advanced Genetics</i>	
MIC 454 Molecular Biology of Bacteria and Viruses, *MIC 541 Microbial Genetics, *BIO 542 Molecular Genetics	
<i>Group B—Cellular/Molecular Biology</i>	
MIC 340 Basic Virology, BIO 461 Oncology, *BIO 540 Cell Biology	
<i>Group C—Medical Microbiology</i>	
MIC 432 Clinical Microbiology, BOT 446 Medical Mycology, ZOO 462 Parasitology	
<i>Group D—Environmental/Field and Applied Microbiology</i>	
BOT 404 Mycology, BOT 451 Freshwater Algae, BOT 453 Taxonomy and Ecology of Diatoms, MIC 442 Microbial Ecology, MIC 445 Food Microbiology, ZOO 480 Protozoology, *BOT 540 Plant Morphology of Algae and Fungi	
<i>*Qualified students may take graduate level courses (listed in the graduate catalog) with approval of their adviser and the Graduate School.</i>	
3. Required biochemistry minor	22
CHM 121-124 General Chemistry I-II with labs	8
CHM 270-271 Organic Chemistry with lab	5
CHM 281 Quantitative Analysis	4
CHM 351 Introductory Biochemistry	3
CHM 453 Biochemistry Laboratory	2
4. Mathematics requirement	4
MTH 120 Calculus I	4

Students are encouraged to take at least three semester hours in research and practical experience through the following courses: MIC 497/498/499 Special Problems in Microbiology (one/two/three credits); MIC 387/487 Cooperative Education in Microbiology (three credits each).

PHYSIOLOGY CONCENTRATION

Students electing this concentration are strongly advised to take minors in botany or zoology, and chemistry or biochemistry. Students are prepared for a variety of technical laboratory and clinical positions. It is recommended that students consider continuing with graduate study to expand their career opportunities.

	Sem hours
Physiology concentration	22
1. Required course	4
BIO 320 Introduction to Cell Physiology	4
2. Restricted electives	9
Choose nine credits from the following:	
BOT 442 Plant Physiology, MIC 444 Microbial Physiology, ZOO 427 Vertebrate Physiology, ZOO 437 Invertebrate Physiology	
3. Electives	6
Choose 6 credits from the following:	
BIO 413 Animal and Plant Preservation Techniques, BIO 415 Basic Histological Techniques, BIO 416 Biological Instrumentation—Theory and Practice, BIO 420 General Ecology, BIO 480 Radiation Biology, *BIO 540 Cell Biology	
BOT 412 Plant Anatomy	
MIC 329 General Microbiology	
ZOO 317 Human Gross Anatomy, ZOO 323 Animal Embryology, ZOO 431 Comparative Anatomy of Vertebrates, ZOO 404 Mammalian Histology, ZOO 417 Neuroanatomy	
<i>*Qualified students may take graduate level courses (listed in the graduate catalog) with approval of their adviser.</i>	
4. Chemistry Requirement	3
CHM 451 Biochemistry I	3

MINORS OFFERED IN THE BIOLOGY DEPARTMENT

BIOLOGY

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 biology, certification code "DA." The certification test covering this field is #17, "Biology." See page 291.

BIOLOGY

Students minoring in biology are strongly advised to take CHM 119 Fundamentals of Chemistry or CHM 121-124 General Chemistry I-II with labs.

Students with no previous biology in high school must follow the directives stated under the biology major by starting with BIO 105 Biology and the Human Species.

	Sem hours
Minor in biology	20-24
1. Required courses	11
BOT 221 General Botany	4
ZOO 222 General Zoology	4
BIO 301 Genetics	3
2. Electives*	9
Choose 9 credits from the following: biology, botany, microbiology, or zoology <i>except</i> ESC 302 Elementary School Science, ESC 303 Science for the Elementary Teacher, BIO 105 Biology and the Human Species, BIO 205 Field Biology, and BIO 403 Methods and Materials for Teaching Biology. Either BIO 204 The Biology of Cancer or BIO 239 Biology of Aging may be used in this minor, but <i>not</i> both courses.	
<i>*No more than two hours of electives toward the minor may be taken in any combination of BIO/BOT/ZOO 497/498/499 Special Problems courses. BIO/BOT/MIC/ZOO 387/487 Cooperative Education courses will not count on this minor. A minimum of three elective hours MUST be selected from 300-level or higher courses.</i>	

BOTANY

Students electing this minor must file an approved program of required/elective courses with their faculty adviser and with the Biology Department undergraduate coordinator. Program changes require prior written departmental approval.

Sem hours

Minor in botany 20

ZOOLOGY

Students electing this minor must file an approved program of required/elective courses with their faculty adviser and with the Biology Department undergraduate coordinator. Program changes require prior written departmental approval.

Sem hours

Minor in zoology 20

CONSERVATION AND RESOURCE USE

This program is administered jointly by the heads of the Biology Department, the Economics Department, the Geography Department, and the Sociology Department.

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 adviser.

Students are urged to take PLS 202 State and Local Government.

Sem hours

Minor in conservation and resource use 24

1. **Required courses** 13
 - * GES 108 Earth Science or GLG 160 Physical Geology 4
 - **BIO 207 Elements of Ecology 2
 - BIO 224 Principles of Conservation 4
 - *** ECO 200 The American Economy 3
2. **Electives** 11

Choose 11 credits from the following (approved by the advising coordinator):

 - BOT 215 Economic Botany, BOT 221 General Botany, ZOO 222 General Zoology, BIO 410 Limnology, BIO 412 Biogeography, BIO 436 Terrestrial Ecosystems, and any taxonomic field course.
 - CHM 115 Chemistry and Society, CHM 415 Environmental Chemistry
 - ECO 201-202 Principles of Economics I-II, ECO 336 Economics of Environment and Natural Resources, ECO 337 Energy Economics and Policies
 - GES 114 National Parks and Monuments, GES 200 The Oceans, GES 208 Natural Environmental Hazards, GEO 215 Introduction to Urban and Regional Planning, GEO 235 Economic Geography, GLG 229 Rocks of Michigan, GES 305 Aerial Photograph Interpretation, GEO 310 Energy Awareness, GEO 320 Geography of the United States and Canada, GES 324 Weather, GES 327 Soil Science, GEO 332 Urban Geography, GEO 361 Geography of Population, GES 424 Climatology, GLG 448 Hydrogeology, GES 495 Environmental Assessment and Planning
 - SOC 306 The Urban Community, SOC 334 Population

*Students required to take GES 108 Earth Science on a major or minor in the Geography and Geology Department will take an additional four hours of electives on this minor from the approved list.

**The prerequisite for BIO 207 Elements of Ecology is BIO 105 Biology and the Human Species. Students planning to take

this minor should elect BIO 105 for basic studies credit in the freshman year. Biology majors minoring in conservation will take BIO 420 General Ecology on the major and substitute additional approved electives on the minor.

***Students who prefer to elect ECO 201-202 Principles of Economics I-II to satisfy basic studies requirements may substitute ECO 201 for ECO 200 The American Economy and count ECO 202 as an elective on the minor. Students who are required to take ECO 201-202 for other purposes on their curricula, as in business administration, may not count it on this minor and must substitute an additional elective for ECO 200.

PRE-PROFESSIONAL PROGRAMS

PRE-FORESTRY

Forestry schools set their own requirements for admission. It is imperative that during the first year at EMU exact requirements be obtained from current catalogs of specific schools at which students seek to complete professional training. Students should initially follow the general biology program curriculum, which allows sufficient flexibility to accommodate admission requirements of professional schools. Students should consult with the pre-forestry adviser to establish the most appropriate program of courses.

The pre-forestry curriculum is designed for such diverse fields as conservation biology, wildlife management, resource policy, and fisheries biology, as well as forestry.

PRE-MEDICINE (ALLOPATHIC AND OSTEOPATHIC), PRE-OPTOMETRY, PRE-PODIATRY, AND PRE-CHIROPRACTIC

Students can complete course requirements at EMU for admission to optometry, podiatry, and chiropractic programs. For information on these programs, see the advising coordinator for pre-medical programs. The requirements are similar to those for allopathic and osteopathic medical schools as described below.

While medical schools do not prescribe a pre-medical curriculum, they expect a thorough understanding of modern concepts in biology, chemistry, and physics, and all value mathematical competence, with some specifying a course sequence in mathematics. Most pre-medical students, therefore, elect a major in one of these areas, although this is not mandatory. Most students 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 September in various centers throughout the nation. This test should be taken 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 the EMU library and in the pre-medicine adviser's office, should be consulted. The introductory chapters of this book should be read by every prospective medical student.

If students electing the pre-medicine sequence are not achieving at least a 2.75 grade point average (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 without completing the degree should plan their schedule to include the following general requirements:

Sem hours

ENG 121 English Composition 3

Elective in English language or literature 3

ZOO 222 General Zoology	4
BIO 301 Genetics	3
BIO 320 Introduction to Cell Physiology	4
BOT 221 General Botany	4
CHM 121-124 General Chemistry I-II with labs	8
CHM 351 Introduction to Biochemistry	3
CHM 371-373 Organic Chemistry with lab	8
PHY 221 Mechanics, Sound, and Heat	4
PHY 222 Electricity and Light	4
Sociology and psychology courses	8

Because of the nature of the pre-medical program, if the student is a biology or chemistry major it is almost mandatory to follow the first year as patterned below.

First Year—Pre-Medicine

	Sem hours	
First semester	12-18	
CHM 121-122 General Chemistry I with lab	4	
BOT 221 General Botany	4	
*Mathematics	2-4	
Basic studies	2-6	
**Second semester	13-19	
CHM 123-124 General Chemistry II with lab	4	
*Mathematics	2-4	
ZOO 222 General Zoology	4	
Basic studies	3-7	

*Students with one to two years of less than high quality algebra take MTH 105 College Algebra. Students with only one year of algebra take MTH 104 Intermediate Algebra, followed by MTH 105 College Algebra. Students without trigonometry take MTH 107 Plane Trigonometry.

**Prior to registering for the second semester the student should see the pre-medical coordinator.

BIOLOGY COURSES

BIO 105 Biology and the Human Species. 4 hrs
The basic concepts of biology, with emphasis on human structure and function, as well as key issues and problems confronting the human. Designed for the student who is taking neither major nor minor in biology. Meets for two lecture hours, one recitation hour, and three laboratory hours per week. Audio-tutorial laboratory covers basic biological concepts.

Not open to students with credit in BOT 221, and/or ZOO 222. Does not count toward the major or minor.

BIO 204 The Biology of Cancer. 2 hrs
Introduces the types, characteristics, putative causes, and current treatments of cancer.

Prereq: One year of high school biology or an introductory college-level biology course.

BIO 205 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. Gives background material to the non-specialist interested in outdoor life, and to the elementary school teacher. Not open to students having credit in BOT 221 or ZOO 222 except by department permission.

Prereq: BIO 105 or equivalent or department permission. Does not count toward the major or minor.

BIO 207 Elements of Ecology. 2 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.

Prereq: BIO 105 or equivalent. Does not count toward the major.

BIO 224 Principles of Conservation. 4 hrs
Introduces the basic resources of water, soil, vegetation, animal life, land as space, land in its unaltered condition, minerals and human powers, and develops the principles by which they may be wisely utilized and conserved with major emphasis on the renewable resources.

BIO 232 Nature Interpretation. 3 hrs
Combines intensive field and museum work in natural history with practical training and experience in interpreting natural objects and settings to individuals and groups.
Prereq: Previous field/course work in biology.

BIO 239 Biology of Aging. 2 hrs
The study of the aging process at the molecular, cellular, tissue, and systems level of organization. Theories of aging will be considered.
Prereq: BIO 105 or equivalent.

BIO 277/278/279 Special Topics in Biology. 1/2/3 hrs
An examination of topics in biology not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.
Prereq: Department permission.

BIO 301 Genetics. 3 hrs
A lecture course emphasizing the basic principles of inheritance with their application to plants and animals.
Prereq: BOT 221 and ZOO 222 or equivalent.

BIO 302 Genetics Lab. 2 hrs
A laboratory course designed to accompany or follow BIO 301. Provides opportunity to work with organisms proved to be most beneficial in extending our understanding of genetic principles. Practice in gathering and analyzing data from living populations will be provided.
Prereq: BIO 301 (may be taken concurrently).

BIO 307 Introduction to Hematology. 3 hrs
The study of the formed elements of the blood, their precursors, and some of their products. An introduction to the theory and principles of routine medical laboratory procedure and technique. Not open to those with credit in CLS 307.
Prereq: Department permission.

BIO 314 Energy Analysis and Environmental Decision-Making. 3 hrs
An introductory course in techniques used in environmental decision-making, emphasizing the energy analysis approach involving both natural and technological energy flows.
Prereq: BIO 105 or equivalent; one year of high school algebra or MTH 104.

BIO 320 Introduction to Cell Physiology. 4 hrs
A lecture and laboratory course in introductory physiology devoted to the study of physiological mechanisms common to all living organisms. Basic processes at the cellular level emphasized, rather than the applications of such processes to a particular organism.
Prereq: BOT 221; ZOO 222; CHM 121-124; CHM 270, 271 or equivalent.

BIO 334 Immunohematology/Urinalysis. 3 hrs
A lecture and laboratory course dealing with the principles of immunohematology and the theory and practice of urinalysis.
Prereq: ZOO 201, 202; or ZOO 222 and ZOO 326; BIO 307 and MIC 333.

BIO 387 Cooperative Education in Biology. 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 biology or technology. The program consists of two work experiences (BIO 387 and BIO 487) alternated with full-time attendance at the University. Admittance to program by application only. Graded on a credit/no credit basis.
Prereq: Junior standing.

BIO 403 Methods and Materials for Teaching Biology. 3 hrs
A lecture-laboratory course providing knowledge, training and practice in the presentation of biological principles, analysis of texts, 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: BOT 221, ZOO 222, and department permission. Junior standing. Not open to students on academic probation.

BIO 407 Advanced Hematology. 3 hrs

Theory and application of hematological test procedures. Includes interpretation of results, problem-solving, and correlation of laboratory findings with disease states. Not open to those with credit in CLS 407.

Prereq: BIO 307. Coreq: MIC 333.

BIO 410 Limnology. 3 hrs

A lecture, laboratory, and field course dealing with physicochemical and biological interrelationships in standing waters.

Prereq: BIO 420 and one taxonomic field course, or department permission.

BIO 412 Biogeography. 2 hrs

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: A course in college biology and a course in earth science, or department permission.

BIO 413 Animal and Plant Preservation Techniques. 1 hr

A laboratory, lecture, and demonstration mini-techniques course in the preservation of biological specimens: minute whole animal slide mounts to large animal and plant techniques, such as freeze-drying, pressing, skeleton making, study-skins, and plastic embedding.

Prereq: Two college biology courses.

BIO 415 Basic Histological Techniques. 1 hr

A laboratory, lecture, and demonstration mini-techniques course giving basic theory and practice in mammalian tissue slide preparation including dissection, fixation, dehydration, embedding, sectioning, affixing, and staining.

Prereq: Two college biology courses.

BIO 416 Biological Instrumentation—Theory and Practice. 1 hr

A lecture and laboratory course that covers testing, adjustments, operation, and maintenance of scientific instruments and their uses in the biological area.

Prereq: Two biology courses or department permission.

BIO 420 General Ecology. 4 hrs

A lecture, laboratory, and field course introducing the concepts involved in the study of terrestrial and aquatic communities, their physical environment, and their integration into ecosystems. Emphasis on properties at the ecosystem, community, and population levels.

Prereq: BOT 221, ZOO 222, and one taxonomic field course or department permission.

BIO 433 Stream Ecology. 3 hrs

A field biology course that includes the study of physicochemical and biological aspects of stream eco-systems. Includes a study of laboratory and field methods.

Prereq: BIO 420 and one taxonomic field course, or department permission.

BIO 434 Advanced Immunohematology. 3 hrs

Principles and procedures used in the blood bank are studied and related to problem situations in the laboratory. Not open to those with credit in CLS 434.

Prereq: BIO 307 and CLS 335.

BIO 435 Wetland Ecosystems. 3 hrs

Advanced field ecology course in the theory and method of study of wetland ecosystems.

Prereq: BIO 420 and one taxonomic field course, or department permission.

BIO 436 Terrestrial Ecosystems. 3 hrs

Advanced field ecology course in the theory and methods of study of the structure and dynamics of terrestrial ecosystems.

Prereq: BIO 420, BOT 354, or BOT 455.

BIO 461 Oncology. 3 hrs

A lecture course on physico-chemico-biological agents and factors of non-human and human cancer etiology, pathogenesis of neoplastic transformation in vitro, biochemistry and immunobiology of cancer, host-tumor relationship, and "model systems" in control.

Prereq: MIC 329 or equivalent; CHM 270, 271.

BIO 477/478/479 Special Topics in Biology. 1/2/3 hrs

An examination of advanced topics in biology not covered in other department offerings.

Prereq: Department permission.

BIO 480 Radiation Biology. 3 hrs

A lecture course on the molecular, cellular, organismal, supra-organismal effects of corpuscular and electromagnetic radiation. Topics will cover the basic mechanisms of biological responses of viruses, microbes, plants, and animals to radiation.

Prereq: Microbial, plant, or animal physiology; one year of physics; one year of chemistry. Genetics is desirable.

BIO 487 Cooperative Education in Biology. 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 biology or technology. The program consists of two work experiences (BIO 387 and BIO 487) alternated with full-time attendance at the University. Admittance to program by application only. Graded on a credit/no credit basis.

Prereq: BIO 387.

BIO 488 Honors Practicum in Ecosystem Biology. 2 hrs

A practical experience in an environmental field study including experimental design and collection, analysis, and interpretation of data as a member of a research team. Emphasis is placed on the application of biological theory to problem solving.

Prereq: Senior status (85 hours); GPA 3.0 overall and 3.3 in biology, a sponsoring faculty member, and/or approval of the Ecosystem Biology Program Committee; prior application required.

BIO 489 Practicum in Biology. 3 hrs

Provision of practical experience in a particular field of study, including experimental design and collection, analysis, and interpretation of data as a member of a research team. Emphasis placed on the application of a biological theory to problem solving.

Prereq: Department and adviser permission.

BIO 497/498/499 Special Problems in Biology. 1/2/3 hrs

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 resubmission and approval.

Prereq: Department permission.

BOTANY COURSES

BOT 177 Special Topics. 1 hr

An examination of topics in botany not covered in other department offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Department permission.

BOT 209 Ornamental Plants. 2 hrs

A general cultural course to acquaint students with ornamental shrubs and trees, common weeds, and house plants. Stress on identification and methods of propagation. Much time is spent in the greenhouse and on short field trips.

BOT 215 Economic Botany. 3 hrs

A study of plants useful to man, especially those which 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.

BOT 221 General Botany. 4 hrs

The structure and function of seed plants and of representative lower plants, together with the fundamentals of plant heredity, ecology, and evolution. Two one-hour lectures, one one-hour recitation, plus four hours of laboratory experience.

Prereq: High school biology or BIO 105 or equivalent. Cannot be taken concurrently with ZOO 222 except by department permission.

BOT 234 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.

BOT 277/278/279 Special Topics in Botany. 1/2/3 hrs

An examination of topics in botany not covered in other department offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Department permission.

BOT 354 Trees and Shrubs. 3 hrs

A taxonomic field course on identification of native trees and shrubs in winter and summer conditions. Counts as taxonomic field course.

Prereq: BIO 205 or BOT 221..

BOT 387 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 (BOT 387 and BOT 487) alternated with full-time attendance at the University. Admittance to program by application only. Graded on a credit/no credit basis.

Prereq: Junior standing.

BOT 404 Mycology. 3 hrs

A lecture-laboratory course on the study of molds, rusts, mildews, edible and poisonous mushrooms, and other fungi. Their life history, economic importance, method of identification, and preservation are considered.

Prereq: BOT 221.

BOT 412 Plant Anatomy. 3 hrs

A basic lecture-laboratory course in plant histology emphasizing recognition of primary and secondary tissues as variously combined in root, stem, leaf, and flower of a wide variety of representative seed plants.

Prereq: BOT 221.

BOT 442 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.

Prereq: BOT 221; CHM 270, 271 or equivalent; and BIO 320.

BOT 446 Medical Mycology. 4 hrs

The medical and public health importance of diseases caused by fungi. Diagnostic methods and significant characteristics of the causal agents of mycoses are studied in this lecture-laboratory course. Fungi included are the contaminants, dermatophytes, and systemics.

Prereq: MIC 328 or MIC 329 or BOT 404.

BOT 450 Aquatic Tracheophyta. 3 hrs

Field and laboratory work in identification of herbaceous and shrubby vascular plants growing in aquatic habitats and in both vegetative and reproductive phases. Counts as taxonomic field course.

Prereq: BOT 221.

BOT 451 Freshwater Algae. 3 hrs

A survey of the freshwater algal divisions; their morphology, taxonomy, ecology, and economic importances. Lectures emphasize an evolutionary approach. Laboratory work stresses the identification of representative algal taxa. Class field collections are made. Counts as taxonomic field course.

Prereq: BOT 221.

BOT 453 Taxonomy and Ecology of Diatoms. 3 hrs

A taxonomic field course on the collection, preservation, and identification of freshwater diatoms. A survey of the diatom genera and the common or ecologically important species. Emphasis is placed on developing a familiarity with the more significant world literature. Collection required.

Prereq: BOT 451 or department permission.

BOT 455 Systematic Botany. 3 hrs

Covers the essentials of the collection, identification, and classification of flowering plants. The student will become familiar with the major plant groups, both from lecture and herbarium study and from field experience in varied habitats. Counts as taxonomic field course.

Prereq: BOT 221.

BOT 477/478/479 Special Topics in Botany. 1/2/3 hrs

An examination in topics in botany not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Department permission.

BOT 487 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 (BOT 387 and BOT 487) alternated with full-time attendance at the University. Admittance to program by application only. Graded on a credit/no credit basis.

Prereq: BOT 387.

BOT 497/498/499 Special Problems in Botany. 1/2/3 hrs

Individual work in some area of botany under direction of a staff member. Preliminary draft or proposed study must be approved by the department prior to enrollment. May be elected more than once, after resubmission and approval.

Prereq: Department permission.

ELEMENTARY SCIENCE COURSES

BIO 205 Field Biology 4 hrs

(See Biology Courses.)

ESC 302 Elementary School Science. 3 hrs

Intended for those planning to teach in the elementary grades. Prepares the student to organize the problems, 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 lectures and one two-hour laboratory. Not open to students who have taken ESC 303.

ESC 303 Science for the Elementary Teacher. 3 hrs

Important biological concepts, especially relating to the interrelationships of organisms within their environment; the investigative or "discovery" approach; methodology involved in the new approaches to teaching science. One hour of lecture and four hours weekly involving recitation, laboratory, or field work. Concluding course in the elementary science sequence.

ESC 377/378/379 Special Topics In Elementary Science. 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 as long as different topics are studied.
Prereq: Department permission.

MICROBIOLOGY COURSES

MIC 277/278/279 Special Topics In Microbiology. 1/2/3 hrs
An examination of topics in microbiology not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.
Prereq: Department permission

MIC 328 Introductory Microbiology. 3 hrs
Introduction to the biology of bacteria and other microbes; transmission of infectious diseases; and principles of, control of, and immunity to infectious diseases. A lecture/lab course. Does not apply on the curriculum in clinical laboratory sciences or on microbiology concentration in biology major, but will count as elective on general biology concentration or biology minor.
Prereq: BIO 105 and CHM 120; or ZOO 201,202; or department permission.

MIC 329 General Microbiology. 5 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 the interactions of pathogenic microorganisms with their hosts. Laboratory includes an introduction to the techniques of isolating, cultivating, and identifying bacteria and other microbes, and their physiological, serological, and pathological properties. Not open to those who take MIC 328.
Prereq: BOT 221 or ZOO 222 or ZOO 326 and CHM 270, 271. A biochemistry course recommended.

MIC 333 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; hypersensitivity.
Prereq: MIC 328 or MIC 329.

MIC 335 Immunology and Serology Laboratory. 2 hrs
A laboratory course designed to accompany or follow MIC 333. Theory and practice in serological techniques with emphases on antigen-antibody reactions such as precipitation, agglutination, viral neutralization, and complement fixation. Not open to those with credit in CLS 335.
Prereq: MIC 333. (May be taken concurrently.)

MIC 340 Basic Virology. 3 hrs
A basic lecture and laboratory course on physico-chemico-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.
Prereq: MIC 329 and an organic chemistry course.

MIC 387 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 (MIC 387 and MIC 487) alternated with full-time attendance at the University. Graded on a credit/no credit basis.
Prereq: MIC 329 and junior standing. Admittance to program by application only.

MIC 432 Clinical Microbiology. 4 hrs
Lecture and laboratory. Mechanisms of pathogenesis and the specific bacterial and viral etiological agents of human disease. Meth-

ods of detection, isolation, enumeration, and identification used in clinical laboratories. Not open to those with credit in CLS 432.
Prereq: MIC 329 or department permission.

MIC 442 Microbial Ecology. 3 hrs
Interactions among microbes (fungi, bacteria, some phages), other living organisms, and the environment, with emphases on parasitism, mutualism, commensalism, and biogeochemical recycling of matter. Includes both laboratory and field exercises.
Prereq: BOT 221 or ZOO 222, and MIC 329 or equivalent.

MIC 444 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.
Prereq: MIC 329; CHM 270, 271; CHM 351 and CHM 453 recommended.

MIC 445 Food Microbiology. 3 hrs
A lecture and laboratory course on the qualitative and quantitative nature of microbiology in relation to foods and food systems, behavior and detection of bacteria, toxin production, destruction of microbes by heat and other means, and food sanitation.
Prereq: MIC 328 or MIC 329.

MIC 452 Advanced Microbiology. 4 hrs
A lecture and laboratory course to provide an in-depth study of the morphological, biochemical, and genetic relationships of bacteria. Emphasis will be on physiological transformations carried out by autotrophic and heterotrophic organisms in their environment, regulation of growth, and advanced isolation and characterization techniques.
Prereq: MIC 329, MIC 444, and a biochemistry course.

MIC 454 Molecular Biology of Bacteria and Viruses. 3 hrs
A lecture course on ultra-structure of both bacteria and viruses and expression of their genomes (such as operons, morphogenesis and control, modification and restriction, virus induced enzymes, and replication and control mechanisms), viral carcinogens, and implication in disease control.
Prereq: MIC 329 or equivalent, BIO 301, a course in physiology, and a course in organic chemistry lecture and laboratory. BIO 542 recommended.

MIC 477/478/479 Special Topics in Microbiology. 1/2/3 hrs
An examination of topics in microbiology not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.
Prereq: Department permission.

MIC 487 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 (MIC 387 and MIC 487) alternated with full-time attendance at the University. Graded on a credit/no credit basis.
Prereq: MIC 387.

MIC 497/498/499 Special Problems in Microbiology. 1/2/3 hrs
Individual work in an area of microbiology under direction of a staff member. Preliminary draft or proposed study must be approved by the department prior to enrollment. May be elected more than once, after resubmission and approval.
Prereq: Department permission.

ZOOLOGY COURSES

ZOO 201 Human Anatomy and Physiology I. 3 hrs
An intensive lecture and laboratory course investigating human anatomy and physiology with emphasis on both normal and patho-

logical conditions, in a two-semester sequence. First semester will cover the basic structure and functions of the muscular, skeletal, and nervous systems. Credit on nursing and biology programs counts only if ZOO 201 and ZOO 202 are taken consecutively.
Prereq: CHM 120.

ZOO 202 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 circulation, metabolism, the endocrine, digestive, excretory and reproductive systems, and the integration of the systems of the body.
Prereq: CHM 120 and ZOO 201.

ZOO 222 General Zoology. 4 hrs
A general survey of the groups of invertebrate and vertebrate animals according to the evolutionary sequence. Emphasis is placed upon the classification and structures, also on such aspects as physiology, life histories, habits, distribution, and economic relations. Two one-hour lectures, one-hour recitation, and four hours of audio-tutorial laboratory.
Prereq: High school biology or BIO 105 or equivalent. Cannot be taken concurrently with BOT 221 except by department permission.

ZOO 223 Field Bird Study. 1 hr
Identification of birds and their songs and nesting habits, studied in laboratory and field.

ZOO 277/278/279 Special Topics in Zoology. 1/2/3 hrs
An examination of zoology topics not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.
Prereq: Department permission.

ZOO 300 Natural History of Invertebrates. 3 hrs
A field course in the recognition, collection, identification, and preserving of common invertebrates of Michigan, exclusive of the insects, with emphasis on their natural history, ecology, and economic importance. Counts as taxonomic field course.
Prereq: ZOO 222.

ZOO 310 Natural History of Vertebrates. 3 hrs
A survey of vertebrates, emphasizing their adaptations and their natural history. Laboratory work will stress the taxonomic classification, identification, and distribution of local and other forms. Field work will emphasize accurate observation and permanent recording of original data on local species. Counts as taxonomic field course.
Prereq: ZOO 222.

ZOO 317 Human Gross Anatomy. 5 hrs
A lecture, demonstration, and laboratory course on gross anatomy of the human body with emphasis on the extremities.
Prereq: BIO 105 and department permission.

ZOO 318 Laboratory in Human Anatomy. 2 hrs
Laboratory with prosection and dissection of human cadaver by students. Designed to accompany lecture material in PED 200 Anatomy and Physiology.
Coreq: PED 200.

ZOO 323 Animal Embryology. 3 hrs
Fundamental facts and principles of the reproduction and development of animals with laboratory studies of the frog, chicken, pig, and other forms.
Prereq: ZOO 222.

ZOO 326 Human Physiology. 3 hrs
A study of the functioning of the human body. Lecture, laboratory, and demonstration. Not open to biology majors, but can be taken

on a biology minor in which case ZOO 222 is prerequisite. Credit will be given for both ZOO 326 and ZOO 427 on the minor.
Prereq: BIO 105. Open to Dietetics and Occupational Therapy majors, and biology minors.

ZOO 366 Economic Zoology. 2 hrs
A survey of the species and breeds of animals that are used as beasts of burden; supply food, clothing, sport, and recreation; or serve as pets. A lecture course.
Prereq: One course in college zoology.

ZOO 387 Cooperative Education in Zoology. 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 zoology or technology. The program consists of two work experiences (ZOO 387 and ZOO 487) alternated with full-time attendance at the University. Admittance to program by application only. Graded on a credit/no credit basis.
Prereq: Junior standing.

ZOO 404 Mammalian Histology. 3 hrs
A lecture/laboratory course dealing with the structure and properties of mammalian organs and their component tissues.
Prereq: ZOO 222.

ZOO 417 Neuroanatomy. 3 hrs
A lecture/laboratory course concerned with the study of the human nervous system, lesions, and resulting disabilities.
Prereq: ZOO 317 and department permission.

ZOO 421 Entomology. 3 hrs
A survey of the world of insects, their structure, function, behavior, and ecology. The identification and classification of local insects will be stressed. A student field project will be required. Counts as a taxonomic field course.
Prereq: ZOO 222.

ZOO 422 Ichthyology. 3 hrs
A study of the biology, classification, distribution, and evolution of fishes. Attention is given to the morphology, physiology, behavior, natural history, and ecology of fishes through work in lecture, laboratory, and in the field. Specific experience in the identification of the freshwater fishes of the Great Lakes region is provided in addition to a general survey of some marine fish families. Counts as a taxonomic field course.
Prereq: ZOO 222.

ZOO 425 Ornithology. 3 hrs
A course in bird biology for the secondary teacher and students with advanced interest in biology. Field identification and census methods will be used to introduce the study of bird populations, behavior, and ecology. A survey of major North American bird families will be made in the laboratory. A student field project will be required. Counts as a taxonomic field course.
Prereq: ZOO 222.

ZOO 427 Vertebrate Physiology. 3 hrs
A detailed study of physiological phenomena of the vertebrate body at the cellular and organ level with laboratory experiments to illustrate. Organ to organ interaction is emphasized.
Prereq: ZOO 222; BIO 320; CHM 270, 271; or department permission. Physics is desirable.

ZOO 430 Invertebrate Zoology. 4 hrs
Phylogenetic and anatomical study of one or more representative types from each phylum of invertebrates, with special emphasis on taxonomy, classical literature, and current research. Three lectures and two two-hour labs weekly.
Prereq: ZOO 222.

ZOO 431 Comparative Anatomy of Vertebrates. 4 hrs

The anatomy of the vertebrate organ systems is studied on a comparative basis, which emphasizes the evolutionary development of the groups. Laboratory work includes detailed dissection of the shark and cat. Three one-hour lectures and two two-hour laboratory periods per week.

Prereq: ZOO 222.

ZOO 437 Invertebrate Physiology. 3 hrs

A lecture/lab course to study the functional processes of both terrestrial and aquatic insects and other major invertebrate groups. Builds upon a general understanding of physiology to compare the ways different invertebrates have evolved solutions to common physiological problems. In the laboratory, standard physiological research techniques will be used to demonstrate the lecture concepts. Some of these techniques will be applied in a student-designed research exercise and report.

Prereq: ZOO 222; CHM 270, 271; BIO 320. ZOO 430 is recommended.

ZOO 462 Parasitology. 3 hrs

A survey of animal parasites that affect other animals including the human. Lecture and laboratory.

Prereq: ZOO 222.

ZOO 474 Herpetology. 3 hrs

The biology of amphibians and reptiles; taxonomy, origins and evolution, anatomy, adaptations, behavior, ecology, zoogeography. Local hibernating and spring-breeding populations will be studied in the field, including at night and/or during inclement weather and on two Saturday field trips. Laboratory work will cover dissection of a representative amphibian and reptile, and study of living and preserved specimens of extant orders and families and North American species. Counts as a taxonomic field course.

Prereq: ZOO 222 and one of the following: BIO 420, ZOO 310, or ZOO 431.

ZOO 477/478/479 Special Topics in Zoology. 1/2/3 hrs

An examination of zoology topics not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Department permission.

ZOO 480 Protozoology. 3 hrs

Survey of the protozoa with emphasis on their life cycles, morphology, and ecology. Both free living and parasitic forms will be discussed. Techniques of collecting, culturing, and preserving protozoans and their identification will be emphasized in the laboratory. Counts as a taxonomic field course.

Prereq: ZOO 222.

ZOO 482 Aquatic Entomology. 3 hrs

The study of aquatic insect families and their general ecology, life histories, and taxonomy. A collection of the common aquatic insect families of the area is required. Counts as a taxonomic field course.

Prereq: ZOO 222. ZOO 421 recommended.

ZOO 485 Mammalogy. 3 hrs

Some aspects of the biology of mammals: origins and evolution, anatomy, classification, adaptations, and zoogeography. Natural history and aspects of their ecology are studied in the field. A collection of study specimens of different species is required of each student. Counts as a taxonomic field course.

Prereq: ZOO 222 and one of the following: ZOO 310, BIO 420, or ZOO 431.

ZOO 487 Cooperative Education in Zoology. 3 hrs

Four or six months of full-time employment at an industrial firm or laboratory specially chosen for imparting a practical educa-

tional experience in zoology or technology. The program consists of two work experiences (ZOO 387 and ZOO 487) alternated with full-time attendance at the University. Admittance to program by application only. Graded on a credit/no credit basis.

Prereq: ZOO 387.

ZOO 497/498/499 Special Problems in Zoology. 1/2/3 hrs

Individual work in some area of zoology under direction of a staff member. Preliminary draft or proposed study must be approved by the department prior to enrollment. May be selected more than once, after resubmission and approval.

Prereq: Department permission.

CHEMISTRY

Judith T. Levy
Department Head
225 Mark Jefferson
487-0106

Professors: Michael J. Brabec, Stephen W. Brewer, Ronald W. Collins, Judith T. Levy, Elva Mae Nicholson, Donald B. Phillips, O. Bertrand Ramsay, Krishnaswamy Rengan, Stephen E. Schullery, Ronald M. Scott, John M. Sullivan, Stewart D. Work, Masanobu Yamauchi

Associate Professors: Ellene Tratras Contis, Arthur S. Howard, Ross S. Nord, Ralph R. Powell, Wade J. Tornquist, Jerry R. Williamson

Assistant Professors: Deborah Heyl-Clegg, Maria C. Milletti, Jose C. Vites

The Chemistry Department offers both professional and general level programs in chemistry and biochemistry, and a biochemistry/toxicology program. The department also administers pre-professional programs in dentistry, mortuary science, and pharmacy. Although the pre-medicine program is not administered by the department, the biochemistry and chemistry curricula provide excellent preparation for a career in medicine.

Housed in the spacious 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; diffraction and X-ray fluorescence apparatus; preparative and analytical ultracentrifuges; fluorometers; a DTA-DSC-TGA thermal analysis system; a gas chromatograph-mass spectrometer; and a titration microcalorimeter. The department also has a Bruker 250MHz superconducting nuclear magnetic resonancer (NMR) spectrometer. In addition, a computer laboratory with 24 IBM AT-compatible computers, and specialized facilities and equipment for radiochemistry and cell culture are available.

The Chemistry Department offers Honors General Chemistry I & 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 Committee; or students may apply to the Honors Committee 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 offered by the Department of Chemistry is accredited by the American Chemical Society.

Degrees:

Bachelor of Science and Bachelor of Arts

Programs of Study:

Major:

Chemistry for secondary education
General Chemistry

Curricula:

Professional chemistry
Professional biochemistry
General biochemistry
Biochemistry/toxicology

Minors:

Chemistry
Chemistry for secondary, K-12, and special education-secondary
Biochemistry

Pre-Professional Programs:

Pre-Dentistry
Pre-Medicine
Pre-Mortuary Science
Pre-Pharmacy

Advising for students desiring to pursue a major or curriculum in chemistry is available through either the undergraduate advising coordinator, or an adviser identified on the adviser list in the Chemistry Department Office, or an area advising coordinator listed below. A handbook for undergraduate chemistry students is available in the department office.

Advising Coordinators:

Undergraduate advising coordinator: Elva Mae Nicholson

Biochemistry: Ronald M. Scott

Biochemistry/toxicology: Michael Brabec

Pre-Dentistry (including dental hygiene and dental assisting programs): John M. Sullivan

Pre-Medicine: Elva Mae Nicholson

Pre-Mortuary Science and Pre-Pharmacy: Ralph Powell

Cooperative education in chemistry: Elva Mae Nicholson

CHEMISTRY MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in chemistry, certification code "DC," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #18, "Chemistry." See page 292.

GENERAL CHEMISTRY MAJOR

The general chemistry major is appropriate for those 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.

Sem hours

Major in general chemistry	30
1. Required courses	25
CHM 121-124 General Chemistry I-II with labs	8
*CHM 261 Introduction to Physical Chemistry	4
CHM 281 Quantitative Analysis	4
CHM 371-373 Organic Chemistry I-II with lab	8
CHM 381 Instrumentation for Chemical Technology	2
<i>*Prerequisites for CHM 261 include MTH 120 Calculus I, PHY 223 Mechanics, Sound, and Heat, and either PHY 222/PHY 224 Electricity and Light, a total of 13-14 semester hours, all of which are required for a chemistry major.</i>	
2. Electives	5
Choose five credits from 300- and 400-level courses in chemistry.	

PROFESSIONAL CHEMISTRY CURRICULUM

This curriculum provides the necessary background for those planning to become professional chemists. It meets the requirements established by the American Chemical Society. Students successfully completing the curriculum are prepared to enter technical positions in industrial and government research, or to undertake graduate study in chemistry. Further work at the graduate level is highly recommended for those who are capable. The program includes a group minor comprised 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 semester hours or an equivalent reading knowledge of a foreign language, preferably German, are recommended.

**Required courses and electives in science and mathematics are listed below. Additional basic studies and elective courses totaling 124 semester hours are required to complete a degree.*

	Sem hours
Science and mathematics	69-74
1. Required courses	65
CHM 121-124 General Chemistry I-II with labs	8
CHM 281 Quantitative Analysis	4
CHM 363 Chemical Thermodynamics	2
CHM 364 Chemical Kinetics	2
CHM 365 Physical Chemistry Laboratory	2
CHM 371-373 Organic Chemistry I-II with lab	8
CHM 432 Advanced Inorganic Chemistry	3
CHM 433 Inorganic-Organic Synthesis Laboratory	2
CHM 464 Quantum Chemistry	2
CHM 481 Instrumental Analysis	4
MTH 120-121 Calculus I-II	8
<i>(Students deficient in high school preparation must take MTH 105 College Algebra before entering calculus.)</i>	
MTH 122 Elementary Linear Algebra	3
MTH 223 Multivariable Calculus	4
MTH 325 Differential Equations	3
PHY 223 Mechanics, Sound, and Heat	5
PHY 224 Electricity and Light	5
2. Electives	4-9
Choose two advanced courses from the following (at least one must be in the Chemistry Department):	
<i>Chemistry</i>	
CHM 411-412 Toxicology I-II, CHM 413 Toxicology Laboratory, CHM 414 Regulatory Toxicology, CHM 451-452 Biochemistry I-II, CHM 453 Biochemistry Laboratory, CHM 475 Introduction to Polymer Chemistry, CHM 480 Computer/Instrument Interfacing, CHM 485 Introduction to Radiotracer Techniques, CHM 477/478/479 Special Topics in Chemistry, CHM 487/488/489 Cooperative Education in Chemistry, CHM 498/499 Undergraduate Research in Chemistry, CHM 553 Enzymology, CHM 555 Neurochemistry, CHM 561 Quantum Chemistry and Spectroscopy, CHM 562 Statistical Mechanics and Chemical Kinetics, CHM 565 Nuclear Chemistry, CHM 571 Advanced Organic Chemistry, CHM 572 Spectrometric Organic Structure Determination, CHM 574 Advanced Organic Chemistry Topics	
<i>Mathematics and computer science</i>	
CSC 237 Computer Programming and Numeric Methods, CSC 337 Programming Languages, MTH 425 Mathematics for Scientists, other 400-level courses with department permission	
<i>Physics</i>	
PHY 330 Intermediate Mechanics I, PHY 360 Heat and Thermodynamics, PHY 440 Optics, PHY 450 Electricity and Magnetism II, PHY 452 Electrical Measurements, PHY 456 Electronics for Scientists, PHY 471 Nuclear Physics, PHY 475 Introduction to Quantum Mechanics	

PROFESSIONAL BIOCHEMISTRY CURRICULUM

The professional biochemistry curriculum provides preparation for students anticipating graduate study or a research career in

biochemistry. The program includes a group minor comprised of the required courses in biology, mathematics, and physics. No other minor is needed to meet graduation requirements.

**Required courses and electives in science and mathematics are listed below. Additional basic studies and elective courses totaling 124 semester hours are required to complete a degree.*

	Sem hours
Science and mathematics	78
1. Required courses	71
CHM 121-124 General Chemistry I-II with labs	8
CHM 281 Quantitative Analysis	4
CHM 363 Chemical Thermodynamics	2
CHM 364 Chemical Kinetics	2
CHM 365 Physical Chemistry Laboratory	2
CHM 371-373 Organic Chemistry I-II with lab	8
CHM 451-452 Biochemistry I-II	6
CHM 453 Biochemistry Laboratory	2
CHM 464 Quantum Chemistry	2
BOT 221 General Botany or ZOO 222 General Zoology	4
BIO 301 Genetics	3
MTH 120-121 Calculus I-II	8
MTH 122 Elementary Linear Algebra	3
MTH 223 Multi variable Calculus	4
MTH 325 Differential Equations	3
PHY 223 Mechanics, Sound, and Heat	5
PHY 224 Electricity and Light	5
2. Electives	7
Choose four credits from the following:	
CHM 411-412 Toxicology I-II, CHM 413 Toxicology Laboratory, CHM 414 Regulatory Toxicology, CHM 433 Inorganic-Organic Synthesis Laboratory, CHM 475 Introduction to Polymer Chemistry, CHM 477/478/479 Special Topics in Chemistry, CHM 480 Computer/Instrument Interfacing, CHM 481 Instrumental Analysis, CHM 485 Introduction to Radiotracer Techniques, CHM 487/488/489 Cooperative Education in Chemistry, CHM 498/499 Undergraduate Research in Chemistry, CHM 553 Enzymology, CHM 555 Neurochemistry, CHM 572 Spectrometric Organic Structure Determination	
Choose three credits from any courses in biology numbered 300 or above.	

GENERAL BIOCHEMISTRY CURRICULUM

This curriculum is designed for students with an interest in biochemistry but who require a less extensive background. It is often selected by students in pre-medical and pre-dental programs.

The program includes a group minor comprised of the required courses in biology, mathematics, and physics. No other minor is needed to meet graduation requirements.

**Required courses and electives in science and mathematics are listed below. Additional basic studies and elective courses totaling 124 semester hours are required to complete a degree.*

	Sem hours
Science and mathematics	55-56
1. Required courses	50-51
CHM 121-124 General Chemistry I-II with labs	8
CHM 261 Introduction to Physical Chemistry	3
*CHM 270 Organic Chemistry with lab	5
<i>(*Pre-medicine and pre-dentistry students should substitute CHM 371-373 Organic Chemistry I-II with lab to satisfy most medical and dental school requirements for organic chemistry.)</i>	
CHM 281 Quantitative Analysis	4
CHM 381 Instrumentation for Chemical Technology	2

CHM 451-453 Biochemistry I-II with lab	8
BOT 221 General Botany or ZOO 222 General Zoology	4
BIO 301 Genetics	3
MTH 120 Calculus I	4
PHY 223 Mechanics, Sound, and Heat	5
PHY 222/224 Electricity and Light	4-5
2. Electives	5
Choose five credits from any biology courses numbered 300 or above.	

BIOCHEMISTRY/TOXICOLOGY CURRICULUM

The biochemistry/toxicology curriculum is designed to prepare students for employment in laboratories doing toxicology testing in such fields as pharmaceutical chemistry, environmental studies, occupational health and safety, and forensic toxicology. This curriculum also provides preparation for students anticipating graduate study and a research career in toxicology and pharmacology-related fields. Included in the required courses is a group minor of biology, mathematics, and physics. No other minor is needed to meet graduation requirements.

*Required courses and electives in science and mathematics are listed below. Additional basic studies and elective courses totaling 124 semester hours are required to complete a degree.

	Sem hours
Science and mathematics	73-78
Required courses	
CHM 121-124 General Chemistry I-II with labs	8
CHM 261 Introduction to Physical Chemistry	3
CHM 281 Quantitative Analysis	4
CHM 371-373 Organic Chemistry I-II with lab	8
CHM 381 Instrumentation for Chemical Technology	2
CHM 411-413 Toxicology I-II with lab	6
CHM 451-453 Biochemistry I-II with lab	8
BIO 320 Introduction to Cell Physiology or ZOO 326 Human Physiology	3-4
ZOO 222 General Zoology	4
ZOO 404 Mammalian Histology	3
ZOO 431 Comparative Anatomy of Vertebrates or ZOO 317 Human Gross Anatomy	4-5
MTH 120 Calculus I	4
PHY 223 Mechanics, Sound, and Heat	5
PHY 222/224 Electricity and Light	4-5
Two toxicology classes numbered above 413, or one such course and enrollment in a toxicology cooperative education project (CHM 487/488/489)	4-6
A statistics course ^c (MTH 270 Elementary Statistics I or PSY 205 Quantitative Methods in Psychology)	3

MINORS OFFERED IN THE CHEMISTRY DEPARTMENT

CHEMISTRY

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 chemistry, certification code "DC." The certification test covering this field is #18, "Chemistry." See page 293.

CHEMISTRY

	Sem hours
Minor in chemistry	20
1. Required courses	17
CHM 121-124 General Chemistry I-II with labs	8

CHM 270-271 Organic Chemistry with lab	5
CHM 281 Quantitative Analysis	4
(The CHM 371-373 Organic Chemistry sequence may be substituted for CHM 270-271 Organic Chemistry if a stronger background is desired.)	
2. Electives	3
Choose from courses numbered above 200 in chemistry	

BIOCHEMISTRY

	Sem hours
Minor in biochemistry	22
Required courses	
CHM 121-124 General Chemistry I-II with labs	8
CHM 270-271 Organic Chemistry with lab	5
CHM 281 Quantitative Analysis	4
CHM 351 Introductory Biochemistry	3
CHM 453 Biochemistry Laboratory	2
<i>(The CHM 451-452 Biochemistry I-II sequence may be substituted for CHM 351 Introductory Biochemistry if a stronger background is desired.)</i>	

PRE-PROFESSIONAL PROGRAMS

PRE-DENTISTRY

Most students select either a chemistry major and biology minor or a biology major and chemistry minor as preparation for admission to dental school. The exact requirements for a particular dental school can be found in the publication *Admission Requirements of U.S. and Canadian Dental Schools*, available in the office of the pre-dentistry adviser.

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 Aptitude Test, usually late in the junior year or early in the senior year. 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 and mathematics courses required for admission into most dental schools are listed below. Careful scheduling will allow the student to complete these courses in three years.

Recommended courses:

CHM 121-124 General Chemistry I-II with labs, CHM 371-373 Organic Chemistry I-II with lab
MTH 105 College Algebra, MTH 107 Plane Trigonometry (if not taken in high school)
PHY 221 Mechanics, Sound, and Heat; PHY 222 Electricity and Light
ZOO 222 General Zoology, ZOO 431 Comparative Anatomy of Vertebrates

DENTAL HYGIENE AND DENTAL ASSISTING

Eastern Michigan University offers no degrees or certificates 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. Two-year programs also are available at numerous community colleges.

Students interested in these programs should plan on transferring after completing their freshman year at EMU. Liberal arts preparation in English composition, speech, chemistry (CHM 119 Fundamentals of Chemistry), psychology, sociology, and political

science, plus electives in social science, natural science, and humanities, generally will be transferable. More specific descriptions of requirements should be obtained by writing to the schools in question since requirements vary from school to school. Catalogs and brochures also are available from the advising coordinator.

PRE-MORTUARY SCIENCE

The pre-mortuary science program requires two academic years. Before entering the professional mortuary school, the student must complete at least 60 semester hours of college work that includes the following science and mathematics courses:

- CHM 121-124 General Chemistry I and II with labs
- BIO 105 Biology and the Human Species
- MTH 104 Intermediate Algebra or other mathematics elective
- PSY 101 General Psychology

The Board of Examiners in Mortuary Science recommends use of some elective hours for courses in the following areas, with suggested appropriate courses in parentheses:

- Behavioral sciences (PSY 225 Psychology of Religion, PSY 323 Psychology of Human Aging; SOC 105 Introductory Sociology, SOC 311 Social Gerontology)
- Business (LAW 293 Legal Environment of Business; ACC 240 Principles of Accounting I; ECO 200 The American Economy, ECO 201 Principles of Economics I; MKT 360 Principles of Marketing, MKT 363 Retailing)
- Counseling (G&C 450 An Introduction: Counseling Concepts and Skills, with permission)
- First aid (HED 210 Standard American Red Cross First Aid)
- Public speaking (CTA 121 or CTA 124 Fundamentals of Speech, CTA 225 Listening Behavior, CTA 226 Non-Verbal Communication, CTA 227 Interpersonal Communication)

PRE-PHARMACY

Two years of college work (60 transferable semester hours, including the courses listed below) will admit students to a professional school of pharmacy. If the student desires to continue in graduate school and research, his or her coursework should include German and French.

Although some have been lengthened to five, most professional courses require three full years of study (the "six semester rule") regardless of the number of years preceding entry. A total of four to six years is required for the degree in pharmacy.

It is suggested that eight hours of electives be chosen from economics, history, mathematics, psychology, and political science.

Recommended courses:

- CHM 121-124 General Chemistry I and II with labs
- CHM 371-373 Organic Chemistry
- BOT 221 General Botany
- ZOO 222 General Zoology
- PHY 221 Mechanics, Sound, and Heat and PHY 222 Electricity and Light
- MTH 120 Calculus I
- ENG 120/121 English Composition plus two social science courses and two humanities courses (two foreign language courses may be substituted for the humanities courses).

CHEMISTRY COURSES

CHM 101 Science 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 on major or minor. Lecture: two hours per week. Laboratory: two hours per week.

Prereq: PHY 100.

CHM 105 Survey of Chemistry. 5 hrs
A survey course for non-science majors covering inorganic, organic, and biological chemistry with special emphasis on nutritional, textile, and household applications. No credit for both CHM 105 and CHM 119 or CHM 120. Does not count on major or minor. Lecture: three hours per week. Laboratory: four hours per week.

CHM 115 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. CHM 116 may be taken concurrently to satisfy the laboratory science requirement. Does not count on major or minor. Lecture: three hours per week.

CHM 116 Chemistry and Society Laboratory. 1 hr
Laboratory experiments based on environmental problems such as water and air pollution, drugs, and pesticides. The laboratory may be taken concurrently with CHM 115 to satisfy the science requirement. Does not count on major or minor. Laboratory: two hours per week.
Coreq: CHM 115.

CHM 119 Fundamentals of Chemistry. 4 hrs
A study of the basic principles of general chemistry, designed for students who have had no prior chemistry. This course may be used to satisfy the chemistry prerequisite for CHM 121. Does not count on major or minor. Lecture: three hours per week. Laboratory: two hours per week.
Prereq: MTH 104 or one year of high school algebra.

CHM 120 Fundamentals of Organic and Biochemistry. 4 hrs
A survey of organic chemistry and biochemistry; completes the study of chemistry begun in CHM 119 and is a terminal course. Does not count on major or minor. Lecture: three hours per week. Laboratory: two hours per week.
Prereq: CHM 119 or one year of high school chemistry.

CHM 121 General Chemistry I. 3 hrs
The first semester of a 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.
Prereq: High school chemistry or CHM 119; two years of high school algebra or MTH 105. Coreq: CHM 122.

CHM 122 General Chemistry I Laboratory. 1 hr
The laboratory class to accompany CHM 121. Students learn basic techniques employed in a chemistry laboratory, including use of analytical balances, quantitative glassware, spectrophotometry, and pH measurement. Laboratory: three hours per week.
Coreq: CHM 121.

CHM 123 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.
Prereq: CHM 121 and CHM 122. Coreq: CHM 124.

CHM 124 General Chemistry II Laboratory. 1 hr
The techniques learned in CHM 122 are reemphasized and supplemented. Laboratory: three hours per week.
Coreq: CHM 123.

CHM 134 Honors General Chemistry II. 4 hrs
A continuation of CHM 121, 122 General Chemistry for students of superior ability. The sequence of CHM 121, 122, and 134 can constitute the customary year of general chemistry. Lecture: three hours per week. Laboratory: three hours per week.
Prereq: CHM 121, 122 and consent of Honors Committee.

CHM 177/178/179 Special Topics in Chemistry. 1/2/3 hrs
Covers specific chemical topics not discussed in any regular, introductory chemistry course.
Prereq: Department permission.

CHM 232 Inorganic Chemistry. 2 hrs
Descriptive inorganic chemistry; properties and reactions of the elements and their compounds are correlated with the periodic table, atomic structures, and basic chemical principles. Lecture: two hours per week.
Prereq: CHM 123 and CHM 124/134.

CHM 241 Materials Science. 3 hrs
Considers the relation of composition and structure to properties of materials: metals, plastics, ceramics, glass, and composites. Lecture: three hours per week.
Prereq: CHM 123 and CHM 124/134; PHY 221/223.

CHM 242 Materials Science Laboratory. 1 hr
Measurement of mechanical properties and investigation of crystal structures, microstructures, imperfections, and transformations (solidification, recrystallization, solid phase changes, and corrosion) of materials. Laboratory: three hours per week.
Coreq: CHM 241.

CHM 261 Introduction to Physical Chemistry. 3 hrs
Familiarizes the student with chemistry applications of thermodynamics, kinetics, and spectroscopy. Can be used as a preparatory course for the professional major's physical chemistry sequence (CHM 363, 364, 365, 464), although it will not count for credit toward either the professional chemistry or professional biochemistry curricula. Lecture: three hours per week.
Prereq: CHM 123, CHM 124/134, MTH 120, PHY 223. Co- or prereq: PHY 222/224; organic chemistry and quantitative analysis recommended.

CHM 270 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 CHM 371 and 372. Lecture: four hours per week.
Prereq: CHM 123 and CHM 124/134.

CHM 271 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.
Prereq or coreq: CHM 270.

CHM 277/278/279 Special Topics in Chemistry. 1/2/3 hrs
Covers specific chemical topics not discussed in any regular chemistry course at this level.
Prereq: One 100-level chemistry course and department permission.

CHM 281 Quantitative Analysis. 4 hrs
A lecture and laboratory course treating instrumental, gravimetric, and volumetric analysis, and equilibrium. Lecture: two hours per week. Laboratory: six hours per week.
Prereq: CHM 123 and CHM 124/134.

CHM 282 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.
Prereq: CHM 123 and CHM 124/134, and consent of Honors Committee.

CHM 287/288/289 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.
Prereq: CHM 123 and CHM 124/134. Admission by application only. Sophomore standing.

CHM 297 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.
Prereq: Department permission.

CHM 311 Introduction to Food Toxicology. 1 hr
Introduction to the terminology and methods of toxicology with special emphasis on food and nutritional toxicology. The regulatory role of the federal/state government in this area also is examined. Intended for students in dietetics and foods/nutrition programs. Cannot be applied toward chemistry degree programs. Lecture: one hour per week.
Prereq: A course in organic chemistry.

CHM 340 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.
Prereq: CHM 123 and CHM 124/134; CHM 270.

CHM 351 Introductory Biochemistry. 3 hrs
Deals with the structure, function, and metabolism of biologically significant compounds and the chemistry of physiological processes. Not open to those with credit in CHM 451. Lecture: three hours per week.
Prereq: CHM 270 or equivalent.

CHM 363 Chemical Thermodynamics. 2 hrs
The principles of thermodynamics and the equilibrium properties of systems. Lecture: two hours per week.
Prereq: CHM 281, PHY 223, PHY 224, and MTH 223. Students with less than a "B" average in the prerequisites should take CHM 261 first.

CHM 364 Chemical Kinetics. 2 hrs
The study of rates of chemical reactions and transport processes. Lecture: two hours per week.
Prereq: CHM 363. Pre- or coreq: MTH 325.

CHM 365 Physical Chemistry Laboratory. 2 hrs
Determination of the physical properties of substances, rate studies, and measurement of thermochemical properties. Emphasis on scientific report writing and oral presentation of work. Laboratory: six hours per week.
Prereq or coreq: CHM 364.

CHM 371 Organic Chemistry I. 3 hrs
The first 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. Not open to those with credit in CHM 270.
Prereq: CHM 123 and CHM 124/134.

CHM 372 Organic Chemistry II. 3 hrs
A continuation of CHM 371. CHM 371 and 372 constitute the customary year of foundation/lecture work in organic chemistry. Lecture: three hours per week.
Prereq: CHM 371.

CHM 373 Organic Chemistry Laboratory. 2 hrs
Covers the basic techniques involved in organic chemistry. Laboratory: six hours per week.
Prereq or coreq: CHM 372.

CHM 376 Honors Organic Chemistry Laboratory. 2 hrs
Covers the basic techniques involved in organic chemistry for students of superior ability. The sequence of CHM 371-372, 376 can constitute the customary year of organic chemistry. Laboratory: six hours per week.
Prereq or coreq: CHM 372 and consent of Honors Committee.

CHM 377/378/379 Special Topics in Chemistry. 1/2/3 hrs
Covers specific chemical topics not discussed in any regular chemistry course at this level.
Prereq: Department permission.

CHM 381 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: CHM 281, CHM 270, and CHM 271 or equivalent.

CHM 387/388/389 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/no-credit basis. For junior-level students. No credit granted toward chemistry degree programs, except with department permission.

CHM 397 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.
Prereq: Department permission.

CHM 411 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: CHM 270 or CHM 371, 372.

CHM 412 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: CHM 411. *Biochemistry recommended.*

CHM 413 Toxicology Laboratory. 2 hrs
A lecture 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: CHM 411. *CHM 281 recommended.*

CHM 414 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: CHM 270 or CHM 372.

CHM 415 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: CHM 123 and CHM 124/134. *A course in organic chemistry and/or quantitative analysis recommended.*

CHM 416 Advanced Topics in Toxicology. 2 hrs
This course provides a broadening and strengthening of the background of toxicology students in areas which are covered only minimally in the introductory sequence but are of critical importance to toxicologists, particularly those planning careers in industrial or pharmacological areas.
Prereq: CHM 411, ZOO 326, ZOO 427, or equivalent.

CHM 432 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: CHM 464 or department permission. *CHM 232 also is recommended.*

CHM 433 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: CHM 281 and CHM 373.

CHM 451 Biochemistry I. 3 hrs
Chemistry of biologically important substances such as proteins, nucleic acids, carbohydrates, and lipids. Enzyme chemistry is introduced. Lecture: three hours per week.
Prereq: CHM 123 and CHM 124/134, and CHM 270 or equivalent.

CHM 452 Biochemistry II. 3 hrs
Continues the survey of biochemistry begun in CHM 451. Considers the dynamic aspects of biochemistry, especially metabolism, biosynthesis, and regulation. Lecture: three hours per week.
Prereq: CHM 451.

CHM 453 Biochemistry Laboratory. 2 hrs
Emphasis on the special analytical techniques employed by biochemists such as chromatography, electrophoresis, fluorimetry, spectrophotometry, and laboratory report writing. Laboratory: four hours per week.
Prereq: CHM 271 or equivalent and CHM 281 strongly recommended. *Coreq:* CHM 351 or equivalent.

CHM 464 Quantum Chemistry. 2 hrs
The study of quantum mechanics and its application to atomic structure, molecular bonding, and spectroscopy. Lecture: two hours per week.
Prereq: CHM 123, MTH 325, PHY 223, and PHY 224. *Students with less than a "B" average in the prerequisites should take CHM 261 first. CHM 363 and CHM 364 are recommended.*

CHM 475 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: CHM 123 and CHM 124/134; CHM 270; or CHM 371, 372 or equivalent.

CHM 477/478/479 Special Topics in Chemistry. 1/2/3 hrs
Covers specific chemical topics not discussed in any regular chemistry courses at this level.
Prereq: Department permission.

CHM 480 Computer/Instrument Interfacing. 2 hrs
Introduction to the techniques of interfacing the microcomputer to various laboratory analytical instruments. Lecture: one hour per week. Laboratory: three hours per week.
Prereq: CHM 281, CHM 381, or CHM 481 or department permission.

CHM 481 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: CHM 281 and CHM 365. *Prereq or coreq:* CHM 464.

CHM 485 Introduction to Radiotracer Techniques. 3 hrs
Measurement of radiation and principles of radiation safety; experiments with emphasis on beta and gamma-ray counting and handling radioactivity. Lecture: three hours per week. Laboratory: two hours per week.
Prereq: CHM 123 and CHM 124/134, and either CHM 281 or one science laboratory course above the 500 level, or department permission.

CHM 487/488/489 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. For senior-level students.

CHM 498/499 Undergraduate Research in Chemistry. 2/3 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.

The following graduate level chemistry courses are open to senior chemistry students:

CHM 510 Computer Applications in Chemistry
CHM 511 Introduction to Industrial Hygiene
CHM 512 Industrial Hygiene Laboratory
CHM 515 Industrial and Environmental Chemistry
CHM 553 Enzymology
CHM 555 Neurochemistry
CHM 561 Quantum Chemistry and Spectroscopy
CHM 562 Statistical Mechanics and Chemical Kinetics
CHM 564 Physical-Chemical Characterization of Polymers
CHM 565 Nuclear Chemistry
CHM 571 Advanced Organic Chemistry
CHM 572 Spectrometric Organic Structure Determination
CHM 574 Advanced Organic Chemistry Topics
CHM 590/591/592 Special Topics in Chemistry

Please see the Graduate Catalog for course descriptions.

COMMUNICATION AND THEATRE ARTS

Dennis M. Beagen
Department Head
124 Quirk Building
487-3131

Professors: Henry B. Aldridge, Dennis M. Beagen, P. George Bird, Harry W. Bowen, Gail W. Compton, Gary L. Evans, James W. Gousseff, Lucy A. Liggett, Annette Martin, Sally R. McCracken, Thomas J. Murray, Kenneth W. Stevens, Katherine Strand-Evans

Associate Professors: Geoffrey D. Hammill, James A. Robinson, Karen M. Smith, Mary Ann Watson, Arthur J. Yahrmatter, Patricia M. Zimmer

Assistant Professors: Wallace A. Bridges, John J. Capecci, Theresa Heck Seibert, Kathleen H. Stacey, Michael Tew

Instructor: Judy Sturgis Hill

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 at two campus radio stations—WEMU-FM and WQBR, 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.

Degrees:

Bachelor of Science and Bachelor of Arts

Programs of Study

Majors and Curricula:

Arts management curriculum
Communication (Options: interpersonal communication, organizational communication, speech communication)
Communication for elementary and special education—elementary
Comprehensive major in communication and theatre arts (Areas of concentration: communication, interpretation/performance studies, speech improvement, telecommunications and film, theatre arts, drama/theatre for the young)
Interdisciplinary major in public relations
Speech for secondary education
Telecommunications and film
Theatre arts

Minors:

Communication
Communication for elementary education
Comprehensive minor in communication and theatre arts
Comprehensive minor in communication and theatre arts for secondary, K-12, and special education—secondary
Drama/theatre for the young
Drama/theatre for the young for elementary and special education—elementary
Musical theatre

Telecommunications and film
Theatre arts

Joint program with the Department of Interdisciplinary Technology:
Communication technology curriculum

Advising is by assignment to a personal adviser who shares the student's interests and objectives. Coordinators listed below should be consulted by each prospective major or minor student.

Advising Coordinators:

- Arts management curriculum: Kenneth Stevens
- Communication major and minor: Gary Evans
- Communication minor for elementary and secondary education: Arthur Yahrmatter
- Communication technology curriculum: Henry B. Aldridge
- Comprehensive major and minor in communication and theatre arts: Arthur Yahrmatter
- Drama/theatre for the young minor: Patricia Zimmer, Karen Smith
- Interpretation/performance studies: Annette Martin
- Musical theatre minor: Kenneth Stevens
- Telecommunications and film major and minor: Lucy Liggett
- Theatre arts major and minor: Katherine Strand-Evans

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 Communication and Theatre Arts Department, consult the Graduate Catalog.

**COMMUNICATION MAJOR
SECONDARY TEACHER CERTIFICATION**

Successful completion of this course of studies 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 certification test covering this field is #04, "Speech." See page 294.

**COMMUNICATION MAJOR
ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in speech, certification code "BD." The certification test covering this field is #04, "Speech." See page 295.

ARTS MANAGEMENT CURRICULUM

The Arts Management curriculum provides career training and practical experience for those who have a passion for the arts and whose talents are in the field of administration and/or promotion. The arts manager not only must develop a variety of managing skills but also must maintain a high degree of sensitivity to aesthetics.

Students are provided a broad background in all of the arts with the opportunity to study a specific art in more depth. In addition, each student gains vital practical experience working in the arts during internships on the university campus and in an approved off-campus professional theatre or arts institution.

Combined with the training in the arts is the development of skills in accounting, advertising, personnel management, labor relations, and various other areas of business through a program of study in 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 relatively new and changing rapidly, it is to the student's advantage to maintain

regular contact with an adviser during the entire course of the 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 as follows: the basic studies requirements, arts management major, a management or marketing minor (see College of Business), and two internships.

	Sem hours
Major in arts management	39-47
1. Required courses	23
<i>Arts fundamentals</i>	
CTA 150 Introduction to Theatre	3
CTA 155 Play Production	3
FA 107-108 Art History Survey I-II	6
MUS 107 Music Appreciation	2
PEG 161 Modern Dance	1
<i>Media and arts management</i>	
CTA 334 Radio-Television News	3
CTA 452 Arts Management	2
JRN 215 News Writing and Reporting	3
2. Restricted electives	8-12
Choose one course from each of the following areas:	
academic dance, art, music, theatre	
3. Recommended electives	8-12
DAN 350 History of Dance	
IDT 121 Graphic Communication	
A course in technical theatre	
Minor in management or marketing	21
To be chosen in consultation with the arts management advising coordinator.	

Internships

Two are required for this major: a one-semester on-campus internship and a one-semester practicum with an approved off-campus arts institution. Application procedures and minimum requirements for credit should be obtained from the advising coordinator not later than the first semester of the junior year.

On-campus internships are approved part-time work as a member of the management staff of such EMU arts institutions as the Ford Gallery or EMU Dancers.

Practicums are available to the junior-senior level student who has a minimum GPA of 2.5 in the arts management curriculum.

COMMUNICATION MAJOR

The major in communication requires a minimum of 36 semester hours and offers three options: interpersonal communication, organizational communication, and speech communication. A minor in communication also is available.

	Sem hours
Major in communication	35-36
1. Required courses	2-3
<i>Foundation level</i>	
CTA 121/124 Fundamentals of Speech	2-3
2. Restricted electives 18	
Choose two courses from the following:	
CTA 224 Public Speaking, CTA 225 Listening Behavior,	
CTA 226 Non-Verbal Communication, CTA 227	
Interpersonal Communication	
	6
<i>Intermediate level</i>	
Choose two courses from the following:	
CTA 350 Persuasion, CTA 354 Organizational	
Communication, CTA 356 Argumentation and	
Debate, CTA 359 Small Group Communication	
	6
<i>Advanced level</i>	

Choose two courses from the following:

CTA 440 Survey of Public Address, CTA 460 Theories of Speech Criticism, CTA 475 Research in Speech Communication, CTA 485 Theories of Speech Communication Behavior 6

3. **Major option** 12-16
Choose one of three options below in consultation with the advising coordinator

4. **Electives** 0-4
Choose from communication and theatre arts courses

COMMUNICATION MAJOR OPTIONS

Interpersonal communication option Sem hours 12-16

Choose 12-16 additional credits from the following:

CTA 225 Listening Behavior, CTA 226 Non-Verbal Communication, CTA 227 Interpersonal Communication, CTA 350 Persuasion, CTA 357 Interviewing as Communication, CTA 359 Small Group Communication, CTA 372 Assertive Communication, CTA 375 Interracial/Interethnic Communication, CTA 475 Research in Speech Communication, CTA 485 Theories of Speech Communication Behavior, CTA 387/388/389 Cooperative Education in Communication, CTA 487/488/489 Internship in Communication, CTA 166/266/366/466 Forensics

Organizational communication option 12-16

Choose 12-16 additional credits from the following:

CTA 225 Listening Behavior, CTA 226 Non-Verbal Communication, CTA 321 Parliamentary Procedure and Meeting Management, CTA 350 Persuasion, CTA 352 Communication in Negotiation, CTA 353 Organizational Communication in Unions, CTA 354 Organizational Communication, CTA 357 Interviewing as Communication, CTA 359 Small Group Communication, CTA 372 Assertive Communication, CTA 374 Intercultural Communication, CTA 375 Interracial/Interethnic Communication, CTA 475 Research in Speech Communication, CTA 485 Theories of Speech Communication Behavior, CTA 387/388/389 Cooperative Education in Communication, CTA 487/488/499 Internship in Communication, CTA 166/266/366/466 Forensics

Speech communication option 12-16

Choose 12-16 additional credits from the following:

CTA 224 Public Speaking, CTA 226 Non-Verbal Communication, CTA 227 Interpersonal Communication, CTA 321 Parliamentary Procedure and Meeting Management, CTA 350 Persuasion, CTA 356 Argumentation and Debate, CTA 357 Interviewing as Communication, CTA 359 Small Group Communication, CTA 440 Survey of Public Address, CTA 460 Theories of Speech Criticism, CTA 387/388/389 Cooperative Education in Communication, CTA 487/488/489 Internship in Communication, CTA 166/266/366/466 Forensics

Substitution options:

With department permission, ten semester hours of coursework in telecommunications or interpretation/performance studies may be substituted to fulfill the credit requirement for the major option in speech communication.

Telecommunications 13

1. **Required courses** 7
CTA 130 Introduction to Telecommunications and Film ... 3
CTA 131 Introduction to Audio Production and Direction ... 2

CTA 132 Introduction to Video Production and Direction ... 2

2. **Electives** 6

Choose one course from the following:

CTA 145 Introduction to Film Appreciation, CTA 241 Radio-Television-Film Announcing, CTA 331 Fundamentals of Radio Production and Direction, CTA 332 Fundamentals of Television Production and Direction, CTA 333 Fundamentals of Film Production and Direction, CTA 334 Radio-Television News, CTA 344 Continuity Writing for Radio-Television-Film

Choose one course from the following:

CTA 431 Advanced Radio Production and Direction, CTA 432 Advanced Television Production and Direction, CTA 433 Advanced Film Production and Direction, CTA 445 Film Theory and Criticism, CTA 446 Contemporary Problems in Telecommunications, CTA 447 Radio-Television Station Management

Interpretation/performance studies 10

1. **Required course** 3

CTA 210 Interpretative Reading 3

2. **Electives** 7

Choose one course from the following:

CTA 311 Interpretation of Prose, CTA 314 Interpretation of Drama, CTA 412 Oral Interpretation of Poetry

Choose either CTA 411 Advanced Problems in Interpretation or CTA 414 Development and Theory of Oral Interpretation

One semester hour of credit in an oral interpretation activity course (CTA 168/268/368/468)

COMMUNICATION TECHNOLOGY CURRICULUM

See the Department of Interdisciplinary Technology for program requirements.

COMPREHENSIVE MAJOR IN COMMUNICATION AND THEATRE ARTS

The comprehensive major allows each student to develop a variety of communication skills with one or two areas of concentration (12-18 semester hours each). Within the 36 semester hours, at least six semester hours 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.

Comprehensive major in communication and theatre arts Sem hours 30-43

1. **Required core course** 2-3

CTA 121/124 Fundamentals of Speech 2-3

2. **Restricted electives** 15

Choose at least three credits in five of the six following concentrations (communication, oral interpretation, speech improvement, telecommunications and film, theatre arts, drama/theatre for the young)

Communication:

CTA 224 Public Speaking, CTA 227 Interpersonal Communication, CTA 350 Persuasion, CTA 356 Argumentation and Debate, CTA 359 Small Group Communication

Interpretation/performance studies:

CTA 210 Interpretative Reading

Speech improvement:

CTA 102, 202, 302, 402 Voice Development (one credit each), CTA 205 Voice and Articulation, CTA 404 Dynamic Speaking Skills*

Telecommunications and film:

CTA 130 Introduction to Telecommunications and Film, CTA 131 Introduction to Audio Production and Direction, CTA 132 Introduction to Video Production and Direction, CTA 141 Introduction to Radio-TV-Film Production,* CTA 145 Introduction to Film Appreciation, CTA 445 Film Theory and Criticism, CTA 446 Contemporary Problems in Telecommunications

*Department permission required.

Theatre arts:

CTA 150 Introduction to Theatre, CTA 151 Black Theatre: An Introduction, CTA 152 Introduction to Technical Theatre, CTA 153 Introduction to Theatre Crafts, CTA 155 Play Production, CTA 158 Fundamentals of Acting, CTA 251 Black Theatre: Creative Problems, CTA 254 Stage Makeup, CTA 450 History of the Theatre to 1642, CTA 451 History of the Theatre: 1642 to the Present

Drama/theatre for the young:

CTA 222 Drama and Play in Human Experience, CTA 322 Theatre for the Young, CTA 323 Improvising and Role-Play, CTA 327 Plays for the Young, CTA 429 History and Theory of Developmental Drama/Theatre

3. **Concentration** 9-15
Choose at least one concentration (above) in consultation with advising coordinator (semester hours here are in addition to the restricted electives above)
4. **Department electives** 3-10
Choose from any courses in areas outside the concentration

TELECOMMUNICATIONS AND FILM MAJOR

	Sem hours
Major in telecommunications and film	30-34
1. Required foundation courses	11
CTA 130 Introduction to Telecommunications and Film ...	3
CTA 131 Introduction to Audio Production and Direction ...	2
CTA 132 Introduction to Video Production and Direction ...	2
Choose one course from the following:	
CTA 145 Introduction to Film Appreciation or CTA 236 History and Criticism of Radio and Television	3
Choose one of the following:	
CTA 165 Television Laboratory or CTA 169 Radio Station WQBR	1
2. Restricted electives	16-18
<i>Production courses</i>	6
Choose six credits from the following (at least three credits must be at the 300 or 400 level):	
CTA 231 Audio Recording Techniques, CTA 241 Radio- Television-Film Announcing, CTA 331 Fundamen- tals of Radio Production and Direction, CTA 332 Fundamentals of Television Production and Direc- tion, CTA 333 Fundamentals of Film Production and Direction, CTA 341 Radio-Television-Film Dramatic Performance, CTA 431 Advanced Radio Production and Direction, CTA 432 Advanced Television Pro- duction and Direction, CTA 433 Advanced Film Pro- duction and Direction	
<i>Writing courses</i>	3
Choose one course from the following:	
CTA 334 Radio-Television News, CTA 344 Continuity Writing for Radio-Television-Film, CTA 360 Dra- matic Composition	
<i>Theory courses</i>	6
Choose six credits from the following (at least three credits must be the 400 level):	

CTA 145 Introduction to Film Appreciation, CTA 236 History and Criticism of Radio and Television, CTA 335 Studies in Film, CTA 336 Studies in Telecommu-
nications, CTA 445 Film Theory and Criticism, CTA 446 Contemporary Problems in Telecommunications, CTA 447 Radio-Television Station Management, CTA 479 Special Topics (must be approved by adviser)

Internship or cooperative education

CTA 487/488/489 Internship in Telecommunications and Film, CTA 387/388/389 Cooperative Education in Telecommunications and Film

3. **Electives** 3-5
Choose three credits from telecommunications and film and the remaining hours from communication and theatre arts (except CTA 121/124 Fundamentals of Speech) or journalism.

THEATRE ARTS MAJOR

	Sem hours
Major in theatre arts	30-33
1. Required courses	23
CTA 150 Introduction to Theatre	3
(may be bypassed by examination or interview for no credit)	
CTA 152 Introduction to Technical Theatre	3
CTA 155 Play Production	3
CTA 158 Fundamentals of Acting	3
CTA 355 Play Direction	3
CTA 450 History of the Theatre to 1642	3
CTA 451 History of the Theatre: 1642 to the Present ...	3
CTA 167 and either 267/367/467 Theatre Practice	2
2. Restricted electives	7-10
A minimum of five credits must be in courses beyond the 200 level. Choose at least seven credits from theatre arts courses (except CTA 106 Introduction to the Performing Arts, CTA 126 The Age of Shakespeare, CTA 153 Introduction to Theatre Crafts, CTA 555 Play Production—Junior/Senior High School) or from the following department area courses:	
Drama/Theatre for the Young (CTA 322 Theatre for the Young or CTA 323 Improvising and Role-Play)	
Oral Interpretation (CTA 314 Interpretation of Drama or CTA 410 Oral Interpretation of Shakespeare)	
Telecommunications and Film (CTA 332 Fundamentals of Television Production and Direction or CTA 341 Radio-Television-Film Dramatic Performance)	

INTERDISCIPLINARY MAJOR IN CHILDREN'S LITERATURE AND DRAMA/THEATRE FOR THE YOUNG

This major may be used for the Bachelor of Science or Bachelor of Arts degrees without teacher certification. For full details, see the Department of English Language and Literature.

INTERDISCIPLINARY MAJOR IN PUBLIC RELATIONS

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 English Department and Communication and Theatre Arts. Courses from both departments are offered as requirements and restricted electives. See the Department of English for program requirements.

MINORS OFFERED IN THE COMMUNICATION AND THEATRE ARTS DEPARTMENT

COMMUNICATION

ELEMENTARY, SPECIAL EDUCATION-ELEMENTARY, K-12, AND SPECIAL EDUCATION-K-12 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 certification test covering this field is #04, "Speech." See page 296.

DRAMA/THEATRE FOR THE YOUNG

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 certification test covering this field is #04, "Speech." See page 296.

COMPREHENSIVE MINOR IN COMMUNICATION AND THEATRE ARTS

SECONDARY, K-12, SPECIAL EDUCATION-SECONDARY, AND SPECIAL EDUCATION-K-12 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 certification test covering this field is #04, "Speech." See page 295.

COMMUNICATION

	Sem hours
Minor in communication	20-21
1. Required course	2-3
<i>Foundation level</i>	
CTA 121/124 Fundamentals of Speech	2-3
2. Restricted electives	18
Choose two courses from the following:	
CTA 224 Public Speaking, CTA 225 Listening Behavior, CTA 226 Non-Verbal Communication, CTA 227 Interpersonal Communication	
<i>Intermediate level</i>	
Choose two courses from the following:	
CTA 350 Persuasion, CTA 354 Organizational Communication, CTA 356 Argumentation and Debate, CTA 359 Small Group Communication	
<i>Advanced level</i>	
Choose two courses from the following:	
CTA 440 Survey of Public Address, CTA 460 Theories of Speech Criticism, CTA 475 Research in Speech Communication, CTA 485 Theories of Speech Communication Behavior	

Concentrations in telecommunications and interpretation/performance studies

With department permission, course work in telecommunications or interpretation/performance studies may be substituted to fulfill the credit requirement for the minor in communication.

Telecommunications and film	11
1. Required courses	7
CTA 130 Introduction to Telecommunications and Film ...	3
CTA 131 Introduction to Audio Production and Direction ...	2
CTA 132 Introduction to Video Production and Direction ...	2

2. Restricted electives 4
Choose one course from the following:
CTA 145 Introduction to Film Appreciation, CTA 241 Radio-Television-Film Announcing, CTA 331 Fundamentals of Radio Production and Direction, CTA 332 Fundamentals of Television Production and Direction, CTA 333 Fundamentals of Film Production and Direction, CTA 334 Radio-Television News, CTA 344 Continuity Writing for Radio-Television-Film
Choose one course from the following:
CTA 431 Advanced Radio Production and Direction, CTA 432 Advanced Television Production and Direction, CTA 433 Advanced Film Production and Direction, CTA 445 Film Theory and Criticism, CTA 446 Contemporary Problems in Telecommunications, CTA 447 Radio-Television Station Management

Interpretation/performance studies 10

1. Required course 3
CTA 210 Interpretative Reading 3
2. Restricted electives 7
Choose one course from the following:
CTA 311 Interpretation of Prose, CTA 314 Interpretation of Drama, CTA 324 Oral Interpretation of Literature for the Young, CTA 412 Oral Interpretation of Poetry
Choose either CTA 411 Advanced Problems in Interpretation or CTA 414 Development and Theory of Oral Interpretation
One semester hour of credit in an oral interpretation activity course (CTA 168/268/368/468)

COMPREHENSIVE MINOR IN COMMUNICATION AND THEATRE ARTS

	Sem hours
Comprehensive minor in communication and theatre arts.....	20-28
1. Required core course	2-3
CTA 121/124 Fundamentals of Speech	
2. Restricted electives	12
Choose at least three credits in four of the six areas of concentration (communication, interpretation/performance studies, speech improvement, telecommunications and film, theatre arts, drama/theatre for the young)	
See courses listed in comprehensive major in communication and theatre arts, page 76.	
3. Concentration	6-9
Choose at least one area of concentration. Minors applying for secondary certification must elect their concentration courses from either speech communication or theatre arts (semester hours here are in addition to the restricted electives above)	
4. Department electives	0-4
Choose from any courses in areas outside the concentration	

DRAMA/THEATRE FOR THE YOUNG

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, guidance and 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.

	Sem hours
Minor in drama/theatre for the young	20-21
1. Required courses	14-15
CTA 121/124 Fundamentals of Speech	2-3
CTA 222 Drama and Play in Human Experience	3
CTA 322 Theatre for the Young	3
CTA 323 Improvising and Role-Play	3
CTA 324 Oral Interpretation of Literature for the Young	3
2. Electives	5-6
Choose five to six credits from the following:	
CTA 326 Developmental Drama/Theatre with the Handicapped, CTA 327 Plays for the Young, CTA 429 History and Theory of Developmental Drama/Theatre, CTA 504 Oral Interpretation of Literature and Language with the Young, CTA 522 TIE: Theatre-In-Education, CTA 523 Puppetry: Catalyst in Human Development, CTA 524 Developmental Drama/Theatre with Handicapped Persons, CTA 525 Developmental Drama/Theatre in Recreational Settings, CTA 528 Developmental Drama/Theatre in Religion, CTA 565 Studies in Drama/Theatre for the Young (all 500-level courses are available for undergraduate credit to qualified seniors)	
CTA 168/268/368/468 Oral Interpretation	
CTA 377/378/379 Special Topics	
CTA 477/478/479 Special Topics (478 Touring to Young Audiences)	
CTA 497/498/499 Independent Study in Drama/Theatre for the Young	
LIT 207 Introduction to Children's Literature or any course in dramatic literature or any communication or theatre arts course	

MUSICAL THEATRE

	Sem hours
Minor in musical theatre	24
1. Required courses	6
Choose four credits of applied music-voice and two semester hours of ensemble performance voice courses	
2. Restricted electives	18
Choose eight credits from the theatre arts area, four credits from the dance area, and six credits from the music area	
<i>Theatre arts:</i>	
CTA 155 Play Production, CTA 258 Mime/Pantomime and Mask, CTA 457 Tryouts and Auditions, CTA 461 Musical Theatre Acting, CTA 462 Directors on Directing, CTA 463 The American Musical Stage: 1900 to 1940	
<i>Dance:</i>	
PEG 155 Jazz I, PEG 159 Tap Dancing, PEG 160 Ballet, PEG 161 Modern Dance, PEG 255 Jazz II, PEG 261 Intermediate Modern Dance	
<i>Music:</i>	
MUS 101 Music Theory I, MUS 104 Elements of Music, MUS 305 Keyboard Skills, MUS 326 Conducting	

TELECOMMUNICATIONS AND FILM

	Sem hours
Minor in telecommunications and film	24
1. Required foundation courses	7
CTA 130 Introduction to Telecommunications and Film ...	3
CTA 131 Introduction to Audio Production and Direction ...	2
CTA 132 Introduction to Video Production and Direction ...	2
2. Restricted electives	13
Choose one of the following:	

CTA 145 Introduction to Film Appreciation or CTA 236 History and Criticism of Radio and Television	Choose one of the following:
CTA 165 Television Laboratory or CTA 169 Radio Station WQBR	Choose three credits from each group of the area courses listed under the major (page 77) in production, writing, and theory
3. Electives	4
Choose three credits from telecommunications and film and the remaining hours from communication and theatre arts (except CTA 121/124 Fundamentals of Speech) or journalism.	

THEATRE ARTS

	Sem hours
Minor in theatre arts	20-24
1. Required courses	19
CTA 150 Introduction to Theatre	3
(may be bypassed by examination or interview for no credit)	
CTA 152 Introduction to Technical Theatre	3
CTA 155 Play Production	3
CTA 158 Fundamentals of Acting	3
CTA 355 Play Direction	3
CTA 450 History of the Theatre to 1642 or CTA 451 History of the Theatre: 1642 to the Present	3
CTA 167 Theatre Practice	1
2. Electives	1-5
Choose courses beyond the 100 level in theatre arts or in other departmental areas specified under the major (see page 77).	

FUNDAMENTALS OF SPEECH COURSES

CTA 121 Fundamentals of Speech.	2 hrs
Theory and practice in the principles of effective speech composition and presentation. Not open to students with credit in CTA 124.	
CTA 124 Fundamentals of Speech.	3 hrs
More intensive theory and practice in the principles of effective speech composition. Not open to students with credit in CTA 121.	

COMMUNICATION COURSES

CTA 177/178/179 Special Topics in Communication.	1/2/3 hrs
Offered on an experimental basis or for special purposes. <i>Prereq: Department permission.</i>	
CTA 224 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. <i>Prereq: CTA 121/124.</i>	
CTA 225 Listening Behavior.	3 hrs
The study of the behavior, processes, and theory of human listening; practice in improving listening skills. <i>Prereq: CTA 121/124.</i>	
CTA 226 Non-Verbal Communication.	3 hrs
An examination of non-verbal and situational behaviors, relationships, objects, and events surrounding speech communication acts. <i>Prereq: CTA 121/124.</i>	
CTA 227 Interpersonal Communication.	3 hrs
Study and practice of the basic elements of interpersonal communication with emphasis on perception, meanings, 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 requirement in the basic studies.

Prereq: CTA 121/124.

CTA 277/278/279 Special Topics in Communication. 1/2/3 hrs
Offered on an experimental basis or for special purposes.

Prereq: Department permission.

CTA 307 The Teaching of Speech. 3 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 theatre arts in the junior or senior high school teaching curriculum. Does not count on the major or minor. Not open to students on academic probation.

Prereq: Four courses in communication and theatre arts.

CTA 321 Parliamentary Procedure and Meeting Management. 3 hrs

A study of the principles of parliamentary procedure with a special emphasis on Robert's Rules of Order. Students will learn general skills in managing meetings: how to chair a meeting and how to serve as a parliamentarian.

Prereq: CTA 121/124.

CTA 350 Persuasion. 3 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.

Prereq: CTA 121/124.

CTA 352 Communication in Negotiation. 3 hrs

Practical communication skills for negotiating a labor union collective bargaining agreement and effective grievance handling.

Prereq: CTA 121/124, or department permission.

CTA 353 Organizational Communication in Unions. 3 hrs

The study of the organizational communication structures and channels involved in public and private sector labor unions. Emphasis is placed on the communication skills of the officers and labor union representatives.

Prereq: CTA 121/124, or department permission.

CTA 354 Organizational Communication. 3 hrs

An investigation of information patterns and persuasion in the formal organization.

Prereq: CTA 121/124.

CTA 356 Argumentation and Debate. 3 hrs

Emphasizes the principles of logical reasoning and oral presentation of reasoned discourse in group situations. Exercise in debate and in general argumentative speaking.

Prereq: CTA 121/124.

CTA 357 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 explored from both the perspective of the interviewer and the interviewee.

Prereq: CTA 121/124, or department permission.

CTA 359 Small Group Communication. 3 hrs

Emphasizes the principles and practice of discussion as employed in committees, panels, symposiums, and forums. Students will plan and participate in discussions of contemporary problems.

Prereq: CTA 121/124.

CTA 372 Assertive Communication. 3 hrs

Individualized approach to study and training in effective assertive communication for social, conversational, and career-oriented situations.

Prereq: CTA 121/124, or department permission.

CTA 374 Intercultural Communication. 3 hrs

Analysis of processes and problems of communication as affected by national cultures; effects of differences in verbal and non-verbal communication, values, meaning, perception, and thought.

Prereq: CTA 121/124, or department permission.

CTA 375 Interracial/Interethnic Communication. 3 hrs

The analysis of how ethnocentric attitudes toward perceived racial/ethnic minority group speakers/listeners influence interpersonal communication transactions.

Prereq: CTA 121/124.

CTA 377/378/379 Special Topics in Communication. 1/2/3 hrs

These courses are offered on an experimental basis or for some special need.

CTA 387/388/389 Cooperative Education in Communication. 1/2/3 hrs

One semester of supervised work in speech communication. An evaluation is required at the end of the employment period.

Prereq: Nine credit hours in speech communication, approval by Cooperative Education Office, and department permission.

CTA 440 Survey of Public Address. 3 hrs

An historical and critical study of the more important speakers and their speeches from classical Greek and Roman times to the present with reference to social and political movements in the world's history.

Prereq: Three courses in communication, junior standing, or department permission.

CTA 460 Theories of Speech Criticism. 3 hrs

A study of the theoretical and critical works from various eras of western culture.

Prereq: Three courses in communication, junior standing, or department permission.

CTA 475 Research in Speech Communication. 3 hrs

An examination of methods currently employed in speech communication, as well as a review of the many types of application now being made. Course includes analysis of speech communication behavior.

Prereq: Three courses in communication, junior standing, or department permission.

CTA 477/478/479 Special Topics in Communication. 1/2/3 hrs

These courses are offered on an experimental basis or for some special need.

CTA 485 Theories of Speech Communication Behavior. 3 hrs

Study of theories that have made significant contributions to understanding of speech communication behavior.

Prereq: Three courses in communication, junior standing, or department permission.

CTA 487/488/489 Internship in Communication. 1/2/3 hrs

One semester of practical, on-the-job work experience and training (four hours per week minimum) at selected on-campus or off-campus facilities.

Prereq: Twenty semester hours of speech communication courses and department permission.

CTA 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 profi-

cient students in the senior year under the general conditions prescribed for honors courses.

Prereq: Department permission.

DRAMA/THEATRE FOR THE YOUNG

CTA 222 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.

CTA 322 Theatre for the Young. 3 hrs

An introductory study of the development, philosophy and techniques of theatre for the young.

CTA 323 Improvising and Role-Play. 3 hrs

Exploration of spontaneous dramatic play through intensive 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.

CTA 324 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 folktales.

CTA 326 Developmental Drama/Theatre with the Handicapped. 2 hrs

Study of principles, theories and practices of developmental drama/theatre as related to handicapped persons. Application to educational, recreational and institutional settings stressed.

CTA 327 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.

CTA 377/378/379 Special Topics in Drama/Theatre for the Young. 1/2/3 hrs

These courses are offered on an experimental basis or for some special need.

CTA 387/388/389 Cooperative Education in Drama/Theatre for the Young. 1/2/3 hrs

One semester of supervised work in drama/theatre for the young. An evaluation is required at the end of the employment period. Offered on a credit/no credit basis.

Prereq: Nine credit hours in dramatheatre for the young, approval by Cooperative Education Office, and department permission.

CTA 429 History and Theory of Developmental Drama/Theatre. 3 hrs

An introductory study of the history and theory of developmental drama/theatre. The current thinking of major practitioners in the field of developmental drama/theatre; current research that involves the development of new knowledge or the validation of existing knowledge relating to history and theory of developmental drama/theatre.

CTA 477/478/479 Special Topics in Drama/Theatre for the Young. 1/2/3 hrs

These courses are offered on an experimental basis or for some special need.

CTA 487/488/489 Internship in Drama/Theatre for the Young. 1/2/3 hrs

One semester of practical on-the-job work experience and training in drama/theatre for the young either on- or off-campus. Offered on a credit/no credit basis.

Prereq: Department permission.

CTA 497/498/499 Independent Study in Drama/Theatre for the Young. 1/2/3 hrs

Individual projects, research, or advanced reading programs in dramatic arts for children. Designed for students prepared to go beyond available course work.

Prereq: Department permission.

INTERPRETATION/PERFORMANCE STUDIES

CTA 102 Voice Development. 1 hr

A laboratory for developing strength and control of the speaking voice through physical and tonal exercises and choral speaking. Two regularly scheduled hours each week and additional sessions as arranged.

CTA 202/302/402 Voice Development. 1 hr each

Advanced laboratory exercises and specialized projects:

202—Pronouncing foreign terms for professional speaking.

302—Energetic vocal skills for theatre/interpretation.

402—Skills, theory, and individualized projects.

Prereq: CTA 102 or department permission.

CTA 205 Voice and Articulation. 3 hrs

An introductory course for improving personal speaking habits. Emphasis is placed on regular practice to develop relaxed tone support, efficient articulation, and vocal variety. Recording and listening laboratory hours arranged.

Prereq: CTA 121/124, or department permission.

CTA 210 Interpretative Reading. 3 hrs

The fundamentals of oral interpretation; developing poise and ease before an audience, a clear, forceful and flexible voice, and discrimination in interpreting thought to others. Selections will be prepared and presented in class.

Prereq: CTA 121/124.

CTA 301 Speech Science. 3 hrs

A survey of the physiological and psychological bases of speech and hearing. Emphasis is placed on understanding the physical characteristics of speech sounds and the human voice as they are used in effective oral communication.

Prereq: One of the following: CTA 205, CTA 210, CTA 241, CTA 158, or department permission.

CTA 311 Interpretation of Prose. 3 hrs

The application of the fundamentals of oral interpretation to the reading of prose with emphasis on the short story and excerpts from longer works of fiction. Special attention given to problems involved in the interpretation of prose.

Prereq: CTA 210.

CTA 314 Interpretation of Drama. 3 hrs

Specific problems involved in interpreting dramatic literature. Emphasis placed on selection of materials, cutting and arrangement of materials, dialogue, characterization, and character placement. Students will work individually and collectively in interpreting scenes from plays.

Prereq: CTA 210 or department permission.

CTA 377/378/379 Special Topics in Oral Interpretation. 1/2/3 hrs

These courses are offered on an experimental basis or for some special need.

CTA 400 Phonetics and Dialects of Spoken English. 3 hrs
A survey of the physiology and physics of speech sounds. Intensive study of the international phonetic alphabet in dialectology and speech improvement. Comparative study of phonemic systems and initial teaching alphabet.
Prereq: CTA 301, CTA 205, or department permission.

CTA 404 Dynamic Speaking Skills. 3 hrs
Projects emphasizing intensive application of voice and articulation theory and professional diction standards for actors, broadcasters, educators, forensic speakers, interpreters, and other professional communicators. Laboratory hours arranged.
Prereq: Three courses in the department including either CTA 102 or CTA 205, or take CTA 402 concurrently.

CTA 405 Voice and Dialects. 3 hrs
Advanced projects in preparing oral presentations and characterizations in regional and foreign dialects.
Prereq: CTA 102 or CTA 402 or CTA 205, or department permission.

CTA 410 Oral Interpretation of Shakespeare. 3 hrs
Specific problems involved in the oral interpretation of Shakespeare. Emphasis placed on language style and characterization problems. Students work individually and collectively in orally interpreting selections from Shakespeare's works.
Prereq: CTA 210 and two courses in literature, one of which should be either LIT 210 or LIT 103, or department permission.

CTA 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, choral reading, and experimental work. A public program will be presented by the class.
Prereq: Six hours of oral interpretation or department permission.

CTA 412 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: CTA 210.

CTA 414 Development and Theory of Oral Interpretation. 3 hrs
The development of oral interpretation from ancient Greece to the present, including the study of modern theories in oral interpretation.
Prereq: Nine hours of oral interpretation or department permission.

CTA 477/478/479 Special Topics in Oral Interpretation. 1/2/3 hrs
These courses are offered on an experimental basis or for special need.

THEATRE ARTS COURSES

CTA 106 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 specified on-campus performances. Not open to those with credit in MUS/DAN 106.

CTA 126 The Age of Shakespeare. 3 hrs
An introduction to basic areas of Renaissance thought as background to at least three of Shakespeare's plays, which are considered from the theatrical point of view as well as philosophical and literary. Team taught by members of the English and Communication and Theatre Arts Departments. *This course satisfies one literature or one theatre arts requirement.* Note: See Honors Humanities Courses, page 30.

CTA 150 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 selected EMU theatre productions. Required of theatre arts majors and minors.

CTA 151 Black Theatre: An Introduction. 3 hrs
An introductory survey of the roots, purposes, and contemporary manifestations of theatre and drama reflecting the black experience.

CTA 152 Introduction to Technical Theatre. 3 hrs
An introduction to design and execution in the various areas of technical theatre: scenery, costume, properties, makeup, and lighting. Laboratory will be arranged to ensure practical experience.

CTA 153 Introduction to Theatre Crafts. 2 hrs
The principles and practical techniques of planning, constructing, and coordinating scenery, lighting, costumes, make-up, sound, and properties with emphasis on simple materials and techniques usable in schools and recreational situations. Designed for non-theatre arts majors.

CTA 155 Play Production. 3 hrs
An introduction to the process of analyzing, directing, and staging plays; demonstration and practice. Laboratory hours by arrangement.
Prereq: CTA 150 strongly recommended for department majors and minors.

CTA 158 Fundamentals of Acting. 3 hrs
A study of the fundamental theories and techniques of acting. Major emphasis on theatre acting, but consideration given to radio and television acting. Laboratory hours by arrangement.

CTA 177/178/179 Special Topics in Theatre. 1/2/3 hrs
These courses are offered on an experimental basis or for special need.

CTA 251 Black Theatre: Creative Problems. 3 hrs
A consideration of those creative aspects of the theatre performance particular to the black theatre.

CTA 252 Stagecraft. 3 hrs
A study and application of the technical elements of play 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: CTA 155 strongly recommended for department majors and minors.

CTA 254 Stage Makeup. 1 hr
The theory and techniques of theatrical makeup. Laboratory hours to be arranged.

CTA 258 Mime/Pantomime and Mask. 3 hrs
A performance-oriented survey of techniques, styles, history, and theory of the silent performing arts of mime/pantomime and mask. Physical preparation, preparation of production materials, scripting, and actual performance.

CTA 277/278/279 Special Topics in Theatre. 1/2/3 hrs
These courses are offered on an experimental basis or for special need.

CTA 351 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: CTA 152, CTA 252, CTA 155, or department permission.

CTA 355 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: CTA 155 or department permission.

CTA 358 Characterization. 3 hrs
The creation of character and characterization by the actor. Analysis, development, and performance of roles studied in depth.
Prereq: CTA 158 or department permission.

- CTA 360 Dramatic Composition.** 3 hrs
An examination of the elements of dramatic structure through the analysis and composition of works of varying scope. Emphasis on adult plays for the stage; the special problems of drama for children and for the various broadcast media also considered.
Prereq: CTA 155 or department permission.
- CTA 361 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: CTA 360 or department permission.
- CTA 362 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: CTA 152, CTA 252, CTA 155, or department permission.
- CTA 363 Stage Costume: History and Theory.** 3 hrs
A survey of the principles and practices of stage costuming from antiquity to present.
Prereq: CTA 155 or department permission.
- CTA 364 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: CTA 363 or department permission.
- CTA 377/378/379 Special Topics in Theatre.** 1/2/3 hrs
These courses are offered on an experimental basis or for special need.
- CTA 387/388/389 Cooperative Education in Arts Management, Costuming, and Technical Theatre.** 1/2/3 hrs
One term of supervised work in arts management, costuming, and technical theatre. An evaluation is required at the end of the employment period.
Prereq: Nine semester hours in arts management, approval by Cooperative Education Office, and department permission.
- CTA 450 History of the Theatre to 1642.** 3 hrs
A history of the physical theatre and the written drama from antiquity to 1642. Emphasis on theatre architecture and stagecraft, including scenery, costumes, and lighting.
Prereq: Junior standing or department permission.
- CTA 451 History of the Theatre: 1642 to the Present.** 3 hrs
History of the physical theatre and the written drama in the western world from the Commonwealth period in England to the present.
Prereq: Junior standing or department permission.
- CTA 452 Arts Management.** 3 hrs
A study of managerial practices of arts organizations and agencies. Emphasis on facility planning, personnel, income sources, promotion, budget development, and management.
- CTA 453 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.
Prereq: MKT 360.
- CTA 454 Law, Public Policy, and the Arts.** 3 hrs
Examination of the impact of public policy and law on arts organizations and the individual artist. Particular attention is paid to tax policy, copyright, arts advocacy, and contract law.
Prereq: Twelve hours in arts management or department permission.
- CTA 456 Experimental Approaches to Directing.** 1 hr
Study of non-traditional possibilities for using the dynamics of theatre to enhance a performance.
Prereq: One course in acting or department permission.
- CTA 457 Tryouts and Auditions.** 1 hr
Intensive study in the preparation of tryout and audition material for the actor.
Prereq: One course in play direction or department permission.
- CTA 458 Style for the Actor.** 3 hrs
Theoretical and practical considerations involved in the acting of selected non-realistic styles of drama.
Prereq: One course in acting or department permission.
- CTA 459 Style for the Director.** 3 hrs
Theoretical and practical considerations involved in the direction of selected non-realistic styles of drama.
Prereq: One course in play direction or department permission.
- CTA 461 Musical Theatre Acting.** 2 hrs
Analysis and application of the performance skills needed by the actor/singer in musical theatre.
Prereq: Nine hours in theatre arts or department permission.
- CTA 462 Directors on Directing.** 2 hrs
Study of selected noted stage directors past and present.
Prereq: Nine hours in theatre arts or department permission.
- CTA 463 The American Musical Stage: 1900 to 1940.** 2 hrs
A survey of the early character and development in America of the Broadway musical, concentrating on operetta, the musical revue, and musical comedy.
Prereq: Junior standing or department permission.
- CTA 477/478/479 Special Topics.** 1/2/3 hrs
These courses are offered on an experimental basis or for special need.
- CTA 487/488/489 Internship in Arts Management.** 1/2/3 hrs
One semester of practical on-the-job work experience and training (four hours per week minimum) in arts management on or off campus.
Prereq: 20 semester hours in arts management and department permission..
- CTA 496 Seminar in Theatre.** 2 hrs
Designed to provide the student with opportunities to explore areas in theatre not covered in the regular course offerings.
Prereq: Open only to departmental seniors or by department permission.
- CTA 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.

TELECOMMUNICATIONS AND FILM COURSES

- CTA 130 Introduction to Telecommunications and Film.** 3 hrs
An introduction to mass media and telecommunication systems in the United States. Emphasis on development of telecommunication industries including radio-television-film, programming, new technology, regulation, and financial support.
Prereq: CTA 121/124.
- CTA 131 Introduction to Audio Production and Direction.** 2 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 WQBR, Quirk TV studio, and the audio production booths. The course will be required of all telecommunications minors and majors. As an introductory course in audio production, CTA 131 is essential to all other advanced production courses, including video and film. As such, CTA 131 must be taken before CTA 132 or other courses in the production curriculum.

CTA 132 Introduction to Video Production and Direction. 2 hrs
For majors and minors only. Class meets three times per week. One hour will be devoted normally to lecture and discussion. The two 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. CTA 132 is designed as an introductory course in Video production.
Prereq: CTA 131.

CTA 141 Introduction to Radio-TV-Film Production. 3 hrs
 For non-majors or non-minors. A study and application of the technical elements of radio, television, and film with emphasis on the operation of studio and remote equipment. Laboratory hours will be arranged in order to ensure adequate practical experiences in the operation of studio production facilities.
Prereq or coreq: CTA 130.

CTA 145 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, performances, editing, mise-en-scène, 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.

CTA 177/178/179 Special Topics in Telecommunications and Film. 1/2/3 hrs
 These courses are offered on an experimental basis or for special need.

CTA 230 Mass Media in America. 3 hrs
 A general survey of mass media with selected radio-television programs and film used to examine key concepts in production, criticism, history, and industry structure. May not be counted on major or minor in telecommunications and film.

CTA 231 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 post-production work. Two regular lecture hours and two hours of laboratory. Field work projects arranged. Laboratory fee.
Prereq: CTA 130, CTA 131, and CTA 132; or department permission.

CTA 236 History and Criticism of Radio and Television. 3 hrs
 An historical survey of network radio and television entertainment and public affairs programming with an emphasis on how the networks' offerings were received by a select number of social and cultural critics of the two media.
Prereq: CTA 130.

CTA 241 Radio-Television-Film Announcing. 3 hrs
 A study of the various types of radio, television, and film non-dramatic speaking such as music, commercials, interviews, and documentaries. Practice and evaluation of announcing types and styles.
Prereq: CTA 130 and CTA 131 and CTA 132, or department permission.

CTA 245 A Survey of American Cinema, 1894-Present. 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, and government intervention on the emergence of a dominant mode of film production practice. Key films by important directors from the entire period will be screened and discussed.
Prereq: CTA 145 or department permission.

CTA 277/278/279 Special Topics in Telecommunications and Film. 1/2/3 hrs
 These courses are offered on an experimental basis or for special need.

CTA 331 Fundamentals of Radio Production and Direction. 3 hrs
 The fundamentals of preparation, production, direction, and evaluation of non-dramatic radio programs.
Prereq: CTA 130 and CTA 131 and CTA 132, or department permission.

CTA 332 Fundamentals of Television Production and Direction. 3 hrs
 The fundamentals of preparation, production, direction, and evaluation of non-dramatic television programs. Emphasis is placed on basic techniques of studio and remote productions. Laboratory fee.
Prereq: CTA 130 and CTA 131 and CTA 132, or department permission.

CTA 333 Fundamentals of Film Production and Direction. 3 hrs
 An introduction to the principles of film-video production. Course offers theory and practice of film-video continuity, master sequencing, narrative and non-narrative editing. Three 16mm film or video projects will be required. Laboratory fees.
Prereq: CTA 130 and CTA 131 and CTA 132, or department permission.

CTA 334 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.
Prereq: CTA 130, CTA 131, and CTA 132 for majors and minors, or JRN 215 for majors/minors in journalism or public relations, or department permission.

CTA 335 Studies in Film. 3 hrs
 Students will examine non-Hollywood films including European, Asian, and Third World theatrical films or documentary, animated, and experimental films. The topics will be alternated over terms to allow an in-depth approach.
Prereq: CTA 130 and CTA 131 and CTA 132, or department permission.

CTA 336 Studies in Telecommunications. 3 hrs
 A comparative study of broadcasting services in European, Soviet, and Third World nations, also international short-wave, satellite interconnections, CATV, limited application video systems, and new technologies. Topics will be alternated over terms to allow an in-depth approach.
Prereq: CTA 130 and CTA 131 and CTA 132, or department permission.

CTA 341 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: CTA 130 and CTA 131 and CTA 132, or department permission. CTA 210 or CTA 158 recommended.

CTA 344 Continuity Writing for Radio-Television-Film. 3 hrs
 A study of the forms of non-dramatic writing for radio, television, and film, including commercials, public service announcements, music continuity, and narrations.
Prereq: CTA 130 and CTA 131 and CTA 132, or department permission.

CTA 345 American Film Genres. 3 hrs
 This course examines key American film genres from several points of view. These will include studying the narrative and stylistic conventions which identify individual genres and a consideration of the social and psychological functions that genre films serve. Students will consider how genre films present such dualities of order/chaos, nature/progress, wealthy/poor, and good/evil in symbolic ways. Also, students will consider the economic functions the genre films serve for the motion picture industry.
Prereq: CTA 145 or department permission.

CTA 377/378/379 Special Topics in Telecommunications and Film. 1/2/3 hrs

These courses are offered on an experimental basis or for special need.

CTA 387/388/389 Cooperative Education in Radio-Television-Film. 1/2/3 hrs

One term of supervised education work in radio-television-film. An evaluation is required at the end of the employment period.

Prereq: Nine credit hours in radio-television-film, approval by Cooperative Education Office, and department permission.

CTA 431 Advanced Radio Production and Direction. 3 hrs

A continuation of CTA 331. Advanced theory and practical experience in production of longer, more complex dramatic and non-dramatic material for radio.

Prereq: CTA 331 or department permission.

CTA 432 Advanced Television Production and Direction. 3 hrs

A continuation of CTA 332. 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: CTA 332 or department permission.

CTA 433 Advanced Film Production and Direction. 3 hrs

Students make complete 16mm color films or videotapes participating in all stages of production from scripting, filming, and taping, to developing an original soundtrack and a final edited version. Laboratory fees.

Prereq: CTA 333 and department permission.

CTA 445 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, auteur criticism, genres, and textual analysis.

Prereq: CTA 145 or LIT 245 or department permission.

CTA 446 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: Twelve semester hours of radio-television courses or department permission.

CTA 447 Radio-Television Station Management. 3 hrs

Study of station management in the areas of advertising, programming, personnel, applied research, and public relations.

Prereq: Twelve semester hours of radio-television courses or department permission.

CTA 477/478/479 Special Topics in Telecommunications and Film. 1/2/3 hrs

These courses are offered on an experimental basis or for special need.

CTA 487/488/489 Internship in Radio-Television-Film. 1/2/3 hrs

One semester of practical on-the-job work experience and training (10 hours per week minimum) at selected on-campus or off-campus radio-television-film facilities.

Prereq: Twenty semester hours of radio-television-film courses and department permission.

CTA 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. Normally restricted to students in the senior year under the conditions prescribed for honors courses

Prereq: Department permission.

ACTIVITY COURSES**CTA 165/265/365/465 Television Laboratory.** 1 hr each

Students who participate in co-instructional activities may, with the approval of the professor in charge of the activity 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: CTA 130, CTA 131, and CTA 132; or department permission.

CTA 166/266/366/466 Forensics. 1 hr each

Students who participate in co-instructional activities may, with the approval of the professor in charge of the activity 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.

CTA 167/267/367/467 Theatre Practice. 1 hr each

Students participating in specified positions of major responsibility in the 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:

167—Heading a major technical crew for a faculty-directed production.

Prereq: CTA 155, CTA 152, or CTA 252 plus previous experience on a similar crew for at least one EMU Theatre production.

267—Assistant directing and/or stage managing a faculty-directed production.

Prereq: CTA 167 and CTA 355.

367—Directing an Experimental Series production.

Prereq: CTA 167 and CTA 355.

467—Additional experience in the responsibilities listed for 367.

Prereq: CTA 167, CTA 267, or CTA 367.

CTA 168/268/368/468 Interpretation. 1 hr each

Students who participate in co-instructional activities may, with the approval of the professor in charge of the activity 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: CTA 210 or department permission.

CTA 169/269/369/469 Radio Station WQBR. 1 hr each

Students who participate in co-instructional programs may, with the approval of the professor in charge of the activity 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: CTA 130, CTA 131, and CTA 132; or department permission.

COMPUTER SCIENCE

George E. Haynam
Department Head
511 Pray-Harrold
487-1063

Professors: George E. Haynam, Hartmut F.W. Höft, Kurt E. Lauckner, Mildred D. Lintner

Associate Professors: Ranjan Chaudhuri, Andrew C. Dempster, Alan Heezen, William W. McMillan, John H. Remmers, Sushil K. Sachdev, Aby Tehranipour

Assistant Professors: John K. Cooper, Susan M. Haynes, Michael Zeiger

Instructors: Augustine Ikeji, Zenia Jones, Pamela A. Moore
Laboratory Coordinators: P. Steven Dotson, Karen Drumm

The Department of Computer Science offers training to facilitate both initial placement and continued growth in a rapidly changing and expanding field. Industrial ties are maintained through the cooperative education aspect of the program. The non-teaching computer science major prepares graduates for careers in computer systems analysis, software development, and application programming. The non-teaching minor accommodates students in mathematics, the physical and social sciences, and other fields concerned with information processing applications. The teaching major and minor train secondary school teachers of computer science. In-service employees in industrial or research information processing environments or in schools can take specific courses to improve their professional competency.

Degrees:

Bachelor of Science and Bachelor of Arts

Programs of Study

Majors:

Computer science
Computer science for secondary education

Minors:

Computer science
Computer science for secondary, K-12, and special education-secondary

Advising assistance may be obtained through the department office. An adviser list is posted, and the department secretary will direct students to appropriate faculty members.

Advising Coordinators:

Computer science (non-teaching): Kurt Lauckner
Computer science (teaching): Mildred Lintner

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.

COMPUTER SCIENCE MAJOR SECONDARY, K-12, AND SPECIAL EDUCATION- SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in computer science, certification code "NR," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #50, "Computer Science." See page 297.

COMPUTER SCIENCE MAJOR

	Sem hours
Major in computer science	36
1. Required courses	24
CSC 138 Computer Science I	3
CSC 238 Computer Science II	3
CSC 239 Assembly and Machine Language Programming	3
CSC 330 Discrete Mathematical Structures	3
CSC 334 Data Structures	3
CSC 337 Programming Languages	3
CSC 338 Computer Organization	3
CSC 365 Foundations of Automata and Languages	3
2. Restricted electives	12
Choose four courses from the following two groups with at least two courses from Group A:	
Group A	
CSC 430 Compiler Construction, CSC 431 Systems Pro- gramming, CSC 433 Computer Operating Systems, CSC 441 Computing Network Principles	
Group B	
CSC 432 Switching Theory, CSC 435 Introduction to Micro- processors, CSC 437 Microcomputer Graphics, CSC 442 Data- base Principles, CSC 443 Software Engineering Principles	
3. Additional required mathematics courses	17-19
MTH 120-121 Calculus I-II	8
MTH 122 Elementary Linear Algebra	3
MTH 360 Statistical Methods or MTH 370 Probability and Statistics I	3-4
Choose one course from the following:	3-4
MTH 223 Multivariable Calculus, MTH 319 Mathemati- cal Modeling, MTH 325 Differential Equations, MTH 411 Modern Algebra with Applications, MTH 418 Applied Linear Algebra, MTH 425 Mathematics for Scientists, MTH 436 Introduction to Numerical Analy- sis, MTH 471 Probability and Statistics II, MTH 475 Applied Combinatorics	

MINORS OFFERED IN THE COMPUTER SCIENCE DEPARTMENT

COMPUTER SCIENCE

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 computer science, certification code "NR." The certification test covering this field is #50, "Computer Science." See page 298.

COMPUTER SCIENCE

Students on the non-teaching minor interested in computer science applications in business may substitute courses from the College of Business with permission of the advising coordinator in computer science.

	Sem hours
Minor in computer science	21
1. Required courses	12
CSC 138 Computer Science I	3
CSC 238 Computer Science II	3
CSC 239 Assembly and Machine Language Programming	3
CSC 334 Data Structures	3
2. Restricted electives	9
Choose three courses from the following:	

CSC 330 Discrete Mathematical Structures; CSC 337 Programming Languages; CSC 338 Computer Organization; CSC 365 Foundations of Automata and Languages; CSC 430 Compiler Construction; CSC 431 Systems Programming; CSC 432 Switching Theory; CSC 433 Computer Operating Systems; CSC 435 Introduction to Microprocessors; CSC 437 Microcomputer Graphics; CSC 441 Computing Network Principles, CSC 442 Database Principles, CSC 443 Software Engineering Principles

COMPUTER SCIENCE COURSES

CSC 136 Computers for the Non-Specialist. 3 hrs
A survey of computer science for non-specialists who wish to learn about the capabilities and applications of computers in our society. The student will learn to write programs in the BASIC language. Not open to computer science non-teaching majors.

CSC 137 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 CSC 137 and CSC 237. Does not count toward computer science major or minor.
Prereq: One and a half years of high school algebra.

CSC 138 Computer Science I. 3 hrs
An introduction to computers, programming, algorithm development, and a block structured language such as Pascal. In particular, strategies for problem solving, problem analysis, algorithm representation, and algorithm verification are balanced with actual program development using top-down, stepwise refinement design and good documentation techniques. The first course in the computer science major and minor, but open to all students.
Prereq: High school algebra II or MTH 105.

CSC 237 Computer Programming and Numeric Methods. 3 hrs
An introductory programming course focusing on numerical algorithms fundamental to scientific computer 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 CSC 137 and CSC 237. Does not count toward computer science major or minor.
Prereq or coreq: MTH 121.

CSC 238 Computer Science II. 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: CSC 138.

CSC 239 Assembly and Machine Language Programming. 3 hrs
Computer structure, machine language, instruction execution, and digital representation of data. Computer systems organization and programs. Symbolic coding and assembly systems, macro definition and generation, program segmentation and linkage.
Prereq: CSC 137, CSC 138, CSC 237, or ORI 219.

CSC 277/278/279 Special Topics In Computer Science. 1/2/3 hrs
A 200-level course in a specific area of computer science, to be determined by the field of specialization of the instructor and the interest of the students.
Prereq: Instructor consent.

CSC 330 Discrete Mathematical Structures. 3 hrs
Set algebra and algebraic structures. Elements of the theory of directed and undirected graphs. Boolean algebra and propositional logic. Applications to various areas of computer science.
Prereq: CSC 238, CSC 239, and MTH 122. CSC 239 may be taken concurrently.

CSC 334 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.
Prereq: CSC 238 and CSC 239.

CSC 336 Programming Languages for Educators. 3 hrs
Formal definition of programming languages; structure of simple statements; global properties of algorithmic languages; structure of list processing, string manipulation, data description, and simulation languages; run-time representation of program and data structures. Special emphasis will be placed on education oriented languages. Credit will not be given for both CSC 336 and CSC 337.
Prereq: CSC 238 or equivalent and CSC 239.

CSC 337 Programming Languages. 3 hrs
Formal definition of programming languages; structure of simple statements; global properties of algorithmic languages; structure of list processing, string manipulation, data description, and simulation languages; run-time representation of program and data structures. Credit will not be given for both CSC 336 Programming Languages for Educators and CSC 337 Programming Languages.
Prereq: CSC 238 and CSC 239.

CSC 338 Computer Organization. 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.
Prereq: CSC 238 and CSC 239.

CSC 340 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 microcomputers. These programs will use many languages and programs including LOGO, PASCAL, BASIC, electronic spreadsheet, and a database program.
Prereq: CSC 136, CSC 238, and junior standing.

CSC 346 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 content, 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 on the major or minor.
Prereq: CSC 336, CUR 305, and admission to the teacher education program.

CSC 350 C Programming in a UNIX Environment. 3 hrs
An intermediate course in computer programming, using the C programming language and emphasizing software development in a UNIX environment. Concepts of structured programming; operators and expressions; statements, functions, and program organization; pointers, arrays, and character strings; structured data types; input/output; command line arguments. Use of UNIX commands, editors, and other tools related to software development.

Credit will not be given for more than one of CSC 451 and CSC 350. Does not count toward the Computer Science major or minor.
Prereq: CSC 239.

CSC 365 Foundations of Automata and Languages. 3 hrs
A rigorous treatment of finite state automata and the languages accepted by them: deterministic and non-deterministic automata, push-down automata, regular and context-free languages, Turing machines. Applications to lexical analysis and parsing. Students will design automata and implement language processors.
Prereq: CSC 330 and CSC 334.

CSC 377/378/379 Special Topics in Computer Science. 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.
Prereq: CSC 238, CSC 239, and department permission.

CSC 388 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 (CSC 388 and CSC 488) alternated with full-time attendance at the University. Use on computer science major subject to department permission. Graded credit/no credit.
Prereq: Junior or senior majoring in computer science, any 300-level course in computer science, admittance to program by application, department permission.

CSC 430 Compiler Construction. 3 hrs
Review of programming language structures, translation, loading, execution, and storage allocation. Compilation of simple statements. Organization and overall design of a compiler. Use of compiler writing languages.
Prereq: CSC 337 and CSC 365.

CSC 431 Systems Programming. 3 hrs
Batch-process systems programs, 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.
Prereq: CSC 334, CSC 337, and CSC 338.

CSC 432 Switching Theory. 3 hrs
Switching algebra, gate network, and sequential circuit analysis and synthesis. Boolean algebra, sequential circuit state and combinational circuit minimization, hazards and races, elementary number systems and codes.
Prereq: CSC 330 and CSC 338.

CSC 433 Computer Operating Systems. 3 hrs
Computer operating systems functions and concepts. Processor allocation; multiprogramming and scheduling algorithms. Memory tasks and data management. The deadlock problem. Virtual memory, allocation strategies, and analysis of their algorithms. Design, implementation, and protection of I/O files. Survey of available computer operating systems.
Prereq: CSC 334 and CSC 338.

CSC 435 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 software development; applications. Students will have access to both microcomputers and a minicomputer to gain firsthand knowledge of this field.
Prereq: CSC 338 or department permission.

CSC 437 Microcomputer Graphics. 3 hrs
A course in computer graphics using microcomputers. Display technologies. Raster graphics, displaying graphics primitives such as points, lines, curves, text, and scan conversion algorithms. Displaying graphs, functions, bar and pie charts, and applications. 2-D graphics including windowing, viewporting, 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: CSC 334 and MTH 122.

CSC 441 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: CSC 334 and CSC 338. CSC 330 recommended.

CSC 442 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: CSC 365. CSC 337 recommended.

CSC 443 Software Engineering Principles. 3 hrs
The design and analysis of large and complex software systems. Students will study software life cycles, analyze the requirements, and conduct detailed design studies using modern design methodologies. The knowledge gained from data structures, programming languages, computing architectures, and other computer science areas will be integrated and extended to build realistic systems.
Prereq: CSC 337, CSC 338, and CSC 365.

CSC 450 UNIX for Programmers. 1 hr
A course on the use of the UNIX operating system, with emphasis on those features which make it an outstanding development environment. History and design philosophy; basic commands and use of the editors; file system; shell constructs such as I/O redirection, pipelines, command substitution, variable substitution, and background tasks; pattern matching programs 'grep,' 'awk,' 'sed,' shell programming; internal structure. Does not count toward the computer science major or minor.
Prereq: Completion of at least one regular 300-level course in Computer Science.

CSC 451 Programming in C. 2 hrs
A course in the C language for those familiar with structured programming concepts, assembly language, and data structures. Syntax and semantics of expressions and statements; program organization; pointers and arrays; structures and unions; input/output; program structure; macro preprocessor; operating system environment; development tools such as 'lint' and 'make'; use of specialized program libraries such as the 'curses' screen control package. Does not count toward the computer science major or minor.
Prereq: CSC 334 (may be taken concurrently.)

CSC 452 Programming in Ada. 3 hrs
A course in the 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 overload-

ing. Procedures and packages will be written and tested using an Ada compiler. Does not count as a restricted elective.
Prereq: CSC 334 or ORI 315.

CSC 460 Computer Science Practicum. 3 hrs

A capstone course for students majoring in computer science that will provide the opportunity to develop one or more large software systems utilizing the latest software design techniques. These techniques include requirement specifications, functional specifications, architectural design, performance measurement, and testing. A final written report will be required that include both the design documents and a user's guide.

Prereq: Any 400 level course in computer science.

CSC 477/478/479 Special Topics In Computer Science. 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.

Prereq: Senior standing in computer science and department permission.

CSC 488 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 (CSC 388 and CSC 488) alternated with full-time attendance at the University. Use on computer science major subject to department permission. Graded credit/no credit.

Prereq: CSC 388 and department permission.

CSC 490 Seminar and Project Design for Educators. 3 hrs

Major project design and more formalized structured programming. Each student will work on two original major programs, one of which will be a group project. The student will report on both projects (written and oral) and give a formal presentation of the individual project to the University community in the form of a public lecture.

Prereq: CSC 334, CSC 336, and senior standing.

CSC 497/498/499 Independent Study In Computer Science. 1/2/3 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: Undergraduate grade point average in computer science of 3.0 or above and department permission.

ECONOMICS

Young-Iob Chung
Department Head
703 Pray-Harrold
487-3395

Professors: Young-Iob Chung, Kemper Moreland, Donald W. Pearson, Michael G. Vogt

Associate Professors: John A. Edgren, Raouf S. Hanna, Steven C. Hayworth, Bill M. Woodland

Assistant Professors: Dewan A. Abdullah, David B. Crary, Sharon Erenburg, Alfredo G. Esposto, Deborah M. Figart, Eija Multasuo, James A. Thornton

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, area studies offered in the Department of History and Philosophy, the minor in conservation and resource use in the Department of Biology, and Women's Studies.

Students have access to the University computer system through the department's own statistical laboratory and terminals, and through facilities available at various locations on campus.

The department presents six annual student awards: the Murg Award for outstanding service to the Economics Department, the Gockerman Award for an outstanding paper on a subject related to economics; two Hanna Awards for outstanding papers in economics; 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 Labor Studies Award for superior coursework, outstanding research effort, public service, and/or commitment to the Labor Studies program and its goals; and the Student Achievement Award for the highest grade point average in economics.

Also, the department sponsors Eta 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, and the Economics Club, for students interested in economics as a major or minor or complementary field to their studies either for further study in economics or for preparation for professional programs such as law and business administration.

Degrees:

- Bachelor of Arts or Bachelor of Science in economics
- Bachelor of Arts in labor studies
- Bachelor of Business Administration in economics
- Bachelor of Arts or Bachelor of Science in actuarial science and economics

Programs of Study

Majors:

- Economics (with concentrations in business economics, economics of finance, labor economics, governmental economics, comparative economic systems, and theoretical and quantitative economics)
- Economics for secondary education
- Labor Studies

Minors:

- Economics
- Economics for secondary, K-12, and special education-secondary
- Labor studies

Joint program with the Department of Mathematics:
Actuarial Science and Economics

Advising is available to students on a walk-in basis during regularly scheduled office hours. A list of advisers is posted in the Economics Department.

Advising Coordinators:

Undergraduate: Dewan A. Abdullah, John Edgren, Kemper Moreland, Eija Multasuo
 Labor studies: Donald W. Pearson, Deborah M. Figart
 B.B.A. in economics: Michael G. Vogt, Bill Woodland

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 development, trade, and planning. The degrees are described in the Graduate Catalog.

ECONOMICS MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in economics, certification code "CA" and, depending on the minor selected, endorsement in geography ("CB"), history ("CC"), political science ("CD"), psychology ("CE"), sociology ("CF"), or social science ("CX"). The certification test covering this field is #07, "Economics." See page 299.

ACTUARIAL SCIENCE AND ECONOMICS MAJOR

See the Department of Mathematics for program requirements.

ECONOMICS MAJOR

The major in economics requires 30 semester hours of which 15 semester hours are elected from economics courses without 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.

	Sem hours
Major in economics	30
1. Required courses	15
ECO 201-202 Principles of Economics I-II	6
ECO 301 Intermediate Macroeconomic Analysis	3
ECO 302 Intermediate Microeconomic Analysis	3
ECO 310 Economic Statistics or ECO 415 Introduction to Econometrics	3
2. Electives	15
Although any 15 semester hours of electives in economics will complete the requirements for the major, choice of one of the six recommended course patterns provides concentration in a specific career area.	

Business economics relates to private enterprise, including an analysis of business from a broad social perspective, and may lead directly to employment in business. Students selecting this concentration normally take additional courses or a minor in management, finance, accounting, marketing, or operations research. Recommended electives are:

ECO 320 Labor Economics	3
ECO 341 Money and Banking	3
ECO 361 Corporation Finance	3
ECO 405 Economic Analysis for Business	3
ECO 445 Economic Fluctuations and Forecasting	3
ECO 460 Industrial Organization	3

Economics of finance concentrates on the financial aspects of private or public enterprise and should enable students to understand the operations of financial institutions and to analyze and interpret financial data. It may lead to employment in banks,

insurance companies or other financial institutions, or in the finance and credit departments of industries or private firms.

Recommended electives include:

ECO 341 Money and Banking	3
ECO 350 Government Finance	3
ECO 361 Corporation Finance	3
ECO 405 Economic Analysis for Business	3
ECO 445 Economic Fluctuations and Forecasting	3
ECO 480 International Economics	3

Labor economics is designed for those who plan to specialize in the economic aspects of human resources and labor relations. It is of interest to those who expect to be employed in occupational counseling, labor and industrial relations, and government service. Recommended electives include:

ECO 320 Labor Economics	3
ECO 321 Minority Workers in the Labor Market	3
ECO 322 American Labor Unions	3
ECO 323 Labor and Government	3
ECO 324 Unionism in the Public Sector	3
ECO 325 Collective Bargaining	3
ECO 328 Economics of Women	3
ECO 420 Comparative Labor Unionism	3

Governmental economics is planned for students who desire to learn about the economic aspects of all levels of governments and their relation to the private sector. This program may lead to employment opportunities in government, in such areas as budget analysis, tax policy, collection and dissemination of governmental statistics, and positions with state and federal regulatory agencies such as public service commissions. Recommended electives include:

ECO 323 Labor and Government	3
ECO 332 Urban Economics	3
ECO 336 Economics of Environment and Natural Resources	3
ECO 337 Energy Economics and Policies	3
ECO 338 Land Economics	3
ECO 350 Government Finance	3
ECO 455 Cost-Benefit Analysis	3

Comparative economic systems is designed for those who wish to study the various economic systems throughout the world and intend to work for international organizations or to enter foreign service. Those in an area studies program will find this concentration of special value. Recommended electives include:

ECO 370 Comparative Economic Systems	3
ECO 375 Economic History of the United States	3
ECO 385 Economic Development	3
ECO 460 Industrial Organization	3
ECO 471 Case Studies of Developing Economies	3

Theoretical and quantitative economics is designed for students planning graduate study in economics or a career as a professional economist. These students are encouraged to minor in mathematics, including MTH 120-121 Calculus I-II, MTH 223 Multivariable Calculus, MTH 370 Probability and Statistics I, MTH 418 Applied Linear Algebra, and MTH 471 Probability and Statistics II in their studies. The recommended elective courses in economics are:

ECO 406 History of Economic Thought	3
ECO 415 Introduction to Econometrics	3
ECO 445 Economic Fluctuations and Forecasting	3
ECO 480 International Economics	3
ECO 491 Research Seminar in Economics	3

BACHELOR OF BUSINESS

ADMINISTRATION IN ECONOMICS

The Bachelor of Business Administration in economics degree program is designed to provide professional training in economics applicable to business management for students contemplating administrative and/or research careers in business and/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. This is a cooperative program with the College of Business.

Students enrolling in this program are required to follow the business administration curriculum (see page 179) in addition to fulfilling the 24 semester hours in economics.

	Sem hours
Major in economics	24
1. Required courses	9
ECO 301 Intermediate Macroeconomic Analysis	3
ECO 302 Intermediate Microeconomic Analysis	3
*ECO 310 Economic Statistics or ECO 415 Introduction to Econometrics	3
*Students also may meet the statistics requirement by taking ORI 265 Business Statistics I. If students elect ORI 265, they are not eligible to take ECO 310 Economic Statistics; ECO 415 Introduction to Econometrics is recommended in this case.	
2. Restricted electives	15

Although any 15 semester hours of 300-level or above electives in economics will complete the requirements for the major, students may pursue one of the six recommended career course patterns: business economics, economics of finance, labor economics, governmental economics, comparative economic systems, and theoretical and quantitative economics listed under the economics major.

Student selecting this economics major are encouraged to include at least one 400-level course offered in the College of Business as an elective.

LABOR STUDIES MAJOR

This program is administered through the Economics Department and leads to a Bachelor of Arts degree in labor studies. A minor also is available. Students should select courses in consultation with the director of labor studies and/or the specified advising coordinators.

	Sem hours
Major in labor studies	30
1. Required courses	9
ECO 310 Economic Statistics	3
ACC 240 Principles of Accounting I	3
ECO 320 Labor Economics	3
2. Restricted electives	21
Choose seven courses from the following:	
ECO 321 Minority Workers in the Labor Market, ECO 322 American Labor Unions, ECO 323 Labor and Government, ECO 324 Unionism in the Public Sector, ECO 325 Collective Bargaining, ECO 328 Economics of Women, ECO 420 Comparative Labor Unionism	
CTA 352 Communication in Negotiation, CTA 353 Organizational Communication in Unions	
HIS 463 United States Labor History	
LAW 403 Employment Law	
MGT 384 Human Resource Management	
PLS 335 Labor in American Politics	
PSY 351 Industrial Psychology	
SOC 307 Industrial Sociology	

MINORS OFFERED IN THE DEPARTMENT OF ECONOMICS

ECONOMICS

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 certification test covering this field is #07, "Economics." See page 300.

ECONOMICS

	Sem hours
Minor in economics	20
1. Required courses	6
ECO 201-202 Principles of Economics I-II	6
2. Electives	14
Choose 14 credits from any economics courses, ECO 301 and ECO 302 are highly recommended.	

LABOR STUDIES

	Sem hours
Minor in labor studies	20
Electives	20
Choose 20 credits from the following:	
ECO 310 Economic Statistics, ECO 320 Labor Economics, ECO 321 Minority Workers in the Labor Market, ECO 322 American Labor Unions, ECO 323 Labor and Government, ECO 324 Unionism in the Public Sector, ECO 325 Collective Bargaining, ECO 328 Economics of Women, ECO 420 Comparative Labor Unionism	
ACC 240 Principles of Accounting I	
CTA 352 Communication in Negotiation, CTA 353 Organizational Communication in Unions	
HIS 463 United States Labor History	
LAW 403 Employment Law	
MGT 384 Human Resource Management	
PLS 335 Labor in American Politics	
PSY 351 Industrial Psychology	
SOC 307 Industrial Sociology	

ECONOMICS COURSES

ECO 200 The American Economy.	3 hrs
Survey of the principles of economics; the basic knowledge of the functioning of the present-day American economy. Not open to students with ECO 201/ECO 202.	
ECO 201 Principles of Economics I.	3 hrs
The first half of basic principles of economics. Emphasizes macroeconomic concepts of national income, fiscal and monetary policy, and problems of unemployment, inflation, and economic growth. <i>Prereq: MTH 104 or equivalent.</i>	
ECO 202 Principles of Economics II.	3 hrs
Second half of an introduction to basic principles of economics. Emphasizes microeconomic concepts of demand, supply, and problems relating to prices and resource allocation. <i>Prereq: ECO 201 or equivalent, and MTH 104 or equivalent.</i>	
ECO 300 Contemporary Economics.	3 hrs
Analysis of contemporary economic problems. Topics may change each semester as the interests and/or problems change. Students may elect this course several times as long as different topics are studied but it may be taken only twice for credit toward a major or minor in economics. <i>Prereq: One course in economics.</i>	
ECO 301 Intermediate Macroeconomic Analysis.	3 hrs
Examines macroeconomic theories 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, monetary 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. <i>Prereq: ECO 201 and ECO 202 or equivalent, and MTH 119/120.</i>	

ECO 302 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.
Prereq: ECO 201 and ECO 202 or equivalent, and MTH 119/120.

ECO 310 Economic Statistics. 3 hrs
Introduction to the statistical measurement and analysis of data with applications to economics. Elements of descriptive statistics, probability, random samples, point and interval estimation, hypothesis testing, and regression analysis are examined.
Prereq: MTH 119 or MTH 120.

ECO 320 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.
Prereq: ECO 201 and ECO 202 or equivalent.

ECO 321 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.
Prereq: One course in economics.

ECO 322 American Labor Unions. 3 hrs
The nature, characteristics, and principles of American labor unionism; the government and structure of unions and their role in the economy.
Prereq: One course in economics.

ECO 323 Labor and Government. 3 hrs
The economic aspects of labor legislation and governmental administrative rulings affecting unions and union-employer relations.
Prereq: One course in economics.

ECO 324 Unionism in the Public Sector. 3 hrs
The origins, goals, and methods of union organization of public sector employees. Emphasis on teachers and other public employees at state and local levels.
Prereq: One course in economics.

ECO 325 Collective Bargaining. 3 hrs
Major problems in present-day collective bargaining including the negotiation of collective agreements, practical aspects, and economic implications.
Prereq: One course in economics.

ECO 327 Inequality and Economic Justice. 3 hrs
The distribution of wealth and income in the U.S.; an economic analysis of income maintenance programs, including the U.S. social security system.
Prereq: ECO 201 and ECO 202 or department permission.

ECO 328 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 non-traditional occupations. Includes some international comparisons.
Prereq: One course in economics or WMS 200.

ECO 329 Economics of Crime. 3 hrs
The use of economic concepts and tools to analyze economic causes of crime and economic policies relevant to crime.
Prereq: ECO 202 or equivalent.

ECO 332 Urban Economics. 3 hrs
The level, distribution, stability, and growth of urban income and employment. Analysis of contemporary urban problems, such as

inner-city poverty, housing-land use, transportation, and local public services with special reference to economic efficiency and programs.
Prereq: ECO 201 and ECO 202 or equivalent.

ECO 336 Economics of Environment and Natural Resources. 3 hrs
The application of economic concepts and analysis to problems of environment and management of natural resources.
Prereq: ECO 202 or equivalent.

ECO 337 Energy Economics and Policies. 3 hrs
Introduction to the economics of energy in the U.S. and world economies, including a critical analysis of the policies of the governments involved.
Prereq: ECO 202 or equivalent.

ECO 338 Land Economics. 3 hrs
The use of land in modern society, including a critical economic evaluation of alternative and optimal uses of land.
Prereq: ECO 201 and ECO 202 or equivalent.

ECO 341 Money and Banking. 3 hrs
The nature and role of money and credit, the banking system and other financial institutions, and the relation of monetary policy to the level of economic activity.
Prereq: ECO 201 and ECO 202 or equivalent.

ECO 350 Government Finance. 3 hrs
An examination of theory, institutions, and problems of financing the public sector; the effects of expenditures, taxes and other revenue sources, borrowing, debt management, and grants-in-aid at all levels of government upon the distribution of national income and upon the allocation of resources.
Prereq: ECO 201 and ECO 202 or equivalent.

ECO 361 Corporation Finance. 3 hrs
The structure, financial organization, income, and policy decisions of corporations.
Prereq: One course in economics.

ECO 370 Comparative Economic Systems. 3 hrs
Alternative approaches to organizing economic activity, emphasizing advantages and disadvantages as compared to the U.S. economic system. Illustrations are taken from noncapitalist economies such as Cuba and China.
Prereq: One course in economics.

ECO 375 Economic History of the United States. 3 hrs
The economic development of the United States.
Prereq: One course in economics.

ECO 385 Economic Development. 3 hrs
The causes, the consequences, and possible solutions of economic problems facing the developing countries of Latin America, Africa, and Asia. Emphasis on mass poverty, food shortages, overpopulation, unemployment, and unequal income distribution.
Prereq: One course in economics.

ECO 386 Technology and Economic Growth. 3 hrs
The nature of technology and its importance for contemporary economic growth. Includes technological change and the effects on society and the individual.
Prereq: One course in economics.

ECO 387 Cooperative Education in Economics or Labor Studies. 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 (ECO 387 and ECO 487) alternated with full-time attendance at the University. A written report is required at the end of each employment period. Admittance to program by application only. Graded credit/no credit.
Prereq: Junior standing. Major in economics or labor studies. Department permission.

ECO 401 Computer Applications in Macroeconomics. 3 hrs
Test of various hypotheses of consumption function, investment function, demand for money function, supply of money process, aggregate production function, and labor supply and demand functions. Problems of aggregation and structural vs. reduced form estimations.

Prereq: ECO 301 and ECO 310, or equivalent.

ECO 402 Computer Applications in Microeconomics. 3 hrs
Applied linear and non-linear models of the consumer and the firm. Estimates demand functions (for example housing demand and energy demand), cost functions, and production functions.

Prereq: ECO 302 and ECO 310, or equivalent.

ECO 405 Economic Analysis for Business. 3 hrs

Analytical tools and methods of economic theory used in business management, focusing on production, cost, pricing, and investment. Application includes demand estimation and economic forecasting.

Prereq: ECO 201 and ECO 202; ECO 302 highly recommended.

ECO 406 History of Economic Thought. 3 hrs

Introduction to the development of economic thought from the age of mercantilism to Keynes, with emphasis on the contributions of some of the major writers and schools of economic thought.

Prereq: ECO 201 and ECO 202.

ECO 407 Economic Analysis and Law. 3 hrs

The application of economic analysis to the law, including property law, contract law, family law, torts, criminal law, constitutional law, antitrust, and environmental law.

Prereq: ECO 201 and ECO 202 or department permission.

ECO 415 Introduction to Econometrics. 3 hrs

Introduction to the mathematical formulation of economic theories. The use of statistical procedures to measure the theoretical relationships and to verify or reject the theories. Quantitative predictions, measurements, and statistical test of the predictions.

Prereq: ECO 310 or MTH 370 or ORI 265.

ECO 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 perspective.

Prereq: ECO 201 and ECO 202 or department permission.

ECO 436 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: ECO 201 and ECO 202 or equivalent.

ECO 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: ECO 301 or ECO 341 or department permission.

ECO 445 Economic Fluctuations and Forecasting. 3 hrs

The nature and causes of business fluctuations. Problems of forecasting business cycles, international aspects of the business cycle, and governmental stabilization policies.

Prereq: ECO 201 and ECO 202 or equivalent.

ECO 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: ECO 201 and ECO 202.

ECO 460 Industrial Organization. 3 hrs

Monopoly, competition, mergers, concentration and antitrust, and other public policies affecting private enterprise in the United States.

Prereq: ECO 201 and ECO 202.

ECO 471 Case Studies of Developing Economies. 3 hrs

A survey of economic problems in selected developing economies. Case studies of countries or regions among the less developed economies. Cases may change from year to year.

Prereq: ECO 201 and ECO 202 or equivalent.

ECO 477/478/479 Special Topics. 1/2/3 hrs

A study of topics not covered in other department offerings. Students may elect more than once provided different topics are studied.

ECO 480 International Economics. 3 hrs

Analysis of theory and economic problems of international trade factor movements, exchange mechanisms, balance of payments, regional economic integration, assistance agencies, and adjustments to changing conditions.

Prereq: ECO 201 and ECO 202, or equivalent.

ECO 487 Cooperative Education in Economics or Labor Studies. 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 (ECO 387 and ECO 487) alternated with full-time attendance at the University. A written report is required at the end of each employment period. Admittance to program by application only. Graded credit/no credit.

Prereq: ECO 387. Department permission.

ECO 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: Junior standing, economics major or minor.

ECO 497/498/499 Independent Studies. 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.*

ENGLISH LANGUAGE AND LITERATURE

Marcia A. Dalbey
Department Head
612 Pray-Harrold
487-4220

Professors: James Angle, Helen Aristar-Dry, Paul Bruss, Franklin Case, Gilbert Cross, Marcia Dalbey, Bernard Decker, James Devers, Jeffrey Duncan, Clayton Eshleman, David Geherin, Arthur Harris, Lucy Hayden, Alethea Helbig, Thomas Hennings, Robert Holkeboer, Sheila Ingersoll, Elizabeth Ingram, Jay Jernigan, Eunice Jordan, Janet Kauffman, Robert Kraft, Russell Larson, Donald Lawniczak, Paul McGlynn, George Perkins, James Reynolds, William Shuter, Lawrence Smith, Arie Staal, Curtis Stadtfeld, Patrick White

Associate Professors: Phillip Arrington, Jean Dye, Harry Eiss, Brenda Flanagan, Meredith Klaus, Bernard Miller, Daniel Seely, Martin Shichtman

Assistant Professors: Nancy Allen, Cheryl Cassidy, Elisabeth Dauemer, Keith Denning, Elaine Dunlap, Catherine Fleischer, William Hauer, Alexandra Norton, James Pinson, Ian Wojcik-Andrews

The programs offered by the English Department 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.

The department supports a student chapter of Sigma Tau Delta, national honorary society for students of English; Women in Communications, Inc., national professional honorary organization for women and men in communications; and the student-managed English Club for all students of English.

Degrees:

Bachelor of Arts and Bachelor of Science

Programs of Study

Majors:

English language
 English linguistics
 Journalism
 Literature
 Written communication

Interdisciplinary and Group Majors:

English and American language and literature for elementary education
 English and American language and literature for secondary education
 Language, journalism, telecommunications, and film
 Literature and drama/theatre for the young
 Literature and drama/theatre for the young for elementary education
 Literature, language, communications, and theatre arts
 Literature, language, communications, and theatre arts for elementary education
 Public relations

Minors:

Children's literature
 Children's literature for elementary education
 English language
 English language and literature
 English language and literature for elementary education

English language and literature for secondary, K-12,
 and special education-secondary

English linguistics
 Journalism
 Literature
 Writing

Advising is available from faculty advisers 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 (FRN/GER/SPN 121, 122, 221, or 222) instead of ENG 121 English Composition.

Graduate study leads to the master's degree in English. The M.A. degree is described in the Graduate Catalog. The undergraduate group major in English and American language and literature also is part of an accelerated Master of Arts program with concentration in language and composition. The Graduate School or the English Department can provide details.

ENGLISH AND AMERICAN LANGUAGE AND LITERATURE MAJOR SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies 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. The certification test covering this field is #02, "English." See page 301.

ENGLISH AND AMERICAN LANGUAGE AND LITERATURE MAJOR ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in English, certification code "BA." The certification test covering this field is #02, "English." See page 302.

ENGLISH LANGUAGE MAJOR

	Sem hours
Major in English language	30
1. Required courses in advanced writing	9
Choose three courses from the following:	
ENG 225 Intermediate English Composition, ENG 326	
Research Writing, ENG 328 Writing: Style and Lan-	
guage, ENG 417 Writing about Controversies	
2. Required courses in linguistics	9
LIN 201 An Introduction to Linguistics and any two other	
LIN courses	
3. Electives	12
Any course not taken from (1) and (2) above as a required	
course, or any of the following:	
ENG 335 Imaginative Writing, ENG 422 Writer's Work-	
shop: Fiction or Poetry, ENG 424 Technical Writing	
JRN 215 News Writing and Reporting, JRN 306 Feature	
Writing, JRN 307 Copy Editing, JRN 314 Writing for	
Public Relations, JRN 423 Magazine Article Writing,	
JRN 453 Advanced Reporting	
LIT 412 English Literature in the Middle Ages, LIT 413	
The Poetry of Chaucer	

ENGLISH LINGUISTICS MAJOR

	Sem hours
Major in English linguistics	30
1. Required courses	18
LIN 201 An Introduction to Linguistics	3
LIN 401 Introduction to Linguistic Science	3
LIN 402 Modern English Grammar	3
LIN 420 Introduction to Phonology	3
LIN 421 The History of the English Language.....	3
LIN 425 Introduction to Syntax	3
2. Electives	12
The remaining twelve hours of study are to be selected by the candidates and their advisers. They may include courses from inside or outside the department. Suggested areas include anthropology, composition and rhetoric, 500-level linguistics courses, foreign languages, literature (particularly the early periods), math and computer science, philosophy, psychology, reading, sociology, speech and hearing science, communications, and TESOL.	

LITERATURE MAJOR

	Sem hours
Major in literature	30
1. Required basic literature courses	9
a. Choose two courses from the following:	
LIT 100 The Reading of Literature, LIT 101 The Reading of Literature: Fiction, LIT 102 The Reading of Literature: Poetry, LIT 103 The Reading of Literature: Drama, LIT 204 Native American Literature, LIT 251 The Bible as Literature, LIT 260 African American Literature	
b. LIT 210 Introduction to Shakespeare (No more than nine semester hours of 100- and 200-level literature courses may count toward this major)	
2. Restricted electives	12
Choose one course from each of the following groups:	
a. LIT 305 Shakespeare: The Major Comedies and Histories, LIT 340 The Rise of British Drama to 1642, LIT 341 English Drama 1660-1779, LIT 411 Medieval Epic and Romance, LIT 412 English Literature in the Middle Ages, LIT 413 The Poetry of Chaucer, LIT 414 English Renaissance Prose and Poetry 1500-1660, LIT 415 Literature of the Neo-Classical Period 1660-1798	
b. LIT 330 The Rise of the British Novel 1720-1832, LIT 331 The Development of the British Novel 1832-1914, LIT 416 Romantic Rebellion in Britain 1798-1832, LIT 417 Victorian and Edwardian Literature 1832-1914	
c. LIT 333 Modern British and European Novel 1914 to Present, LIT 342 The Development of Modern Drama, LIT 401 Modern British and American Poetry 1914 to Present, LIT 460 Recent Trends in British and American Literature	
d. LIT 328 The Rise of the American Novel to 1920, LIT 332 The Modern American Novel 1920 to Present, LIT 409 The Development of American Literature, LIT 410 Modern American Literature	
3. Electives	9
Choose from the restricted electives or from the following: LIT 300 Narrative in Literature and Film, LIT 440 Literary Types, LIT 443 Women in Literature, LIT 450 Major Authors	

WRITTEN COMMUNICATION MAJOR

Students electing this major select one of the two areas of concentration: technical communications and imaginative writing. A 2.5 GPA is required for admission to each of the concentrations.

In the restricted electives for each concentration, students may take only the courses listed unless they obtain department permission for substitutions.

	Sem hours
Major in written communication	30
A. Concentration in technical communications	
1. Required courses	18
JRN 215 News Writing and Reporting or ENG 225 Intermediate English Composition or ENG 326 Research Writing.....	
.....3	
ENG 324 Principles of Technical Communication.....	
.....3	
ENG 328 Writing: Style and Language	
.....3	
ENG 424 Technical Writing	
.....3	
ENG 427 Technical Editing	
.....3	
IDT 201 Microcomputer Applications or IDT 436 Electronic Publishing	
.....3	
2. Restricted electives	12
ENG 387/487 Cooperative Education, ENG 417 Writing about Controversies, ENG 503 Writing and Rhetorical Theory, ENG 524 Advanced Technical Writing and Research	
JRN 306 Feature, Interpretive, and Editorial Writing, JRN 307 Copy Editing, JRN 314 Writing for Public Relations	
CTA 227 Interpersonal Communication	
FA 165 Graphic Design for Non-Majors	
IDT 121 Graphic Communication, IDT 204 Photographic Communication, IDT 436 Electronic Publishing	
B. Concentration in imaginative writing	
1. Required courses	12
*ENG 335 Imaginative Writing	
.....3	
*ENG 422 Writer's Workshop: Fiction or Poetry	
.....3	
Choose two 300- or 400-level literature courses.....	
.....6	
2. Restricted electives	18
Choose six courses from the following:	
ENG 225 Intermediate English Composition, ENG 326 Research Writing, ENG 328 Writing: Style and Language, ENG 417 Writing about Controversies, ENG 422 Writer's Workshop: Fiction or Poetry,* ENG 503 Writing and Rhetorical Theory	
LIN 402 Modern English Grammar, LIN 421 The History of the English Language	
JRN 215 News Writing and Reporting, JRN 306 Feature Writing, JRN 423 Magazine Article Writing	
*Course may be repeated for additional credit if topic is different.	

JOURNALISM MAJOR

Students will be required to complete 30 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 grade point average. For journalism majors, JRN 213 Introduction to the Print Media is a prerequisite for all courses in the major. JRN 213 does not count toward the major.

	Sem hours
Major in journalism	30
1. Required courses	21
JRN 215 News Writing and Reporting, JRN 306 Feature Writing, JRN 307 Copy Editing, JRN 313 History of American Journalism, JRN 453 Advanced Reporting, JRN 454 Contemporary Problems in Journalism, JRN 455 Journalism and the Law	
2. Restricted electives	9
Choose three courses from the following:	

JRN 305 Editorial, Column, and Review Writing; JRN 311 Editing Procedures; JRN 312 Principles of Public Relations; JRN 314 Writing for Public Relations; JRN 387/487 Cooperative Education; JRN 488/489/490 Internship
 ENG 324 Principles of Technical Communication, ENG 328 Writing: Style and Language

Students will be required to complete a 20-hour minor from one of these areas:

Economics, English language and literature, foreign language (nine foreign language minors are available, in German, Spanish, and French, each with a minor option of language, language and literature, or literature), geography, history (several history minors are available; students wishing a history minor will select a minor approved by their journalism counselor), political science, sociology.

Students are advised to choose free electives from the following list:

LIT 210 Introduction to Shakespeare, LIT 332 The Modern American Novel 1920 to Present, LIT 410 Modern American Literature
 HIS 101 Western Civilization to 1648; HIS 102 Western Civilization, 1648 to World War I; HIS 103 Twentieth Century Civilization
 PHI 110 Philosophies of Life, PHI 130 Introduction to Logic
 PLS 112 American Government (one other PLS course from a list available from journalism advisers)
 ECO 201/202 Principles of Economics I-II
 CSC 136 Computers for the Non-Specialist
 ANT 135 Introduction to Cultural Anthropology

If a journalism major chooses a minor in economics, English language and literature, history, or political science, those courses listed here which are part of that minor should be replaced with courses listed as restricted electives on the major. Courses taken to fulfill the basic studies requirements leave room for still other free electives.

Science, technical, business, or other minors will be encouraged for those students wishing to pursue interests or careers that might combine journalism with those specialties. Choice of those minors will be subject to approval by the journalism adviser.

Suggested electives:

SOC 105 Introductory Sociology
 CTA 141 Introduction to Radio-TV-Film Production, CTA 331 Fundamentals of Radio Production and Direction, CTA 332 Fundamentals of Television Production and Direction, CTA 336 Studies in Telecommunications

INTERDISCIPLINARY MAJOR IN PUBLIC RELATIONS

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 Departments of English and Communication and Theatre Arts are offered as requirements and restricted electives.

Sem hours

Interdisciplinary major in public relations 41-42

- Required fundamental courses** 17-18
 - JRN 215 News Writing and Reporting 3
 - JRN 312 Principles of Public Relations 3
 - JRN 314 Writing for Public Relations 3
 - CTA 121 or CTA 124 Fundamentals of Speech 2-3
 - CTA 141 Introduction to Radio-TV-Film Production 3
 - CTA 224 Public Speaking or CTA 350 Persuasion 3

- Required advanced courses** 12
 - JRN 306 Feature Writing 3
 - JRN 408 Case Studies in Public Relations 3
 - CTA 334 Radio-Television News or CTA 344 Continuity Writing for Radio-Television-Film 3
 - CTA 354 Organizational Communication or CTA 357 Interviewing as Communication 3
- Restricted electives** 12
 - JRN 307 Copy Editing, JRN 311 Editing Procedures, JRN 423 Magazine Article Writing, JRN 455 Journalism and the Law, *JRN 387/487 Cooperative Education in Journalism/Public Relations, *JRN 488/489/490 Internship in Journalism/Public Relations, ENG 424 Technical Writing, CTA 224 Public Speaking or CTA 350 Persuasion (whichever is not chosen above), CTA 227 Interpersonal Communication or CTA 359 Small Group Communication, CTA 334 Radio-Television News or CTA 344 Continuity Writing for Radio-Television-Film (whichever is not chosen above), *CTA 387/388/389 Cooperative Education in Radio-Television-Film, *CTA 487/488/489 Internship in Radio-Television-Film

A maximum of six hours may be chosen from:
 FA 165 Graphic Design for Non-Majors, IDT 121 Graphic Communication, IDT 204 Photographic Communication, CSC 136 Computers for the Non-Specialist

**Where applicable to public relations*

Recommended minors:

Marketing or Management (College of Business), with MKT 360 Principles of Marketing and MKT 369 Advertising highly recommended, along with other courses such as statistics, marketing research, buyer behavior, promotional strategy).

English writing, sociology, psychology, or a minor chosen by student in specific field of interest.

INTERDISCIPLINARY MAJOR IN CHILDREN'S LITERATURE AND DRAMA/ THEATRE FOR THE YOUNG

This major may be used for the Bachelor of Science or Bachelor of Arts degrees without teacher certification.

Sem hours

Interdisciplinary major in children's literature and drama/theatre for the young 36

- Required courses** 26-27
 - Choose two courses from the following:
 - LIT 100 The Reading of Literature, LIT 101 The Reading of Literature: Fiction, LIT 102 The Reading of Literature: Poetry, LIT 103 The Reading of Literature: Drama, LIT 204 Native American Literature, LIT 210 Introduction to Shakespeare, LIT 251 The Bible as Literature, LIT 260 African American Literature 6
 - ENG 450 Children's Literature: Criticism and Response ... 3
 - LIT 207 Introduction to Children's Literature 3
 - LIT 351 World Mythology or LIT 352 Folk Literature: Ballads and Folk Tales 3
 - CTA 121 or CTA 124 Fundamentals of Speech 2-3
 - CTA 222 Drama and Play in Human Experience 3
 - CTA 323 Improvising and Role-Play 3
 - CTA 324 Oral Interpretation of Literature for the Young ... 3
- Restricted electives** 9-10
 - Choose nine to 10 credits from the following:
 - LIT 204 Native American Literature, LIT 210 Introduction to Shakespeare, LIT 251 The Bible as Literature,

LIT 351 World Mythology, LIT 352 Folk Literature: Ballads and Folk Tales, LIT 401 Modern British and American Poetry 1914 to Present, ENG 451 Writing about Controversy in Literature for the Young
CTA 168/268/368/468 Interpretation, CTA 210 Interpretative Reading, CTA 322 Theatre for the Young, CTA 327 Plays for the Young, CTA 497/498/499 Independent Study in Drama for the Young, EDM 506 Storytelling

MINORS OFFERED IN THE ENGLISH DEPARTMENT

ENGLISH AND AMERICAN LANGUAGE AND LITERATURE

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 "BA." The certification test covering this field is #02, "English." See page 302.

CHILDREN'S LITERATURE

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 English, certification code "BA." The certification test for "English" is #02, "English." However, the student is advised that there is no test in children's literature and that the test in English covers material not included in this curriculum. See page 303.

ENGLISH LANGUAGE

	Sem hours
Minor in English language	21-24
1. Required courses in advanced writing	6
ENG 225 Intermediate English Composition or ENG 226 Report and Research Writing	3
ENG 325 Expository Writing	3
2. Required courses in linguistics.....	6
LIN 201 Introduction to Language and any one other LIN course	6
3. Electives	9-12
Any course not taken from (1) and (2) above as a required course, or any of the following:	
ENG 335 Imaginative Writing, ENG 417 Writing about Controversies, ENG 422 Writer's Workshop: Fiction or Poetry, ENG 424 Technical Writing	
JRN 215 News Writing and Reporting, JRN 306 Feature Writing, JRN 307 Copy Editing, JRN 314 Writing for Public Relations, JRN 423 Magazine Article Writing, JRN 453 Advanced Reporting	
LIT 412 Medieval Literature, LIT 413 The Poetry of Chaucer	

LITERATURE

	Sem hours
Minor in literature	21-24
1. Required courses	9
Choose two courses from the following:	
LIT 100 The Reading of Literature, LIT 101 The Reading of Literature: Fiction, LIT 102 The Reading of Literature: Poetry, LIT 103 The	

Reading of Literature: Drama, LIT 204 Native American Literature, LIT 251 The Bible as Literature, LIT 260 African American Literature ...	6
LIT 210 Introduction to Shakespeare	3
2. Restricted electives	6
Choose one course from the following:	
LIT 305 Shakespeare: The Major Comedies and Histories, LIT 330 The Rise of the British Novel 1720-1832, LIT 331 The Development of the British Novel 1832-1914, LIT 340 The Rise of British Drama to 1642, LIT 341 English Drama 1660-1779, LIT 411 Medieval Epic and Romance, LIT 412 English Literature of the Middle Ages, LIT 413 The Poetry of Chaucer, LIT 414 English Renaissance Prose and Poetry 1500-1660, LIT 415 Literature of the Neo-classical Period 1660-1798, LIT 416 Romantic Rebellion in Britain, LIT 417 Victorian and Edwardian Literature 1832-1914	
Choose one course from the following:	
LIT 328 The Rise of the American Novel to 1920, LIT 332 The Modern American Novel 1920 to Present, LIT 333 Modern British and European Novel 1914 to Present, LIT 342 The Development of Modern Drama, LIT 401 Modern British and American Poetry 1914 to Present, LIT 410 Modern American Literature, LIT 460 Recent Trends in British and American Literature	
3. Free electives	6-9
Choose from courses in literature, except the following:	
LIT 207 Introduction to Children's Literature, LIT 352 Folk Literature: Ballads and Folk Tales, LIT 451 Controversy in Children's Literature.	
No more than nine semester hours of 100- and 200-level literature courses may count toward this minor.	

JOURNALISM

	Sem hours
Minor in journalism	21
1. Required courses	15
JRN 215 News Writing and Reporting, JRN 306 Feature Writing, JRN 307 Copy Editing, JRN 313 History of American Journalism, JRN 454 Contemporary Problems in Journalism.	
2. Restricted electives	6
Choose six credits from the following:	
ENG 324 Principles of Technical Communication, ENG 328 Writing: Style and Language, ENG 424 Technical Writing	
JRN 305 Editorial, Column, and Review Writing; JRN 311 Editing Procedures; JRN 312 Principles of Public Relations; JRN 423 Magazine Article Writing; JRN 453 Advanced Reporting	
CTA 141 Introduction to Radio-TV-Film Production; CTA 334 Radio-Television News; CTA 344 Continuity Writing for Radio-Television-Film	
FA 165 Graphic Design for Non-Majors	
IDT 121 Graphic Communication, IDT 204 Photographic Communication	

ENGLISH LINGUISTICS

	Sem hours
Minor in English linguistics	21
1. Required courses	6
LIN 201 An Introduction to Linguistics and LIN 401 Introduction to Linguistic Science.	
2. Restricted electives	15
Any LIN course not taken in 1. above, LIT 412 English Literature in the Middle Ages, LIT 413 The Poetry of Chaucer	

WRITING

	Sem hours
Minor in writing	21
1. Required courses	12
ENG 121 English Composition	3
ENG 328 Writing: Style and Language	3
*ENG 335 Imaginative Writing	3
*ENG 422 Writer's Workshop: Fiction or Poetry	3
2. Restricted electives	9
Choose nine credits from the following:	
ENG 225 Intermediate English Composition, ENG 324 Principles of Technical Communication, ENG 326 Research Writing, ENG 417 Writing about Controversies, *ENG 422 Writer's Workshop: Fiction or Poetry, ENG 424 Technical Writing, ENG 503 Writing and Rhetorical Theory	
JRN 215 News Writing and Reporting, JRN 306 Feature Writing, JRN 423 Magazine Article Writing	
CTA 344 Continuity Writing for Radio-Television-Film, CTA 360 Dramatic Composition, CTA 361 Dramatic Writing	
(One of the following may be counted toward this minor as a restricted elective: LIN 201 An Introduction to Linguistics, LIN 402 Modern English Grammar, LIN 421 The History of the English Language, LIN 425 Introduction to Syntax)	
*Course may be repeated for additional credit if topics are different.	

COMPOSITION COURSES

ENG 120 Basic English Composition.	3 hrs
An introductory course on the composing process, with emphasis on writing short expository essays that follow the conventions for paragraphing, syntax, diction, and punctuation in standard American English. Required of students whose SAT verbal scores are below 400 or whose ACT English scores are below 17, as space permits. These students must take ENG 120 during their first semester at Eastern as a prerequisite for ENG 121. <i>ENG 120 does not apply on the basic studies requirements.</i>	
ENG 121 English Composition.	3 hrs
The fundamental skills of reading, reasoning, and writing with emphasis upon the reading and analysis of prose selections and upon basic writing matters, such as thesis, organization, support and development, paragraphing, sentence structure, word choice, punctuation, and documentation. Frequent papers and conferences.	
ENG 225 Intermediate English Composition.	3 hrs
A course that explores the principles and strategies of effective writing with emphasis on argument and persuasion. <i>Prereq: ENG 121 and sophomore standing.</i>	
ENG 227 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. <i>Prereq: ENG 121 and two courses in literature.</i>	
ENG 277/278/279 Special Topics in English.	1/2/3 hrs
An examination of topics in English not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied. <i>Prereq: ENG 121.</i>	
ENG 308 Teaching English in the Secondary Schools.	3 hrs
For secondary English education majors with focus on appropriate methods and materials for teaching language arts in grades 7-12. Special attention will be given to lesson planning, evaluation	

techniques, and classroom management. Does not count toward majors or minors.

Prereq: Taken the term before student teaching. Not open to students on academic probation. Must have at least a 2.75 GPA in major.

ENG 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: English 121 and junior standing.

ENG 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: ENG 121 and junior standing.

ENG 328 Writing: Style and Language. 3 hrs
An advanced writing course focusing on the relationships among purpose, audience, and style with emphasis on the social and political nature of language.

Prereq: JRN 215, ENG 225, ENG 324, or ENG 326.

ENG 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 advanced literature course (200 level or above), or department or instructor's permission.

ENG 387 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.

ENG 408 Writing for Writing Teachers. 3 hrs
A writing course for students preparing to teach English in secondary schools. Students develop their skills as writers and learn how to teach writing. Special focus on recent composition research, theory, and practices, and on strategies, materials, and evaluation techniques.

Prereq: Two writing courses beyond the 100 level.

ENG 417 Writing about Controversies. 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: ENG 121 and two writing courses at the 200-level or above, or department permission.

ENG 422 Writer's Workshop: Fiction or Poetry. 3 hrs
A seminar workshop for the student who wants more experience in imaginative writing. The class schedule will specify fiction or poetry for each particular workshop. This course may be repeated for additional credit if topic is different.

Prereq: ENG 335 and two literature courses at the 200 level or above, or department permission.

ENG 424 Technical Writing. 3 hrs
An advanced workshop that prepares students to communicate, particularly to write, on the job.

Prereq: ENG 324 or department permission.

ENG 427 Technical Editing. 3 hrs
Editing of technical material for publication. Principles of style, format, graphics layout, and publication management.

Prereq: ENG 424, or instructor permission.

ENG 450 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: LIT 207.

ENG 451 Writing about Controversy in Literature for the Young. 3 hrs
This course will deal with strategies for the collection, organization, and presentation of materials dealing with controversial issues in literature for young adults.
Prereq: ENG 121 and LIT 207, or department permission.

ENG 477/478/479 Special Topics in English. 1/2/3 hrs
An examination of topics in English not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.
Prereq: ENG 121 and one advanced writing course or department permission.

ENG 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: Senior standing. Admittance by application only.

ENG 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 intern supervisor; paid or non-paid. One hour credit for 10-15 hours per week; two hours for 16-25 hours; three hours for 26 and above.
Prereq: Junior or senior standing and recommendation of technical writing professor. ENG 324; cumulative 3.0 GPA.

ENG 497/498/499 Independent Study in English. 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 Department of English Language and Literature.
Prereq: Nine hours in the appropriate major or minor.

ENGLISH LANGUAGE AND LINGUISTICS COURSES

LIN 201 An Introduction to Linguistics. 3 hrs
An introduction to phonology, morphology, syntax, the lexicon, semantics, sociolinguistics, psycholinguistics, and other concerns.
Prereq: Sophomore standing.

LIN 205 English Words. 3 hrs
Principles of sound, form, and meaning relationships facilitate the student's mastery of word structure, spelling, use, and comprehension in a language science approach to the analysis of native English words and the foreign vocabulary which is frequently used in English speech and writing. Addresses linguistic, social, historical, and other factors in the development of English, fostering greater linguistic sophistication and appreciation for the richness of the English language.

LIN 310 African American Language. 3 hrs
A survey of the history of African American language from African origins to the present day. Details of the structure (i.e. sounds, words, sentence, and discourse patterns) of African American English and its functions in American culture, from everyday language use to its employment in literature and other verbal arts. Special attention is paid to issues resulting from contact between

different language varieties and the pervasiveness of linguistic diversity in the U.S. and around the world.
Prereq: LIN 201, LNG 223, or AAS 101.

LIN 322 Languages of the World. 3 hrs
A study of the relation of language to social behavior and modes of thought in unilingual and multilingual communities.

LIN 340 Language and Culture. 3 hrs
A survey of the variety of languages and language groups of the world. Topics covered include: origins of human language, language relationships, the ways language changes and why, unusual writing systems, and linguistic exotica.
Prereq: LIN 201 or ANT 135, and sophomore standing.

LIN 401 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.
Prereq: LIN 201 or LNG 223.

LIN 402 Modern English Grammar. 3 hrs
An introduction to the grammar of modern English; problems in the description and analysis of English grammar.
Prereq: Junior standing.

LIN 420 Introduction to Phonology. 3 hrs
An introduction to the basic principles of modern phonology, beginning with a review of phonetics.
Prereq: LIN 401.

LIN 421 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 matters of sound, word formation, and sentence structure.
Prereq: LIN 201 or LIN 401.

LIN 425 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.
Prereq: LIN 401.

LIN 426 Topics in Linguistics. 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 members and by student interest. This course may be taken more than once, providing the topics are different.
Prereq: LIN 401.

LIN 497/498/499 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 Department of English Language and Literature.
Prereq: Nine hours in the appropriate major or minor.

JOURNALISM AND PUBLIC RELATIONS COURSES

JRN 213 Introduction to the Print Media. 3 hrs
An exploration into the multiple effects of print media on American popular culture and vice versa. Understanding the business of news, features, editorials, comics, and other media formats. Tracking the development of contemporary media research. Learning to become critical consumers of print media. Student media research.

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. Courses offer practical instruction and working exercises in interviewing,

news story development, lead writing, and editing skills. Substantial use of computer lab.

Prereq: Sophomore standing.

JRN 277/278/279 Special Topics in Journalism. 1/2/3 hrs
An examination of topics in journalism not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Sophomore standing.

JRN 305 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 the efforts to change it, the rhetorical principles of argumentation and persuasion, and the aesthetic principles guiding criticism in the arts.

Prereq: JRN 215

JRN 306 Feature Writing. 3 hrs
Writing of feature and interpretive articles and editorials designed for newspapers or magazines. Emphasis on research, interviewing, and logical presentation of informative material. Writing assignments and analysis of writing in the mass media.

Prereq: JRN 215.

JRN 307 Copy Editing. 3 hrs
Practical application of professional techniques for editing copy for newspapers, magazines, and books, including basic headline writing, use of pictures, and understanding the laws of libel and copyright and the rights of privacy.

Prereq: JRN 215 and JRN 306.

JRN 311 Editing Procedures. 3 hrs
Presentation of the written word on the printed page relative to the use of photographs and other illustrations; copy fitting, printers' markings, visual concepts; typographical selection; page makeup; working with graphic artist and printer.

Prereq: JRN 215.

JRN 312 Principles of Public Relations. 3 hrs
Definition, historic aspects, evolution, and ethics of public relations; the practical use of public relations by corporations, not-for-profit organizations, businesses, institutions, and government; correlation of written, oral, and visual skills.

Prereq: JRN 215, CTA 121/124.

JRN 313 History of American Journalism. 3 hrs
A survey of the historical evolution of journalism in the United States, its involvement in the social, economic, and political development of the national life and its influences on the decision-making process through its effect on public officials.

Prereq: Sophomore standing.

JRN 314 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, memos, and proposals; implementing public relations campaigns.

Prereq: JRN 306 and JRN 312.

JRN 387 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 approved by a journalism professor.

JRN 408 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 312 and JRN 314.

JRN 423 Magazine Article Writing. 3 hrs
A writing course to develop skills in investigating and writing non-fiction articles longer and more complex than feature or background articles in daily newspapers. Emphasis on individual completion of articles of professional quality.

Prereq: ENG 328 or JRN 306 or department permission.

JRN 453 Advanced Reporting. 3 hrs
Writing of news stories dealing with such topics as courts, politics, government, finance, labor, education, etc. Emphasis on study and research to provide articles of depth.

Prereq: JRN 215.

JRN 454 Contemporary Problems in Journalism. 3 hrs
Emphasis on student investigation, reporting, and writing on selected problems such as free press vs. fair trial, media accessibility, and the people's right to know.

Prereq: Junior standing.

JRN 455 Journalism and the Law. 3 hrs
A senior professional course exploring issues of libel, privacy, free press-fair trial, and the First Amendment.

Prereq: JRN 454.

JRN 477/478/479 Special Topics in Journalism. 1/2/3 hrs
An examination of topics in journalism not covered in other departmental offerings. Students may elect this course more than once as long as different topics are studied.

Prereq: Junior standing and department permission.

JRN 487 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.

Prereq: Junior or senior standing; admittance by application to the Cooperative Education office and recommendation approved by a journalism professor.

JRN 488/489/490 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; paid or non-paid. One hour credit for 10 hours work per week; two hours for 11-17 hours; three hours for 18 and above.

Prereq: Junior or senior standing and recommendation of journalism professor.

JRN 497/498/499 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 Department of English Language and Literature.

Prereq: Nine hours in the appropriate major or minor.

LITERATURE COURSES

Area IV basic studies requirements may be fulfilled with the following courses: LIT 100, 101, 102, 103, 204, 260.

- LIT 100 The Reading of Literature.** 3 hrs
An introduction to the techniques of critical reading with equal emphasis on prose fiction, poetry, and drama. Development of a fundamental understanding and enjoyment of reading.
- LIT 101 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.
- LIT 102 The Reading of Literature: Poetry.** 3 hrs
Reading and critical analysis of poetry intended to deepen the student's understanding and enjoyment of poetry.
- LIT 103 The Reading of Literature: Drama.** 3 hrs
Reading and critical analysis of drama intended to deepen the student's understanding and enjoyment of drama.
- LIT/CLA 106 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, 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, page 30.
- LIT/HIS 107 Society in Crisis: 1848 and 1968.** 6 hrs
A comparison and contrast of the social crises that culminated in two revolutionary aftermaths (1848 in Europe and 1968 in the United States and Europe), focusing on alienation, women, the rise of nationalism and ethnic consciousness, and the revolutionary outlook and its ultimate frustration. Team taught by members of the History and English Departments. *These courses must be taken concurrently and satisfy one history requirement and one literature requirement.* Note: See Honors Humanities Courses, page 30.
- LIT 122 American Studies: Success and the Pursuit of Happiness in 19th Century America.** 3 hrs
An examination of the widespread 19th-century belief that worldly success produces happiness and an exploration of the proper relationship of knowledge and power, history and progress, wealth and happiness. Readings include such authors as Benjamin Franklin, H.D. Thoreau, William James, Mark Twain, and Horatio Alger. Team taught by members of the English and Philosophy Departments. *This course satisfies one philosophy or one literature requirement.* Note: See Honors Humanities Courses, page 30.
- LIT 124 The Age of Wagner.** 3 hrs
An exploration of the personal, intellectual, and artistic influences on Wagner's life and work and a consideration of artists influenced by Wagner. Team taught by members of the English and Philosophy Departments. *This course satisfies one philosophy or one literature requirement.* Note: See Honors Humanities Courses, page 30.
- LIT 126 The Age of Shakespeare.** 3 hrs
An introduction to basic areas of Renaissance thought as background to at least three of Shakespeare's plays, which are considered from theatrical as well as philosophical and literary points of view. Team taught by members of the English and Communication and Theatre Arts Departments. *This course satisfies one literature or one theatre arts requirement.* Note: See Honors Humanities Courses, page 30.
- LIT 128 Russia in the Age of Tolstoy and Dostoevsky.** 3 hrs
An introduction to the rise of the revolutionary movement in Russia in the half century preceding World War I due to developments in peasant, urban, and aristocratic life. Students examine selected works of literature and some art and music. Team taught by members of the English and History Departments. *This course satisfies one literature or one history requirement.* Note: See Honors Humanities Courses, page 30.
- LIT 150 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 Thoreau, Mark Twain, Henry Adams, Aldous Huxley, Lewis Mumford, and Garrett Hardin. *This course satisfies one philosophy or one literature requirement.* Note: See Honors Humanities Courses, page 30.
- LIT 152 From the Gay Nineties to the Crash.** 3 hrs
A series of biographical portraits providing an intensive look at profound cultural changes of the era 1890 to 1930, in both Europe and the United States. Team taught by members of the History and English Departments. *This course satisfies one history or one literature requirement.* Note: See Honors Humanities Courses, page 30.
- LIT 155 Narrative in Literature and Film.** 3 hrs
An introduction to cinematic concepts and terminology, focusing primarily on narrative techniques in literature and parallel devices in film. Readings include several prose forms and a text dealing with the theory of film. Team taught by members of the English and Philosophy Departments. *This course satisfies one literature or one philosophy requirement. Students may not earn credit in both this course and LIT 300.* Note: See Honors Humanities Courses, page 30.
- LIT 179 Special Topics.** 3 hrs
This special topics course will be used to teach some aspects of the humanities that would not regularly be explored. A new course may be taught on an experimental basis using this heading. Dependent on the course offered, the special topic may satisfy a basic studies requirement. Note: See Honors Humanities Courses, page 30.
- LIT 181 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. Team taught by a classicist and/or a member of the English Department. *This course satisfies one literature requirement.* Note: See Honors Humanities Courses, page 30.
- LIT 201 Introduction to Science Fiction.** 3 hrs
An introduction to science fiction as a medium for speculating on science and technology, politics, social systems, education, and the nature of being human. *Does not satisfy the basic studies literature requirement.*
Prereq: One literature course or department permission.
- LIT 204 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 twentieth century.
Prereq: One literature course or department permission.
- LIT 207 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 non-fiction 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.
Prereq: Sophomore standing.

- LIT 210 Introduction to Shakespeare.** 3 hrs
An introduction to at least five of Shakespeare's plays with emphasis upon the tragedies.
Prereq: One literature course or department permission.
- LIT 245 Introduction to Film.** 3 hrs
An introduction to the historical development of film as an art form with attention to cinematography, editing, scenarios, lighting, acting, and directing styles. Students cannot earn credit in both CTA 145 and LIT 245.
Prereq: One course in literature or department permission, CTA 121/124.
- LIT 251 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 upon English and American literature.
Prereq: One course in literature.
- LIT 260 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.
Prereq: One course in literature.
- LIT 277/278/279 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 as long as different topics are studied.
Prereq: One literature course or department permission.
- LIT 300 Narrative in Literature and Film.** 3 hrs
A study of the aesthetic parallels in narrative technique between certain prose forms (novel, novella, romance, satire) and film as a means of enhancing verbal and visual literacy. Not open to those with credit in LIT/PHI 155.
Prereq: Two courses in literature.
- LIT 305 Shakespeare: The Major Comedies and Histories.** 3 hrs
A study of at least eight of the principal comedies and histories.
Prereq: Two literature courses or department permission.
- LIT 328 The Rise of the American Novel to 1920.** 3 hrs
A critical reading of the American novel from C.B. Brown and J.F. Cooper through World War I. A study of the development of the novel in America from its earliest appearance to its critical maturity.
Prereq: Two literature courses or department permission.
- LIT 330 The Rise of the British Novel 1720-1832.** 3 hrs
The British novel from Defoe through Scott, including such figures as Richardson, Fielding, Sterne, Smollett, and Austen and such forms as the picaresque novel, the Gothic novel, the novel of sentiment, and the novel of manners.
Prereq: Two literature courses or department permission.
- LIT 331 The Development of the British Novel 1832-1914.** 3 hrs
A critical reading of Victorian and Edwardian fiction by such authors as Dickens, the Brontës, Thackeray, Trollope, Eliot, Meredith, Hardy, Moore, Wells, and Conrad.
Prereq: Two literature courses or department permission.
- LIT 332 The Modern American Novel 1920 to Present.** 3 hrs
A critical reading of significant American novels since World War I as represented by Hemingway, Fitzgerald, Faulkner, Bellow, Ellison, and others.
Prereq: Two literature courses or department permission.
- LIT 333 Modern British and European Novel 1914 to Present.** 3 hrs
A study of modern British and European novels significant to our own times by such writers as Joyce, Proust, Lawrence, Forster, Wolfe, Kafka, Camus, Golding, Fowles, Robbe-Grillet, Handke, Calvino, Grass.
Prereq: Two literature courses or department permission.
- LIT 340 The Rise of British Drama to 1642.** 3 hrs
A study of British drama from the mystery plays, morality plays, and interludes to the revenge tragedies of Kyd, Marlowe, and Webster and the comedies of Jonson and Massinger.
Prereq: Two literature courses or department permission.
- LIT 341 English Drama 1660-1779.** 3 hrs
A study of the significant plays from the restoration of Charles II to the closing years of the 18th century.
Prereq: Two literature courses or department permission.
- LIT 342 The Development of Modern Drama.** 3 hrs
A study of modern drama from Robertson and Ibsen to the theater of the absurd of Pinter and Beckett, including such figures as Pirandello, Chekhov, Shaw, O'Neill, Williams, and Miller.
Prereq: Two courses in literature or department permission.
- LIT 351 World Mythology.** 3 hrs
A study of the mythological traditions that have most significantly informed Western civilization. The myths are discussed as literature and as people's attempts to understand themselves, their society, and their physical environment.
Prereq: Two courses in literature.
- LIT 352 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 which appear in children's literature. *Applies toward minor in children's literature only*, but may be taken as a free elective.
Prereq: Two courses in literature.
- LIT 401 Modern British and American Poetry 1914 to Present.** 3 hrs
A study of the verse of such major modern British and American poets as Yeats, Auden, Eliot, Pound, Cummings, Stevens, Williams, Thomas, Ashbery, Plath.
Prereq: Three courses in literature or department permission.
- LIT 409 The Development of American Literature.** 3 hrs
A study of American literature from colonial times to 1890, including such writers as Bradstreet, Franklin, Hawthorne, Melville, Thoreau, Emerson, Whitman, Dickinson, Twain, and James.
Prereq: Three courses in literature or department permission.
- LIT 410 Modern American Literature.** 3 hrs
A study of American literature from 1890 to the present, including such writers as Crane, Frost, Cather, Eliot, O'Neill, Fitzgerald, Faulkner, Hemingway, Bellow, Baldwin, O'Connor, and Updike.
Prereq: Three courses in literature or department permission.
- LIT 411 Medieval Epic and Romance.** 3 hrs
A critical reading of medieval French, German, and English epics and romances (and their sources) in translation. The treatment will be both historical and comparative.
Prereq: Two courses in literature.
- LIT 412 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.
Prereq: Three courses in literature or department permission.

LIT 413 The Poetry of Chaucer. 3 hrs
An introduction to the major works of Chaucer: a close reading of representative poetry.

Prereq: Three courses in literature or department permission.

LIT 414 English Renaissance Prose and Poetry 1500-1660. 3 hrs
Major authors from the age of Shakespeare to the close of the Renaissance, including the humanists, lyric poets, Spenser, Bacon, Donne and the metaphysicals, and Milton.

Prereq: Three courses in literature or department permission.

LIT 415 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, Gray, Collins, and others.

Prereq: Three courses in literature or department permission.

LIT 416 Romantic Rebellion in Britain 1798-1832. 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, Keats.

Prereq: Three courses in literature or department permission.

LIT 417 Victorian and Edwardian Literature 1832-1914. 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.

Prereq: Three courses in literature or department permission.

LIT 440 Literary Types. 3 hrs
A study of the characteristics of a particular literary genre, independent of chronology, theme, or author.

Prereq: Three courses in literature or department permission.

LIT 443 Women in Literature. 3 hrs
A study of women and their experiences as described in literature.

Prereq: Two courses in literature.

LIT 450 Major Authors. 3 hrs
An intensive study of a major literary figure or a group of related authors. The particular author to be taught in a given semester will be announced in the class schedule bulletin.

Prereq: Three courses in literature or department permission.

LIT 460 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.

Prereq: Three courses in literature or department permission.

LIT 477/478/479 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 as long as different topics are studied.

Prereq: Three courses in literature or department permission.

LIT 497/498/499 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 teacher and student, subject to approval by the Curriculum Committee. Restricted to students taking majors or minors in the Department of English Language and Literature.

Prereq: Nine hours in the appropriate major or minor.

FOREIGN LANGUAGES AND BILINGUAL STUDIES

Steven D. Kirby
Department Head
219 Alexander
487-0130

Professors: JoAnn Aebersold, Ronald C. Cere, William J. Cline, E. Catherine Day, J. Sanford Dugan, James P. Holoka, John R. Hubbard, Steven D. Kirby, Benjamin W. Palmer, John Pisoni, Sharon Robertson

Associate Professors: Lizabeth England, AnaMaria McCoy, Anne G. Nerenz, Reynaldo Ruiz

Assistant Professors: Pedro Gómez, Elisabeth Morgan, Geneviève Peden, Motoko Tabuse, Thomas Vosteen

Director, bilingual bicultural teacher education program: Phyllis Clemens-Noda

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 group minor in bilingual-bicultural teacher 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 group major in language, journalism, telecommunications, and film.

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.

Degrees:

Bachelor of Arts and Bachelor of Science

Programs of Study

Majors:

Language and world business
French for business
French for secondary education
French language and literature
French language and literature for elementary education
German for business
German for secondary education
German language and literature
German language and literature for elementary education
Japanese language and culture teaching for elementary education
Japanese language and culture teaching for K-12 education
Spanish for business
Spanish for elementary education
Spanish for secondary education
Language and international trade

Minors:

Bilingual bicultural teacher education (Spanish-English) for elementary education
Bilingual bicultural teacher education (Spanish-English) for secondary, K-12, and special education-secondary
English as a second language for non-native speakers of English
French language and literature
French language
French language for secondary, K-12, and special education-secondary
French literature
French for business
German language and literature

German language
 German language for secondary, K-12, and special education-secondary
 German literature
 German for business
 Japanese Language
 Spanish language
 Spanish language for secondary, K-12, and special education-secondary
 Spanish literature
 Spanish culture
 Spanish for business
 Teaching English to speakers of other languages

Concentration:

English as a second language for non-native speakers of English

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 before. Further details on testing are available in the department office. Students should consult advising coordinators in interpreting test results and creating a schedule.

Any course for which a student registers prior to receiving placement test results must be considered provisional. The Foreign Language Department will assist students to change their registration to the appropriate course, when necessary, without incurring financial penalties.

Listed below are rough 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.).

Department Residency Requirements:

1. "Residency," 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 (non LIT):

Department residency requirements are that majors in a foreign language must complete at EMU 12 credit hours consisting of the appropriate courses on the 300 or 400 level for the major chosen. Minors in the foreign language must complete either a) 343 and 344, or b) six (6) hours on the 400 level for which the student has the prerequisites.

3. Language and international trade major:

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 rated in the last semester prior to graduation in an interview conducted by an oral proficiency tester certified by ETS-ACTFL.

Graduate study leads to the Master of Arts degree in Spanish (bilingual bicultural education), in language and international trade, 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; up to 20 hours of ESL credits may be used as elective credits required for graduation.

Three levels of ESL instruction are offered: intermediate, advanced, and academic support, in both fall and winter terms. Only advanced and academic support levels are offered in the combined spring-summer term.

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 admitted with an official (not institutional) score of 80 or above on the Michigan English Language Assessment Battery (MELAB) or of 500 or above on the Test of English as a Foreign Language (TOEFL) will not be required to take any ESL courses. Students admitted with scores of less than 80 or 500 are required to take the departmental placement test before registering. Depending upon test results, students will be placed in either part-time or full-time English (two, three, four, or five courses of ESL) during their first semester. Part-time English students will be allowed to register for other University classes. Students placing in full-time English may not take any other University courses until a later semester. Some students may require two consecutive semesters of full-time English before they can register in other courses.

Once placed in ESL courses, students must complete each course with a grade of "C" or better in order to move on to the next higher level the following semester. Students must immediately repeat all ESL courses in which they receive a "C-" or below. Students starting below the 400 level must continue to enroll in ESL courses until two 400-level courses are taken. When students have successfully completed ESL 412 and 414 or 416, their admission status is changed from conditional to regular. See page 9 under Admission Policies for information regarding conditional admission status.

As of Fall 1990, ESL 412 Academic ESL Writing (for international students) is considered the equivalent of ENG 121 English Composition. ESL 412 will therefore fulfill the Basic Studies requirement for English.

Failure to enroll in the required ESL courses during the first semester and any required subsequent semesters will result in the cancellation of University enrollment and a possible loss of tuition for that semester.

Regular University academic probation and dismissal policies apply to students enrolled in ESL.

Advising Coordinators:

Bilingual bicultural teacher education (Spanish): Pedro Gómez, Ana Maria McCoy
 English as a second language: E. Catherine Day
 French: Benjamin W. Palmer
 German: Sharon Robertson
 Japanese language and culture teaching: Motoko Tabuse
 TESOL: Jo Ann Aebersold
 Language and international trade: John R. Hubbard
 Spanish: Pedro Gómez
 Language and world business: John R. Hubbard

**LANGUAGE AND WORLD BUSINESS
(JOINT BBA/BA DEGREE)**

The joint Bachelor of Business Administration—Bachelor of Arts degree in language and world business is a double degree for undergraduates planning to enter a career in world business or international government and public administration. The major objective of the program is to prepare students for international careers with business and language skills, along with the knowl-

edge needed to function effectively in the increasingly competitive world economy. The LWB joint degree provides students with both practical, on-site work experience as well as a thorough academic background in international affairs and world enterprise. (See page 179 for details.)

GROUP MAJOR IN LANGUAGE AND INTERNATIONAL TRADE

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 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 have met the major and minor requirements for graduation. No outside minor is needed.

Qualified students in French, German, Japanese, and Spanish have the option of participating in a cooperative work exchange in an area of the world where French, German, Japanese, or Spanish is spoken. Students may take examinations leading to foreign certification in business French, German, or Spanish.

	Sem hours
Group major in language and international trade	60
1. Required courses	57
<i>a. Business and economics courses</i>	<i>30</i>
Business minor	21-24
Students must complete requirements for a minor in an operational area of business of their choosing. These areas include 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 adviser.	
MKT 460 International Marketing	3
ECO 370 Comparative Economic Systems or ECO 480 International Economics	3
<i>b. Language and area studies courses</i>	<i>27</i>
• Language courses	18
Students must choose one language in which to specialize—we currently offer French, German, Japanese, and Spanish—and must complete 18 hours in that chosen language. This 18 hour minimum must include:	
FRN/GER/JPN/SPN 361 French/German/Japanese/Spanish for International Trade; FRN/GER/JPN/SPN 446, 447 Business French/German/Japanese/Spanish I and II	
One additional language course at the 300 or 400 level and one additional language course at the 400 level.	
Students with prior language study or knowledge will be placed at an appropriate level in consultation with an advising coordinator.	
• Geography/history courses	6
GEO/HIS 316 History and Geography of Modern Europe, GEO/HIS 317 History and Geography of Spanish America, or GEO/HIS 326 History and Geography of Modern Asia	
These credit hours may be used as electives in history and geography.	
• Political science courses	3
Choose one course from the following:	
PLS 211 Introduction to Comparative Government, PLS 212 Introduction to International Politics, PLS 341 International Law, PLS 342 International Organizations, PLS 354 Government and Politics of Canada, PLS 367 Contemporary Political Systems of Latin America, PLS 412 Comparative Legal Systems	

2. Field experience	3
FLA 489 Internship in International Trade or FLA 387/487 Cooperative Education in Language and International Trade	

GROUP MAJOR IN LANGUAGE, JOURNALISM, TELECOMMUNICATIONS, AND FILM

	Sem hours
Group major in language, journalism, telecommunications, and film	60
<i>Language component</i>	<i>20</i>
Choose one of the languages (French, German, or Spanish) and complete the following:	
1. Required courses	12
FRN/GER/SPN 343 Composition	3
FRN/GER/SPN 344 Conversation	3
FRN/GER/SPN 443 Advanced Grammar and Composition	3
FRN/GER/SPN 444 Advanced Conversation	3
Students with advanced language proficiency will select appropriate courses in consultation with the advising coordinator	
2. Restricted electives	8
Choose eight credits in the language studied at any level	
<i>Journalism component</i>	<i>18-21</i>
1. Required courses	12
JRN 215 News Writing and Reporting	3
JRN 306 Feature Writing	3
JRN 307 Copy Editing	3
JRN 453 Advanced Reporting	3
2. Restricted electives	6-9
Choose six to nine credits from the following:	
JRN 311 Editing Procedures, JRN 313 History of American Journalism, JRN 314 Writing for Public Relations, JRN 423 Magazine Article Writing, JRN 454 Contemporary Problems in Journalism	
ENG 417 Writing about Controversies, ENG 422 Writer's Workshop: Fiction or Poetry, ENG 424 Technical Writing	
<i>Telecommunications and film component</i>	<i>20-21</i>
1. Required courses	15
CTA 130 Introduction to Telecommunications and Film ...	3
CTA 334 Radio-Television News	3
CTA 336 Studies in Telecommunications	3
CTA 374 Intercultural Communication	3
CTA 479 Special Topics: Seminar in International Telecommunications Issues	3
2. Restricted electives	5-6
Choose five to six credits from the following:	
CTA 145 Introduction to Film Appreciation, CTA 165 Television Laboratory, CTA 169 Radio Station WQBR, CTA 227 Interpersonal Communication, CTA 236 History and Criticism of Radio and Television, CTA 241 Radio-Television-Film Announcing, CTA 331 Fundamentals of Radio Production and Direction, CTA 332 Fundamentals of Television Production and Direction, CTA 335 Studies in Film, CTA 344 Continuity Writing for Radio-Television-Film, CTA 354 Organizational Communication, CTA 359 Small Group Communication	

FRENCH MAJORS

FRENCH

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies 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 certification test covering this field is #23, "French." See page 304.

FRENCH
ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in French, certification code "FA." The certification test covering this field is #23, "French." See page 305.

FRENCH

It is recommended that students specializing in French or planning to continue with graduate work carry their undergraduate study beyond the minimum requirements listed below. Many graduate schools require additional course work in literature.

	Sem hours
Major in French	30
1. Required courses	18
FRN 341-342 Survey of French Literature	6
FRN 343 French Composition	3
FRN 344 French Conversation	3
FRN 443 Advanced French Grammar and Composition ...	3
FRN 444 Advanced French Conversation	3
2. Restricted electives	12
Choose six credits at the 400 level; choose an additional six credits in French at any level.	

FRENCH FOR BUSINESS

Students majoring or minoring in business French are eligible to take examinations leading to the "Diplôme Supérieur de Français des Affaires" or the "Certificat Pratique de Français Commercial et Economique" granted by the Chamber of Commerce and Industry of Paris and recognized by the French National Ministry of Education. These tests are administered by Eastern Michigan University.

	Sem hours
Major in business French	30
1. Required courses	24
FRN 341-342 Survey of French Literature	6
FRN 343 French Composition	3
FRN 344 French Conversation	3
FRN 443 Advanced French Grammar and Composition ...	3
FRN 444 Advanced French Conversation	3
FRN 446-447 Business French I-II	6
2. Restricted electives	6
Choose six credits in French at any level	

GERMAN MAJORS

GERMAN
SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in German, certification code "FB," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #24, "German." See page 305.

GERMAN LANGUAGE AND LITERATURE
ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in German, certification code "FB." The certification test covering this field is #24, "German." See page 306.

GERMAN LANGUAGE AND LITERATURE

	Sem hours
Major in German language and literature	30
1. Required courses	18
GER 341-342 Survey of German Literature	6
GER 343 German Composition	3
GER 344 German Conversation	3
GER 443 German Syntax and Advanced Composition	3
GER 444 Advanced German Conversation	3
2. Restricted electives	12
Choose six credits in German at the 400 level; choose six credits in German at any level.	

GERMAN FOR BUSINESS

Students in business German will be eligible to take examinations recognized by the German-American Chamber of Commerce, the Carl Duisberg Society and the Goethe Institute. All examinations are administered by EMU.

	Sem hours
Major in business German	30
1. Required courses	24
GER 341-342 Survey of German Literature	6
GER 361 German for International Trade	3
GER 443 German Syntax and Advanced Composition	3
GER 446-447 Business German I-II	6
Additional German courses at the 400 level	6
2. Restricted electives	6
Choose six credits in German at any level.	

JAPANESE LANGUAGE AND CULTURE
TEACHING

K-12 TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in Japanese, certification code "FL." The certification test covering this field has not yet been developed. See page 306.

SPANISH MAJORS

SPANISH
SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in Spanish, certification code "FF," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #28, "Spanish." See page 307.

SPANISH
ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in Spanish, certification code "FF." The certification test covering this field is #28, "Spanish." See page 308.

SPANISH

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.

	Sem hours
Major in Spanish	30
1. Required courses	12
SPN 343 Spanish Grammar and Composition	3
SPN 344 Spanish Conversation and Composition	3
SPN 443 Advanced Spanish Grammar and Composition	3
SPN 444 Advanced Spanish Conversation and Composition	3
2. Restricted electives	18
Choose 12 credits in Spanish at the 300 level or above; choose six credits at any level in consultation with the advising coordinator.	

SPANISH FOR BUSINESS

Students with concentrations in business Spanish may take examinations leading to the "Diploma de Español Comercial" and the "Certificado de Español Comercial Básico" granted by the Chamber of Commerce of Madrid in cooperation with the Official School of Languages of Madrid.

Language proficiency in both Spanish and English is required; proficiency will be determined by examination.

	Sem hours
Major in business Spanish	30
1. Required courses	24
SPN 301 The Cultures of Spain	3
SPN 302 The Cultures of Spanish America	3
SPN 342 Survey of Spanish Literature	3
SPN 352 Survey of Spanish American Literature	3
SPN 361 Spanish for International Trade	3
SPN 443 Advanced Spanish Grammar and Composition or SPN 456 Scientific and Technical Spanish I	3
SPN 446-447 Business Spanish	6
2. Restricted electives	6
Choose six credits in Spanish at any level in consultation with the advising coordinator	

MINORS OFFERED IN THE FOREIGN LANGUAGES AND BILINGUAL STUDIES DEPARTMENT

GROUP MINOR IN TEACHING ENGLISH AS A SECOND LANGUAGE

	Sem hours
Group minor in teaching English as a second language	24
1. Required courses	15
LNG 223 Introduction to Language	3
CTA 374 Intercultural Communication	3
TSL 410 TESOL Methods	3
TSL 420 Materials and Tests for TESOL	3
LNG 425 Second Language Acquisition	3
2. Restricted electives	9
Choose at least one course from each group:	
<i>Group 1</i>	
LIN 401 Introduction to Linguistic Science	3
LIN 402 Modern English Grammar	3
<i>Group 2</i>	
CTA 226 Non-Verbal Communication	3
ENG 328 Writing: Style and Language	3
SLI 337 Language Acquisition	3
<i>Group 3</i>	
SOC 214 Racial and Cultural Minorities	3
ANT 340 Language and Culture	3
<i>Prereq. or Coreq.: One year of university foreign lan- guage study.</i>	

ENGLISH AS A FOREIGN LANGUAGE FOR NON-NATIVE SPEAKERS OF ENGLISH

This minor is limited to international students who are non-native 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 at the 300 level on the departmental placement test will complete all of the following courses. Students who have placed at the 400 level will begin this minor by taking ESL 412 Academic ESL Writing and ESL 414 Academic ESL Reading and/or ESL 416 Academic ESL Speaking and Listening. These students must choose 6 credit hours from the restricted electives or other courses with the permission of the adviser.

	Sem hours
Minor in English as a foreign language for non-native speakers of English	23-24
1. Required courses	21
ESL 310, 312 Advanced ESL Grammar and Writing	3
ESL 314, 316 Advanced ESL Reading, Speaking, and Listening	3
ESL 412 Academic ESL Writing	3
ESL 414 Academic ESL Reading	3
ESL 416 Academic ESL Speaking and Listening	3
ENG 225 Intermediate English Composition or other approved English writing course (written permission required)	3
ENG 326 Research Writing	3
2. Restricted elective	3
Choose one course from the following:	
LIN 201 An Introduction to Linguistics, LIN 402 Modern English Grammar, or other English language or lin- guistics course (written permission required)	
CTA 224 Public Speaking, CTA 350 Persuasion, CTA 356 Argumentation and Debate, CTA 359 Small Group Communication, or other speech communica- tion course (written permission required)	
Other advanced (speech) courses not including theatre arts courses, with written permission from the ESL coordi- nator	

FRENCH MINORS

FRENCH LANGUAGE 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 French, certification code "FA." The certification test covering this field is #23, "French." See page 309.

LANGUAGE AND LITERATURE

	Sem hours
Minor in French language and literature	20
1. Required courses	12
FRN 341-342 Survey of French Literature	6
FRN 343 French Composition	3
FRN 344 French Conversation	3
2. Restricted electives	8
Choose eight credits in French at any level	

LANGUAGE

	Sem hours
Minor in French language	20
1. Required courses	12
FRN 343 French Composition	3
FRN 344 French Conversation	3
FRN 443 Advanced French Grammar and Composition ...	3
FRN 444 Advanced French Conversation	3
2. Restricted electives	8
Choose eight credits in French at any level	

LITERATURE

	Sem hours
Minor in French literature	20
1. Required courses	12
FRN 341-342 Survey of French Literature	6
Courses in French literature at the 400 level	6
2. Restricted electives	8
Choose eight credits in French at any level	

BUSINESS FRENCH

Students minoring in business French are eligible to take the examinations listed under the major in business French.

	Sem hours
Minor in business French	20
1. Required courses	18
FRN 343 French Composition	3
FRN 344 French Conversation	3
FRN 443 Advanced French Grammar and Composition ...	3
FRN 444 Advanced French Conversation	3
FRN 446-447 Business French I-II	6
2. Restricted electives	2
Choose two credits in French at any level	

GERMAN MINORS

GERMAN LANGUAGE

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 German, certification code "FB." The certification test covering this field is #24, "German." See page 309.

LANGUAGE AND LITERATURE

	Sem hours
Minor in German language and literature	20
1. Required courses	12
GER 341-342 Survey of German Literature	6
GER 343 German Composition	3
GER 344 German Conversation	3
2. Restricted electives	8
Choose eight credits in German at any level	

LANGUAGE

	Sem hours
Minor in German language	20
1. Required courses	12
GER 343 German Composition	3
GER 344 German Conversation	3
GER 443 German Syntax and Advanced Composition	3
GER 444 Advanced German Conversation	3
2. Restricted electives	8
Choose eight credits in German at any level	

LITERATURE

	Sem hours
Minor in German literature	20
1. Required courses	12
GER 341-342 Survey of German Literature	6
Courses in German literature at the 400 level	6
2. Restricted electives	8
Choose eight credits in German at any level	

BUSINESS GERMAN

Examinations listed under the major in business German also may be taken by students minoring in this subject.

	Sem hours
Minor in business German	20
1. Required courses	12
GER 341/342 Survey of German Literature	3
GER 361 German for International Trade	3
GER 443 German Syntax and Advanced Composition	3
GER 446/447 Business German	3
2. Restricted electives	8
Choose eight credits in German at any level	

JAPANESE LANGUAGE MINOR

	Sem hours
Minor in Japanese language	20
1. Required courses	12
JPN 343-344 Japanese Conversation and Composition ...	6
JPN 361 Japanese for International Trade	3
JPN 444 Advanced Japanese Conversation	3
2. Restricted electives	8
Choose eight credits in Japanese at any level in consulta- tion with the advising coordinator	

SPANISH MINORS

BILINGUAL-BICULTURAL EDUCATION

SPANISH-ENGLISH

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 bilingual Spanish, certification code "YF." The certification test covering this field is #70, "Bilingual Spanish." See page 308.

BILINGUAL-BICULTURAL EDUCATION

SPANISH-ENGLISH

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 bilingual Spanish, certification code "YF." The certification test covering this field is #70, "Bilingual Spanish." See page 308.

SPANISH LANGUAGE

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 Spanish, certification code "FF." The certification test covering this field is #28, "Spanish." See page 309.

LANGUAGE

	Sem hours
Minor in Spanish language	20
1. Required courses	12
SPN 343-344 Spanish Conversation and Composition	6
Choose either of the following options	6
a. SPN 443 Advanced Spanish Grammar and Composition and SPN 444 Advanced Spanish Conversation and Composition, or	
b. Additional courses in Spanish at the 300 level or above	
2. Restricted electives	8
Choose eight credits in Spanish at any level in consultation with the advising coordinator	

LITERATURE

	Sem hours
Minor in Spanish literature	20
1. Required courses	12
SPN 341 Survey of Spanish Literature, SPN 342 Survey of Spanish Literature, SPN 351 Survey of Spanish American Literature, SPN 352 Survey of Spanish American Literature	6
Choose six credits in Spanish at the 300 level or above (students on teaching curricula should include SPN 343 Spanish Grammar and Composition, SPN 344 Spanish Conversation and Composition)	6
2. Restricted electives	8
Choose eight credits in Spanish at any level in consultation with the advising coordinator	

SPANISH CULTURE

	Sem hours
Minor in Spanish culture	20
1. Required courses	12
SPN 301 The Cultures of Spain	3
SPN 302 The Cultures of Spanish America	3
Choose six credits in Spanish at the 300 level or above (students on teaching curricula should include SPN 343 Spanish Grammar and Composition, SPN 344 Spanish Conversation and Composition)	6
2. Restricted electives	8
Choose eight credits in Spanish at any level in consultation with the advising coordinator	

BUSINESS SPANISH

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.

	Sem hours
Minor in business Spanish	20
1. Required courses	12
SPN 301 The Cultures of Spain or SPN 302 The Cultures of Spanish America	3
SPN 342 Survey of Spanish Literature or SPN 352 Survey of Spanish American Literature	3
SPN 361 Spanish for International Trade	3
SPN 446 Business Spanish	3
2. Restricted electives	8
Choose eight credits in Spanish at any level in consultation with the advising coordinator.	

FRENCH COURSES

FRN 121 Beginning French.	5 hrs
Introductory course including practice in listening, speaking, reading, and writing in French. Sessions in the language laboratory are part of regular assignments. Satisfies basic studies foreign language composition requirement, Area I.	
FRN 122 Beginning French.	5 hrs
Introductory course including practice in listening, speaking, reading, and writing in French. Sessions in the language laboratory are part of regular assignments. Satisfies basic studies foreign language composition requirement, Area I. <i>Prereq: FRN 121 or equivalent. Placement exam required.</i>	
FRN 221 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 FRN 233. Satisfies basic studies intermediate or advanced foreign language literature requirement, Area IV. <i>Prereq: FRN 122 or equivalent. Placement exam required.</i>	
FRN 222 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 FRN 234. Satisfies basic studies intermediate or advanced foreign language literature requirement, Area IV. <i>Prereq: FRN 221 or equivalent. Placement exam required.</i>	
FRN 233 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 FRN 221. Does not satisfy basic studies literature requirement. Satisfies basic studies foreign language composition requirement, Area I. <i>Prereq: FRN 122 or equivalent. Placement exam required.</i>	
FRN 234 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 FRN 222. Does not satisfy basic studies literature requirement. Satisfies basic studies foreign language composition requirement, Area I. <i>Prereq: FRN 233 or equivalent. Placement exam required.</i>	
FRN 277/278/279 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 as long as different topics are studied. <i>Prereq: Department permission.</i>	
FRN 341/342 Survey of French Literature.	3 hrs each
This survey course covers major authors and literary movements from the beginning of French literature to the 19th century. In French. Satisfies basic studies intermediate or advanced foreign language literature requirement, Area IV. <i>Prereq: FRN 222 or department permission.</i>	
FRN 343 French Composition.	3 hrs
Review and drill of intermediate and advanced linguistic patterns in French. Written compositions. <i>Prereq: FRN 234 or department permission.</i>	
FRN 344 French Conversation.	3 hrs
Additional classwork in conversation: improving pronunciation and acquiring a larger active vocabulary for daily life. <i>Prereq: FRN 234 or department permission.</i>	

FRN 361 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.
Prereq: FRN 343 or department permission.

FRN 377/378/379 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 as long as different topics are studied.
Prereq: Department permission.

FRN 388 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 supervisors. Credit/no credit.
Prereq: Department permission.

FRN 431 Studies in French Theatre. 3 hrs
A study of selected French drama. Specific topic (themes, authors, genres, periods) will vary depending on the instructor's field of specialization and student interest. The course may be repeated for credit with department permission. In French.
Prereq: FRN 341, 342 or department permission.

FRN 432 Studies in French Poetry. 3 hrs
A study of selected French poetry. Specific topic (themes, authors, genres, periods) will vary depending on the instructor's field of specialization and student interest. The course may be repeated for credit with department permission. In French.
Prereq: FRN 341, 342 or department permission.

FRN 433 Studies in French Prose. 3 hrs
A study of selected French prose. Specific topic (themes, authors, genres, periods) will vary depending on the instructor's field of specialization and student interest. The course may be repeated for credit with department permission.
Prereq: FRN 341, 342 or department permission.

FRN 443 Advanced French Grammar and Composition. 3 hrs
Review and practice of advanced syntactical patterns. Practice in composition. Taught in French.
Prereq: FRN 343.

FRN 444 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.
Prereq: FRN 343 and FRN 344, or department permission.

FRN 446 Business French I. 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.
Prereq: FRN 361 or department permission.

FRN 447 Business French II. 3 hrs
Further study of business practices, business law, and the French economy. Emphasis on business correspondence and translation and on French ties with the European economic community, the U.S.A., the East, developing countries, and francophone countries. Prepares student for language proficiency examinations (CCIP diplomas).
Prereq: FRN 446 or department permission.

FRN 451/452 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.
Prereq: FRN 341, 342 or department permission.

FRN 456 Scientific and Technical French. 3 hrs
In-depth study of French scientific and technical vocabulary and terminology needed for Franco-American business interaction in three scientific and technical fields. Topics covered may include food industry, automobile, mass transportation, and energy. In French.
Prereq: Any two 300-level French courses or department permission.

FRN 457 Scientific and Technical French. 3 hrs
Study of French scientific and technical vocabulary and terminology in three scientific and technical fields not covered in FRN 456. Topics may include electronics, computers, glass, or robotics. In French.
Prereq: Any two 300-level French courses or department permission.

FRN 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 to communicate successfully with people in those cultures. In French.
Prereq: FRN 343 and FRN 344.

FRN 477/478/479 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 as long as different topics are studied.
Prereq: Department permission.

FRN 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. Credit/no credit.
Prereq: Department permission.

FRN 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 100-200 levels. *May be repeated for credit.*

FRN 497/498/499 Independent Study. 1/2/3 hrs
Advanced study on an individual research basis in areas not covered in formal course work.
Prereq: Department permission.

GERMAN COURSES

GER 121 Beginning German. 5 hrs
Instruction includes pronunciation, aural-oral pattern practice, the fundamentals of grammar, written exercise, reading. Laboratory attendance is required. Satisfies Area I 3.c of basic studies requirements.

GER 122 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 non-verbal symbols. The emphasis is on communicative competence (both spoken and written) through the 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 Area I 3.c of the basic studies requirements.
Prereq: GER 121 or equivalent. Placement examination required.

GER 221 Intermediate German Reading. 3 hrs
This course consists of readings in German literature and civilization. Students who plan to continue in German should take GER 233, 234 concurrently with GER 221, 222. Satisfies Area IV of basic studies requirements.
Prereq: GER 122 or equivalent. Placement examination required.

- GER 222 Intermediate German Reading.** 3 hrs
This course consists of readings in German literature and civilization. Students who plan to continue in German should take GER 233, 234 concurrently with GER 221, 222. Satisfies Area IV of basic studies requirements.
Prereq: GER 122 or equivalent. Placement examination required.
- GER 233 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.
Prereq: GER 122 or equivalent.
- GER 234 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.
Prereq: GER 233 or equivalent.
- GER 277/278/279 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 as long as different topics are studied.
Prereq: Department permission.
- GER 341 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. It covers an introduction to literature analysis and major writers and trends in modern German poetry and short stories, and is a prerequisite for all later courses in literature. Students must have sufficient comprehension to follow lectures in German.
Prereq: GER 222 or department permission.
- GER 342 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 GER 341 and encourages students to apply principles of analysis to a chronological selection of literary works from the beginning of German literature to 1940. It is a prerequisite for all later courses in literature. Students must have sufficient comprehension to follow lectures in German.
Prereq: GER 222 and GER 341, or department permission.
- GER 343 German Composition.** 3 hrs
Writing for a variety of purposes and a systematic grammar review. Frequent written assignments. Taught in German.
Prereq: GER 234 or department permission.
- GER 344 German Conversation.** 3 hrs
Builds on the foundation in speaking skills acquired in GER 233, 234. Emphasizes vocabulary and idiom building and improvement in basic sentence structure. Readings, slides, tapes, films, and other aids stimulate discussion. Meets three times per week.
Prereq: GER 234 or department permission.
- GER 361 German for International Trade.** 3 hrs
Develops working knowledge of commercial material including economics and business in multinational setting. Cross-cultural references provide opportunity for comparative and contrastive analysis of American and German cultural patterns in a business setting.
Prereq: GER 343 or department permission.
- GER 377/378/379 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 as long as different topics are studied.
Prereq: Department permission.
- GER 388 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. Credit/no credit.
Prereq: Department permission.
- GER 425 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 German.
Prereq: GER 341, 342 or department permission.
- GER 426 German Literature from 1750-1850.** 3 hrs
The literature of Germany from the pre-classical period through Romanticism is discussed in class meetings and treated in student essays and reports. Perspectives of the other arts and of political and social developments enable the student to appreciate the literature in the context of European civilization. Taught in German.
Prereq: GER 341, 342 or department permission.
- GER 427 German Literature from 1850-1945.** 3 hrs
Selections from the literature of Poetic Realism, Biedermeier, Naturalism, Neo-Romanticism, and Expressionism, viewed against the background of political and cultural history. Classroom discussion and student reports.
Prereq: GER 341, 342 or department permission.
- GER 428 German Literature from 1945 to the Present.** 3 hrs
Those works that have shaped and are shaping current German literary and cultural life. Classroom discussion, papers, and reports. In German.
Prereq: GER 341, 342 or department permission.
- GER 443 German Syntax and Advanced Composition.** 3 hrs
Builds on the foundation in written expression acquired in GER 343. Intensive vocabulary and idiom 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.
Prereq: GER 343 and GER 344, or department permission.
- GER 444 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.
Prereq: GER 343 and GER 344, or department permission.
- GER 446 Business German I.** 3 hrs
The idiom and terminology of the German economy and economic geography. Emphasis on business communication in German.
Prereq: Three years of college German or the equivalent, or department permission.
- GER 447 Business German II.** 3 hrs
The idiom and terminology of the German economy and economic geography. Emphasis on business communication in German.
Prereq: GER 446 Business German I or department permission.
- GER 451/452 Readings in German.** 1/2 hrs
Special projects in directed reading for majors and minors who have completed the available offerings in German or who, because of most unusual circumstances, are granted department approval to substitute this for the regular courses.
Prereq: Department permission.
- GER 456 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 reading

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. *Prereq: GER 343 or department permission.*

GER 457 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 reading 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 changed student needs and changes in technology. *Prereq: GER 456 or department permission.*

GER 466 German for International Affairs. 3 hrs
The study and functional use of German terminology for international affairs with emphasis on improving cross-cultural communication skills. The principles of German government (with references to Austria and Switzerland) and the implications for Germany's international relations and trade with the United States. In German. *Prereq: GER 343 and GER 344.*

GER 477/478/479 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 as long as different topics are studied. *Prereq: Department permission.*

GER 488/489 Internship. 2/3 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. *Credit/no credit.* *Prereq: Department permission.*

GER 490 Intensive German in Europe. 3 hrs
An intensive summer course offered in Europe. Instruction at many different levels available. May be counted for equivalent hours on 100-400 levels. *May be repeated for credit.*

GER 497/498/499 Independent Study. 1/2/3 hrs
Advanced study on an individual research basis in areas not covered in formal course work. *Prereq: Department permission.*

JAPANESE COURSES

JPN 121 Beginning Japanese. 5 hrs
Practice in elementary conversation with special attention to reading and writing the two Japanese syllabaries and basic ideographs. Laboratory attendance required. Satisfies Area I 3.c of the basic studies requirements.

JPN 122 Beginning Japanese. 5 hrs
Instruction includes practice in elementary conversation with special attention to reading and writing the two Japanese syllabaries and basic ideographs. Laboratory attendance required. Satisfies Area I 3.c of the basic studies requirements. *Prereq: JPN 121 or equivalent.*

JPN 211 Intermediate Japanese. 5 hrs
Practice in intermediate Japanese conversation, with heavy emphasis on reading and writing common ideographs in non-technical text. Laboratory attendance required. Satisfies Area I 3.c of the basic studies requirements. *Prereq: JPN 122 or equivalent.*

JPN 212 Intermediate Japanese. 5 hrs
Instruction includes practice in intermediate Japanese conversation, with heavy emphasis on reading and writing common ideographs in non-technical text. Laboratory attendance required. Satisfies Area I 3.c of the basic studies requirements. *Prereq: JPN 211 or equivalent.*

JPN 344 Japanese Conversation. 3 hrs
Emphasizes acquisition of an active vocabulary for daily life and greater oral facility. Intensive study of casual or familiar levels of speech as well as polite forms and honorifics. About 80 percent in Japanese. *Prereq: JPN 212 or department permission.*

JPN 345 Japanese Composition. 3 hrs
Writing for a variety of purposes and a review of kanji (ideographs) and grammar constitute the core of the course. Frequent written assignments. *Prereq: JPN 344 or department permission.*

JPN 361 Japanese for International Trade. 3 hrs
Introduction to Japanese business culture and business communication in Japanese. The course provides opportunity for comparative analysis of American and Japanese cultural patterns in business settings. About 50 percent in Japanese. *Prereq: JPN 345 or department permission.*

JPN 444 Advanced Japanese Conversation. 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: JPN 345 or department permission.*

JPN 446 Business Japanese I. 3 hrs
The course aims to increase proficiency in business communication in Japanese and to develop knowledge of Japanese economy, industry, and foreign trade. Extensive work on the vocabulary and idiom of Japanese economy and business. In Japanese. *Prereq: JPN 361 and JPN 444, or department permission.*

JPN 447 Business Japanese II. 3 hrs
The course provides an overview of the system of organization, managerial style, and personnel relations of the Japanese company. Study of business communication focuses on business correspondence and translation. In Japanese. *Prereq: JPN 446 or department permission.*

JPN 494 Seminar in Japanese Studies. 3 hrs
Required of students majoring in teaching Japanese language and culture. Extensive study and discussion of issues related to Japanese society and to political and economic systems. Students are required to apply Japanese language skills in research, presentations, and papers. About 50 percent in Japanese. *Prereq: JPN 361 or department permission.*

SPANISH COURSES

SPN 121 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 basic studies foreign language composition requirement, Area I.

SPN 122 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 basic studies foreign language composition requirement, Area I. *Prereq: SPN 121 or equivalent. Placement exam required.*

- SPN 134 Spanish for the Bilingual.** 5 hrs
Basic grammar and composition for students with an oral command of Spanish. Conducted in Spanish. Prepares the student for entry into more advanced Spanish classes.
Prereq: Native command of oral Spanish and department permission.
- SPN 201 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 basic studies foreign language composition requirement, Area I. Does not satisfy the basic studies literature requirement.
Prereq: SPN 122 or equivalent. Placement exam required.
- SPN 202 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 basic studies foreign language composition requirement, Area I. Does not satisfy the basic studies literature requirement.
Prereq: SPN 201 or equivalent.
- SPN 221 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 basic studies requirements.
Prereq: SPN 202 or department permission.
- SPN 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 basic studies requirements.
Prereq: SPN 221 or department permission. Placement exam required.
- SPN 277/278/279 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 as long as different topics are studied.
Prereq: Department permission.
- SPN 301 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 202 and SPN 222, or department permission.
- SPN 302 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 202 and SPN 222, or department permission.
- SPN 341 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 basic studies literature requirement, Area IV.
Prereq: SPN 222 or department permission.
- SPN 342 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 basic studies literature requirement, Area IV.
Prereq: SPN 222 or department permission.
- SPN 343 Spanish Grammar and Composition.** 3 hrs
A systematic review of Spanish grammar and practice in composition. Frequent written assignments.
Prereq: SPN 202 and SPN 222, or department permission.
- SPN 344 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 202 and SPN 222, or department permission.
- SPN 351 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 222 or department permission.
- SPN 352 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 222 or department permission.
- SPN 361 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 competence 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 343 or department permission.
- SPN 377/378/379 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 as long as different topics are studied.
Prereq: Department permission.
- SPN 388 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 supervisors. Credit/no credit.
Prereq: Department permission.
- SPN 443 Advanced Spanish Grammar and Composition.** 3 hrs
A review of selected points of Spanish grammar and extensive practice in writing Spanish.
Prereq: SPN 343 and SPN 344, or department permission.
- SPN 444 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: SPN 343 and SPN 344, or department permission.
- SPN 445 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: SPN 352 or department permission.
- SPN 446, 447 Business Spanish.** 3 hrs each
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: SPN 361 or department permission.
- SPN 448 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: SPN 342 or department permission.

SPN 449 Romanticism. 3 hrs
A study of the major works of Hispanic Romanticism. In Spanish.
Prereq: SPN 342 or department permission.

SPN 451/452/453 Readings in Spanish. 1/2/3 hrs
Special projects in directed readings for majors or minors who have completed the available offerings in Spanish or who, because of unusual circumstances, are granted departmental approval to substitute this for regular courses.
Prereq: Department permission.

SPN 454 Modernism in Spanish America. 3 hrs
A survey of the literary movement known as "modernismo" in the literature of Spanish America. In Spanish.
Prereq: SPN 352 or department permission.

SPN 455 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: SPN 342 or department permission.

SPN 456 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: SPN 343 or department permission.

SPN 457 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: SPN 456 or department permission.

SPN 463 Don Quixote. 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: SPN 341 or department permission.

SPN 464 Drama of the Golden Age. 3 hrs
The drama of the 16th and 17th centuries. Works of the major authors will be read and discussed. In Spanish.
Prereq: SPN 341 or department permission.

SPN 465 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: SPN 342 or department permission.

SPN 466 Spanish for International Affairs. 3 hrs
The political structures, issues, and realities of Spain, Mexico, and a representative sample of Spanish-speaking countries (may vary from semester to semester) and their relationship to international affairs and business, particularly with the U. S. In Spanish.
Prereq: SPN 343, SPN 344, SPN 301, SPN 302, or department permission.

SPN 471 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 life styles of these groups. In Spanish. A minimum of 24 hours of field experience required.

SPN 477/478/479 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 as long as different topics are studied.
Prereq: Department permission.

SPN 482 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. Good skills in Spanish and at least one introductory course in linguistics are strongly recommended. A minimum of 24 hours of field experience required.

SPN 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. Credit/no credit.
Prereq: Department permission.

SPN 490 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 100-400 levels. May be repeated for credit.

SPN 497/498/499 Independent Study. 1/2/3 hrs
Advanced study on an individual research basis in areas not covered in formal course work.
Prereq: Department permission.

GENERAL LANGUAGE AND BILINGUAL-BICULTURAL EDUCATION COURSES

FLA 215 The Culture of the Latino Groups in the United States. 3 hrs
A study of contemporary life of the principal Latino groups in the United States. Since their language and literature reflect a unique socio-cultural situation, they will be used as a point of departure. Topics will include traditional family structure, economic, political, educational, ethnic and religious backgrounds, artistic contributions, and prospects for the future.

FLA 277/278/279 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 as long as different topics are studied.
Prereq: Department permission.

FLA 377/378/379 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 as long as different topics are studied.
Prereq: Department permission.

FLA 387 Cooperative Education in Foreign Languages. 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 (FLA 387 and FLA 487) alternated with full-time attendance at the University. Credit/no credit.
Prereq: Junior standing; admission to the program by application only.

FLA 388 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. Credit/no credit.
Prereq: Department permission.

FLA 411 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, nor 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.

Prereq: Junior standing, FRN/SPN/GER 343 or department permission.

FLA 421 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.

FLA 422 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.

FLA 423 Bilingual Multicultural Methods K-12.

3 hrs

Identification and study of methods appropriate for the diverse ethnolinguistic groups comprising the school community. Focus on appropriate strategies with an impact on learning styles, achievement, and school socialization of ethnolinguistic and national origin minority school children and youth. Not open to students on academic probation.

Prereq: Junior standing or department permission.

FLA 477/478/479 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 as long as different topics are studied.

Prereq: Department permission.

FLA 487 Cooperative Education in Foreign Languages.

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 (FLA 387 and FLA 487) alternated with full-time attendance at the University. Credit/no credit.

Prereq: FLA 387; admission to the program by application only.

FLA 488/489 Internship.

2/3 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. Credit/no credit.

Prereq: Department permission.

FLA 490 Internship.

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. Credit/no credit.

Prereq: Department permission.

FLA 497/498/499 Independent Study.

1/2/3 hrs

Advanced study on an individual basis in areas not covered in formal course work.

Prereq: Department permission.

CLASSICAL LANGUAGES COURSES**GRK 121 Beginning Ancient Greek I.**

5 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 Area I 3.c of the basic studies requirements.

GRK 122 Beginning Ancient Greek II.

5 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 Area I 3.c of the basic studies requirements.

Prereq: GRK 121.

LAT 121 Beginning Latin I.

5 hrs

A course to bring students to the level of facility necessary to read ancient authors with enjoyment and understanding. Satisfies Area I 3.c of the basic studies requirements.

LAT 122 Beginning Latin II.

5 hrs

A course to bring students to the level of facility necessary to read ancient authors with enjoyment and understanding. Satisfies Area I 3.c of the basic studies requirements.

Prereq: LAT 121.

COURSES IN ENGLISH FOR FOREIGN STUDENTS**ESL 110 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 or placement.

ESL 112 Beginning ESL Writing.

3 hrs

This course includes grammar manipulation of simple sentences while introducing paragraph organization and form.

Prereq: Department permission or placement.

ESL 114 Beginning ESL Reading.

3 hrs

Basic vocabulary is developed while comprehension skills of recognizing main idea, supporting detail, exemplification, and narration of materials in simplified English are studied.

Prereq: Department permission or placement.

ESL 116 Beginning ESL Speaking and Listening.

3 hrs

This course promotes and practices production and comprehension of conversational and survival levels of communication.

Prereq: Department permission or placement.

ESL 118 Beginning ESL Laboratory.

1 hr

Individual and/or group lab sessions.

Prereq: Department permission or placement.

ESL 210 Intermediate ESL Grammar.

3 hrs

Basic sentence components emphasizing verb tenses and usage. Some work on complex sentence structures.

Prereq: Department permission or placement.

ESL 212 Intermediate ESL Writing.

3 hrs

Expanding paragraph constructions while developing unity, cohesion, and transition.

Prereq: Department permission or placement.

ESL 214 Intermediate ESL Reading.

3 hrs

Continued development of techniques to build vocabulary and reading skills. Materials emphasize informational reading.

Prereq: Department permission or placement.

ESL 216 Intermediate ESL Speaking and Listening.

3 hrs

Continued development of conversational skills, both speaking and listening. Delivery of short speeches and the development of listening for details.

Prereq: Department permission or placement.

ESL 218 Intermediate ESL Laboratory.

2 hrs

Individual and/or group lab sessions.

Prereq: Department permission or placement.

ESL 310 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: ESL 210, department permission, or placement.

ESL 312 Advanced ESL Writing. 3 hrs
Development of knowledge of organization patterns used in writing both paragraphs and compositions. The principal parts of a composition, writing devices used to achieve coherence.
Prereq: ESL 212, department permission, or placement.

ESL 314 Advanced ESL Reading. 3 hrs
Practice in comprehending and analyzing unsimplified texts of greater length and linguistic complexity in a variety of fields.
Prereq: ESL 214, department permission, or placement.

ESL 316 Advanced ESL Speaking and Listening. 3 hrs
Continued development of conversational, speaking, and listening skills. Production and comprehension of short discourses on personal and non-personal topics.
Prereq: ESL 216, department permission, or placement.

ESL 318 Advanced ESL Laboratory. 1 hr
Individual and/or group lab sessions.
Prereq: Department permission or placement.

ESL 412 Academic ESL Writing. 3 hrs
A review of the components of compositions; practice in composition skills and researching, outlining, formatting, and writing a short research paper. Fulfills Area I. 1. of the basic studies requirements, a course in written composition.
Prereq: ESL 312, department permission, or placement.

ESL 414 Academic ESL Reading. 3 hrs
Reading in specialized fields at professional levels. Practice in outlining, summarizing, and synthesizing ideas from different sources.
Prereq: ESL 314, department permission, or placement.

ESL 416 Academic ESL Speaking and Listening. 3 hrs
Strategies for and practice in comprehending lectures, taking notes, and effectively participating in informal and formal classroom speaking activities.
Prereq: ESL 316, department permission, or placement.

ESL 420 Review of English as a Second Language. 3 hrs
For non-native English speakers who need an additional semester of intensive English training before entering a regular full-time program of study. Includes practice in reading, writing, note-taking, listening, and speaking. May be repeated for credit.
Prereq: Department permission.

ESL 456 English for Special Purposes: Science and Technology. 3 hrs
Development of English speaking, listening, reading, and writing skills for international students who plan to major in scientific and/or technical fields. Students will read and summarize articles in their fields, practice reporting technical information, formally and informally, listen and take notes on technical lectures, and develop skills needed in reading technical books.
Prereq: ESL 310, 312, 314, 316, or department permission.

ESL 477/478/479 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 as long as different topics are studied.
Prereq: Department permission.

CLASSICS COURSES

CLA 104 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 Pericles, Nero, Napoleon I, and Adolf Hitler. Major literary monuments 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 Honors Humanities Courses, page 30.

CLA/LIT 106 Rome and America. 6 hrs
An investigation 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, page 30.

CLA 179 Special Topics in Humanities. 3 hrs
This special topics course will be used to teach some aspects of the humanities that would not regularly be explored. A new course may be taught on an experimental basis using this heading. Dependent on the course offered, the special topic may satisfy a basic studies requirement. Note: See Honors Humanities Courses, page 30.

CLA 181 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. Team taught by a classicist and/or a member of the English Department. *This course satisfies one literature requirement.* Note: See Honors Humanities Courses, page 30.

CLA 301 Mythology. 3 hrs
The general field of classical mythology and the psychology underlying it. The poet's and artist's selection and use of the classic myths from early until modern times; an interpretation of mythological allusions in literature.

LANGUAGE COURSES

LNG 134 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.

LNG 223 Introduction to Language. 3 hrs
The basic principles of linguistic structure as they apply to the Western European languages taught in the department.

LNG 425 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 teen years with particular attention paid to language used in English-medium elementary and secondary schools.
Prereq: LNG 223.

TESOL COURSES

TSL 410 TESOL Methods. 3 hrs
Various methods and techniques used to teach language components (grammar, vocabulary, 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: One year college-level foreign language and an introduction to language course, or department permission.

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.

GEOGRAPHY AND GEOLOGY

Andrew A. Nazzaro
Acting Department Head
203 Strong Hall
487-0218

Professors: Gabriel Cherem, Eugene Jaworski, Horace A. MacMahan, Jr., Robert B. Mancell, James R. McDonald, Marshall S. McLennan, Andrew A. Nazzaro, Carl F. Ojala, C. Nicholas Raphael, Robert M. Ward

Associate Professors: Theodore Ligibel

Assistant Professors: Allen Cichanski, Michael Kasenow, Steven LoDuca, Robert Sutton, Norman Tyler

The department'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, important elements in all department programs. Internship and cooperative education opportunities are also encouraged.

The geology program includes a field camp in Colorado. To support and encourage computer literacy in the department's multiple disciplines, there is a modest 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, public administration, travel and tourism, and urban and regional planning programs. The department also provides teacher preparation courses to serve the College of Education.

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 (PACE), and the Travel and Tourism Student Association.

Degrees:

Bachelor of Science and Bachelor of Arts

Programs of Study

Majors:

Earth science
Earth science for elementary education
Earth science for secondary education
Geography
Geography for elementary education
Geography for secondary education
Geology
Geology for elementary education
Geology for secondary education
Travel and tourism
Urban and regional planning

Minors:

Cartography and remote sensing
Coastal environments
Earth science
Earth science for elementary education
Earth science for secondary, K-12, and special education-secondary
Environmental Analysis
Geography
Geography for elementary education

Geography for secondary, K-12, and special education-secondary

Geology

Geology for elementary education

Historic preservation

Urban and regional planning

Advising coordinators:

Coastal environments: C. Nicholas Raphael

Earth science: Michael Kasenow, Horace MacMahan, Carl Ojala

Geography: James R. McDonald

Geology: Allen Cichanski, Steven LoDuca

Historic preservation: Ted Ligibel, Marshall McLennan

Urban and regional planning: Norman Tyler

Travel & tourism: Gabriel Cherem, Robert Mancell

Cartography & remote sensing: Eugene Jaworski

Graduate study leads to the master's degree in either geography or historic preservation planning. A non-degree certification program of study (five courses) in historic preservation also is offered. The M.A. and M.S. degrees and certification are described in the Graduate Catalog.

EARTH SCIENCE MAJOR SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in earth science/geology, certification code "DH." The program includes a structured general science minor. The student following this program is also qualified for recommendation for endorsement in science, certification code "DX." The certification test covering this field is #16, "Science." See page 310.

EARTH SCIENCE MAJOR ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in geology/earth science, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science." The student is also qualified for recommendation for endorsement in science, certification code "DX." The certification test covering this field is #16, "Science." See page 311.

GEOGRAPHY MAJOR SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for 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 science ("CX"). The certification test covering this field is #08, "Geography." See page 311.

GEOGRAPHY MAJOR ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in geography, certification code "CB." The certification test covering this field is #08, "Geography." See page 312.

GEOLOGY MAJOR**ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in geology/earth science, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science." See page 312.

EARTH SCIENCE MAJOR

	Sem hours
Major in earth science	32
1. Required courses	27-30
AST 205 Principles of Astronomy	4
GES 108 Earth Science	4
GES 114 National Parks and Monuments	2
GES 200 The Oceans	3
GES 309 Plate Tectonics	3
GES 324 Weather	3
GLG 120 The Fossil Record or GLG 161 Historical Geology	3-4
GLG 228 Mineralogy or GLG 229 Rocks of Michigan	2-3
GLG 325 Geomorphology or GLG 331 Paleontology	3-4
2. Restricted electives	2-5
Choose two to five hours from the following:	
AST 204 Astronomical Investigations, GES 208 Natural Environmental Hazards, GES 227 Topographic Maps, GES 250 Introduction to Coastal Processes, GES 325 Severe and Unusual Weather, GES 327 Soil Science, GES 424 Climatology	
GLG 160 Physical Geology, GLG 228 or GLG 229 (the one not taken above), GLG 325 or GLG 331 (the one not taken above), GLG 370 Glacial Geology	

GEOGRAPHY MAJOR

	Sem hours
Major in geography	30
1. Required courses	27-28
GES 108 Earth Science	4
GEO 110 World Regions	3
GEO 235 Economic Geography	3
<i>Technique courses</i>	6
Choose two courses from the following:	
GEO 300 Location and Site Analysis, GES 401 Cartogra- phy, GES 303 Field Geography, GES 305 Aerial Photograph Interpretation, GES 470 Quantitative Methods in Geography and Geology	
<i>Physical courses</i>	2-3
Choose one course from the following:	
GES 200 The Oceans, GES 324 Weather, GLG 325 Geo- morphology, GES 327 Soil Science, GLG 448 Hydrogeology	
<i>Systematic courses</i>	6
Choose two courses from the following:	
GEO 310 Energy Awareness, GEO 332 Urban Geogra- phy, GEO 360 Cultural Geography, GEO 361 Geog- raphy of Population, GEO 431 Historical Geography of the United States, GEO 438 Industrial Location and Development	
<i>Regional courses</i>	3
Choose one course from the following:	
GEO 314 Geography of Russia and Neighboring States, GEO 318 Geography of Asia, GEO 319 Geography of Europe, GEO 320 Geography of the United States and Canada, GEO 321 Geography of Latin America, GEO 322 Geography of Africa, GEO 323 Geography	

of Australia and Pacific Islands, GEO 328 Geogra-
phy of Canada

- 2. Restricted electives** **2-3**
Choose elective credits in consultation with advising coord-
inator.

GEOLOGY MAJOR

Geology majors who intend to enter the geological profes-
sion or enroll in graduate school also should take general chemis-
try and mathematics through calculus.

	Sem hours
Major in geology	30
1. Required courses	26-29
GLG 160 Physical Geology	4
GLG 161 Historical Geology	4
GLG 228 Mineralogy	3
GLG 326 Structural Geology	3
GLG 329 Petrology	3
GLG 330 Sedimentation and Stratigraphy	4
*Field Geology	5-8
2. Electives	1-4
*Students on a Bachelor of Arts curriculum may substitute GLG 331 Paleontology and three semester hours of electives for field geology, with the total required for the major to remain at 30 semester hours.	

URBAN AND REGIONAL PLANNING MAJOR

This interdisciplinary major emphasizes current land use prob-
lems including the deterioration of urban cores, lack of coordina-
tion in land development, loss of open space and other environmental
amenities, and the difficulty of educating local decision makers.
The courses are designed to provide the necessary skills to develop
zoning ordinances, analyze site plans, and critique general develop-
ment plans as well as to review grant applications, environmental
impact statements, and regional management policies.

Incorporated in the major are courses from several other
departments, particularly in the areas of biological science, public
policy and government, and real estate management. Courses
recommended to fulfill basic studies requirements include BIO
105 Biology and the Human Species, MTH 105 College Algebra,
SOC 105 Introductory Sociology, GES 108 Earth Science, ECO
201-202 Principles of Economics I-II, PLS 202 State and Local
Government, and ENG 225 Intermediate English Composition.

	Sem hours
Major in urban and regional planning	36
1. Required courses	25
RES 210 Real Estate Principles and Practices	3
GEO 215 Introduction to Urban and Regional Planning	3
GEO 306 Comprehensive Planning and Zoning	3
GES 401 Cartography	3
GEO 410 Site Planning Studio	4
GEO 435 History of Urban Form and Function	3
GES 476 Introduction to Geographic Information Systems	3
GES 495 Environmental Assessment and Planning	3
2. Restricted electives	11
Choose 11 credits from the following in consultation with the advising coordinator:	
ORI 265 Business Statistics I	
PLS 270 Public Administration	
GEO 300 Location and Site Analysis, GEO 332 Urban Geography, GEO 407 Housing and Residential Development, GEO 441 Transportation Geography and Planning	

GES 303 Field Geography, GES 305 Aerial Photograph Interpretation, GES 475 Computer Mapping, GES 479 Special Topics: Planning Law, GES 387/487 Cooperative Education, GES 488/489/490 Internships
GHP 335 Historic Preservation

TRAVEL AND TOURISM MAJOR

The travel and tourism major is a response to continuing needs for strong liberal arts programs with directed career opportunities. Careful attention is given to course offerings that provide graduates with distinct possibilities for enhancing the travel and tourism profession. Students who successfully complete the curriculum will have: a) increased awareness of the world, particularly in those regions where travel and tourism are commonly associated; b) increased understanding of business, especially from a marketing perspective; and c) increased written and oral skills in English or a foreign language.

The travel and tourism major leading to either a Bachelor of Arts or Bachelor of Science degree consists of: 1) an equal number of required credit hours (21 each) in geography and business courses; 2) electives chosen from a selection of courses from the colleges of Arts and Sciences and Business; and 3) a choice from one of two communications skills options—either a general concentration with courses emphasizing writing and speaking skills, or a foreign language and area studies concentration.

	Sem hours
Major in travel and tourism	75-76
1. Required courses	42
GEO 110 World Regions	3
GEO 112 Introduction to Travel and Tourism	3
GEO 212 Geography of Travel and Tourism	3
GEO 312 Travel Business Applications	3
GEO 320 Geography of the United States and Canada ..	3
GEO 441 Transportation Geography and Planning	3
GEO 445 Cultural Tourism Resources	3
ACC 240 Principles of Accounting I	3
MGT 386 Organizational Behavior and Theory	3
MGT 202 Business Communications	3
MKT 261 Contemporary Selling	3
MKT 360 Principles of Marketing	3
MKT 365 Buyer Behavior	3
MKT 369 Advertising	3
2. Elective courses	15-16
Choose 15-16 credits from the following (not more than three courses may be chosen from the College of Business):	
ANT 135 Introduction to Cultural Anthropology, ANT 233 Peoples and Cultures of Mexico, GEO 321 Geography of Latin America, ANT 236 Peoples and Cultures of Africa or GEO 322 Geography of Africa, ANT 248 Peoples and Cultures of the Pacific or GEO 323 Geography of Australia and Pacific Islands	
GEO 113 Foundations of Guest Service, GEO 115 Observing the Human Landscape, GEO 313 Geography of Michigan, GEO 315 Travel and Tourism: The European Scene, GEO 318 Geography of Asia, GEO 319 Geography of Europe, GEO 333 Settlement Geography, GEO 344 Recreation Geography, GEO 345 Geography of Resorts, GEO 360 Cultural Geography, GEO 387 and/or GEO 487 Cooperative Education in Geography, GEO 435 History of Urban Form and Function, GEO 436 Tourism and Socio-Economic Development, GEO 446 Heritage Interpretation and Tourism, GEO 478 Special Topics in Geography, GEO 488 Internship in Geography	
GES 114 National Parks and Monuments	
FA 429 History of American Architecture	
MGT 402 Business Report Writing	

LAW 293 Legal Environment of Business, LAW 393 Law of Business Enterprises

MKT 368 Marketing Strategy, MKT 460 International Marketing, MKT 473 Marketing and Product Innovation, MKT 474 Promotional Strategy

3. **Concentrations** **18**
Choose either Option A: General or Option B: Foreign language and area studies

Option A: General

Required

JRN 215 News Writing and Reporting 3

CTA 374 Intercultural Communication 3

Choose two of the following:

JRN 306 Feature Writing, JRN 312 Principles of Public Relations, ENG 424 Technical Writing

Choose two of the following:

CTA 224 Public Speaking, CTA 227 Interpersonal Communication, CTA 357 Interviewing as Communication

Option B: Foreign language and area studies

Before choosing Option B, students must have completed FRN/GER/SPN 121, 122; 221, 222; and 233, 234 or equivalencies approved by the Foreign Languages and Bilingual Studies Department.

GEO/HIS 316 History and Geography of Modern Europe or GEO/HIS 317 History and Geography of Spanish America 6

FRN/GER/SPN 343 and 344 Composition and Conversation 6

FRN/GER/SPN 341 and 342 Survey of Literature or FRN/GER/SPN 361 Language for International Trade and FRN/GER/SPN 446 Business French, Spanish, and German 6

MINORS OFFERED IN THE GEOGRAPHY AND GEOLOGY DEPARTMENT

EARTH SCIENCE

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 geology/earth science, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science." See page 313.

GEOGRAPHY

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 geography, certification code "CB." The certification test covering this field is #08, "Geography." See page 313.

GEOLOGY

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 geology/earth science, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science." See page 313.

CARTOGRAPHY AND REMOTE SENSING

Cartography (map-making) is an ancient science which attempted 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 systems software.

The goal of the minor is to provide a track for undergraduates that leads directly to entry level positions as cartographers and remote sensing technicians. An objective of the minor is to provide balanced training between traditional cartographic work and machine processed maps. Emphasis is placed 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.

	Sem hours
Minor in cartography and remote sensing	20
1. Required courses	15
GES 305 Aerial Photograph Interpretation	3
GES 401 Cartography	3
GES 402 Advanced Cartography	3
GES 475 Computer Mapping	3
GES 485 Introduction to Remote Sensing	3
2. Restricted electives	5
Choose five credits from the following:	
GES 227 Topographic Maps, GLG 255 Field Geology I, GES 387/487 Cooperative Education in Earth Sci- ence, GES 488/489/490 Internship	
MTH 105 College Algebra, MTH 107 Plane Trigonometry	
FA 165 Graphic Design for Non-Majors	
IDT 121 Graphic Communication	
IT 206 Surveying, IT 231 Industrial Computer Graphics	
ORI 215 End-User Computing or CSC 137 Introduction to FORTRAN Programming, ORI 417 Systems Analy- sis and Design	

GEOGRAPHY

	Sem hours
Minor in geography	20
1. Required courses	7
GES 108 Earth Science	4
GEO 110 World Regions	3
2. Restricted electives	13
Choose 13 credits in consultation with the advising coord- inator.	

GEOLOGY

	Sem hours
Minor in geology	21
1. Required courses	17
GLG 160 Physical Geology	4
GLG 161 Historical Geology	4
GLG 228 Mineralogy	3
GLG 326 Structural Geology	3
GLG 329 Petrology	3
2. Restricted electives	4
Choose four credits in consultation with an advising coord- inator.	

HISTORIC PRESERVATION

	Sem hours
Minor in historic preservation	24-26
1. Required courses	20
GEO 115 Observing the Human Landscape	2
GEO 332 Urban Geography	3
GEO 333 Settlement Geography	3
GHP 335 Historic Preservation	3
*HIS 123 The United States to 1877	3
*HIS 124 The United States, 1877 to the Present	3
FA 429 History of American Architecture	3
*American history majors will substitute electives for HIS 123, HIS 124	
2. Restricted electives	4-6
Choose two courses from the following:	
ANT 135 Introduction to Cultural Anthropology, ANT 150 Introductory Archeology	
ECO 338 Land Economics	
GEO 215 Introduction to Urban and Regional Planning, GEO 235 Economic Geography, GEO 300 Location and Site Analysis, GEO 313 Geography of Michigan, GEO 344 Recreation Geography, GEO 345 Geograph- y of Resorts, GEO 360 Cultural Geography, GEO 423 Principles of City and Regional Planning, GES 401 Cartography	
IDE 311 History of Interiors: Ancient-1800, IDE 351 History of Interiors Laboratory: Ancient-1800	
HIS 305 Indians of the United States, HIS 313 Michigan History, HIS 362 United States Urban History	
IE 105 History of Industrial Technology	
IT 201 Construction Systems, IT 228 Construction Drawing	
PSY 350 Environmental Psychology	
RES 210 Real Estate Principles and Practices, RES 310 Real Estate Finance	
SOC 306 The Urban Community	
(Students, in consultation with the advising coordinator, may choose other electives not listed above.)	

URBAN AND REGIONAL PLANNING

	Sem hours
Minor in urban and regional planning	20
1. Required courses	13
GEO 215 Introduction to Urban and Regional Planning	3
GEO 306 Comprehensive Planning and Zoning	3
GEO 410 Site Planning Studio	4
GEO 435 History of Urban Form and Function	3
2. Restricted electives	7
Choose at least 7 credits from the following in consulta- tion with the advising coordinator:	
RES 210 Real Estate Principles and Practices	
ORI 265 Business Statistics I	
PLS 270 Public Administration	
GEO 300 Location and Site Analysis, GEO 332 Urban Geography, GEO 407 Housing and Residential Development, GEO 441 Transportation Geography and Planning	
GES 303 Field Geography, GES 305 Aerial Photograph Interpretation, GES 401 Cartography, GES 475 Computer Mapping, GES 476 Introduction to Geographic Information Systems, GES 479 Special Topics: Planning Law, GES 387/487 Cooperative Education, GES 488/489/490 Internships, GES 495 Environmental Assessment and Planning	
GHP 335 Historic Preservation	

COASTAL ENVIRONMENTS

	Sem hours
Minor in coastal environments	22
1. Required courses	16
GES 108 Earth Science or GLG 160 Physical Geology ...	4
GES 200 The Oceans	3
GES 250 Introduction to Coastal Processes	3
GES 350 Biogeography	3
GES 450 Lake and Coastal Management.....	3
2. Restricted electives	6
Choose six credits from the following:	
GEO 215 Introduction to Urban and Regional Planning,	
GES 208 Natural Environmental Hazards, GES 305	
Aerial Photograph Interpretation, GLG 325 Geomor-	
phology, GLG 330 Sedimentation and Stratigraphy,	
GES 495 Environmental Assessment and Planning	
(Students, in consultation with the advising coordinator,	
may choose other electives not listed above.)	

EARTH SCIENCE

	Sem hours
Minor in earth science	21
1. Required courses	18
GES 108 Earth Science	4
GES 200 The Oceans	3
GES 309 Plate Tectonics	3
GES 324 Weather	3
GLG 229 Rocks of Michigan	2
AST 203 Exploration of the Universe.....	3
2. Restricted electives	3
Choose one course from the following:	
GLG 161 Historical Geology, GLG 228 Mineralogy, GLG	
325 Geomorphology, GLG 331 Paleontology, GLG	
370 Glacial Geology	
(Students, in consultation with the advising coordinator,	
may choose other electives not listed above.)	

GEOGRAPHY AND EARTH SCIENCE COURSES

GES 108 Earth Science. 4 hrs
Selected topics and concepts from geology, physical geography, meteorology, and oceanography provide the basis for understanding current environmental problems and for perceiving fundamental options as humans increase pressure on the world's resources and ecosystems. A requirement for both the major and minor in geography. Not open to students who have credit in GES 202 Science for Elementary Teachers. Lecture: three hours per week. Laboratory: one two-hour period per week.

GES 114 National Parks and Monuments. 2 hrs
An analysis of the geology, vegetation, and wildlife that led to the designation of certain U.S. lands as national parks, monuments, and recreational areas. The environmental impact of people on the ecology of these areas resulting from population pressures of camping, trail use, fire, tourist services, and recreational facilities; NPS conservation policies that govern preservation of our heritage. Illustrated lectures and demonstrations.

GES 200 The Oceans. 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: GES 108 or GLG 160 or GES 202 or department permission.

GES 202 Science for Elementary Teachers. 3 hrs
Lectures and laboratory deal with earth science concepts and teaching methodology. Nationally used elementary science curriculums acquaint the student with techniques of teaching basic

earth science concepts. Emphasis on student-centered, process-oriented approaches widely used in elementary classrooms. Not open to students with credit in GES 108. Lecture: two hours per week. Laboratory: one two-hour period per week.

GES 208 Natural Environmental Hazards. 3 hrs
Analysis of devastating earthquakes, volcanic eruptions, floods, violent storms, freezes, and other environmental catastrophes, emphasizing their causes and human adjustments to these events.

GES 227 Topographic Maps. 2 hrs
Interpretation of distances, slopes and terrain features as shown on topographic contour maps. Preparation of contour maps from numerical data and of topographic profiles from contour maps; the correlation of landforms and landform patterns with the geologic materials and processes responsible for them.
Prereq: GES 108.

GES 250 Introduction to Coastal Processes. 3 hrs
Description and analysis of the physical and biogeographical processes of the coastal ocean and lakes. Distribution and origin of the coastal environments. Natural and human modification of beach, river valley, estuary, marsh, delta, and coral reef environments by waves, currents, and tides. Classroom demonstrations and field trips.
Prereq: GES 108 or BIO 105 or department permission.

GES 277/278/279 Special Topics in Earth Science. 1/2/3 hrs
An experimental course for subject matter not provided in other department offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are studied.
Prereq: Department permission.

GES 303 Field Geography. 3 hrs
Techniques in the observation 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.

GES 305 Aerial Photograph 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.
Prereq: GES 108 and algebra/trigonometry, or department permission.

GES 309 Plate Tectonics. 3 hrs
An introduction to plate tectonics—i.e., continental drift and sea-floor spreading—emphasizing the historical development of this new theory. Topics include the theory's influence on improving our understanding of the close relationships between earthquakes, volcanic eruptions, mountain building, the formation of continents, and the origin of and eventual destruction of oceans. Lecture: three hours per week.
Prereq: GES 108 or GLG 160 or GES 202 or department permission.

GES 324 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.
Prereq: GES 108 or department permission.

GES 325 Severe and Unusual Weather. 3 hrs
An analysis of cyclones, blizzards, thunderstorms, tornadoes, hurricanes, and other catastrophic weather phenomena. Includes their environmental impact and methods used in their prediction.
Prereq: GES 324.

GES 327 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. Fall semester only.

Prereq: GES 108 or GLG 160 or department permission.

GES 334 Weather and Climate Investigations. 1 hr

A laboratory course for weather and climate students; includes the techniques utilized and concepts involved in the fields of weather and climate. Two hours of laboratory per week.

Prereq: GES 324 or GES 424; may be taken concurrently.

GES 347 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: GES 108 or equivalent and junior standing or department permission.

GES 350 Biogeography. 3 hrs

Analysis of the distribution, geologic setting, and ecological function of inland freshwater lakes and Great Lakes coasts. Emphasis on sediment, vegetation, wildlife, waterfowl and fisheries resources.

Prereq: GES 108 or BIO 224; GES 250 recommended.

GES 378 Special Topics in Earth Science. 2 hrs

An experimental course for subject matter not provided in other department offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are studied.

Prereq: Department permission.

GES 387 Cooperative Education in Earth Science or Land Use Analysis. 3 hrs

Four to six months of full-time employment at a firm or agency chosen for imparting a practical educational experience in earth science or land use analysis. The program consists of two work experiences (GES 387 and GES 487) alternated 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, earth science or urban and regional planning major. Admittance by applications only.

GES 401 Cartography. 3 hrs

A lecture-laboratory course in the techniques of map making and visual representation of geographic information. The study and construction of several map projections, the evaluation of maps, and the use of map-drawing instruments. One hour lecture and four hours laboratory per week.

GES 402 Advanced Cartography. 3 hrs

A continuation of GES 401. Emphasizes the student's production of thematic maps; the use of press-on materials, tapes and acetate overlays; scribing, computer mapping; reproduction techniques.

Prereq: GES 401 or department permission.

GES 424 Climatology. 3 hrs

An analysis of the world's climate types, including characteristics, classification, controls, and their effects on world soils and natural vegetation.

Prereq: GES 324.

GES 450 Lake and Coastal Management 3 hrs

An analysis of modern coastal management problems of inland lakes and Great Lakes coasts. Selected topics include beach erosion, dredging, loss of wetlands, wildlife habitat degradation, and impact of shoreland development.

Prereq: GES 250 or GES 350 or department permission.

GES 470 Quantitative Methods in Geography and Geology. 3 hrs

Introduction to current techniques and methods applicable to geographic and geologic problems. A laboratory course emphasizing statistical analyses and computer applications.

Prereq: Geography, geology, or earth science major, junior standing, or department permission.

GES 475 Computer Mapping. 3 hrs

A laboratory course introducing interactive operation of microcomputers to produce maps on line printers and plotters. Students learn to develop and apply computer mapping graphics, databases, digitized data, and a simple geographic information system. Two hours instruction and two hours laboratory each week.

Prereq: A course in computer programming (FORTRAN) or cartography is recommended.

GES 476 Introduction to Geographic Information Systems. 3 hrs

Introduction to basic Geographic Information Systems (GIS) concepts, geographic referencing, and to available software programs. Includes theory on map projections, mapping techniques, data collection and compilation, and data analysis. Microcomputer oriented.

Prereq: GES 401 or GES 475 or department permission.

GES 477/478/479 Special Topics in Earth Science. 1/2/3 hrs

An experimental course for subject matter not provided in other department offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are studied.

Prereq: Department permission.

GES 485 Introduction to Remote Sensing. 3 hrs

Introduction to remote sensing techniques and types of imagery, including multispectral, thermal, and radar images. Emphasis on image enhancement and interpretation in regard to land use planning and resource management.

Prereq: GES 305 or department permission.

GES 487 Cooperative Education in Earth Science or Land Use Analysis. 3 hrs

Four to six months of full-time employment at a firm or agency chosen for imparting a practical educational experience in earth science or land use analysis. The program consists of two work experiences (GES 387 and GES 487) alternated 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, earth science or urban and regional planning major. Admittance by application only.

GES 488/489/490 Internship in Earth Science or Urban and Regional Planning. 4/5/6 hrs

Supervised internship in some aspect of earth science or land use that is of mutual interest to the qualified student and the place the student will work. This experience is designed to integrate academic training with practical application. May be taken only once for credit.

Prereq: Department permission and placement.

GES 495 Environmental Assessment and Planning. 3 hrs

An examination of the program elements of environmental impact statements. Geobased data sources are explored and analyzed. Impact statements are prepared by the class and existing impact statements are evaluated.

Prereq: GEO 215 or BIO 224.

GES 497/498/499 Individual Problems. 1/2/3 hrs

Advanced study on individual basis 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.

GEOLOGY COURSES

- GLG 120 The Fossil 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.
- GLG 160 Physical Geology.** 4 hrs
Geological concepts, processes, materials, and surface features of the physical earth; internal features such as heat and volcanism, earthquakes and deformation, and plate tectonics; and external processes that have shaped the landscape. Lecture: three hours per week. Laboratory: one two-hour period per week. Required for the geology major.
- GLG 161 Historical Geology.** 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 the geology major and minor. Lectures: three hours per week. Laboratory: one two-hour period per week.
Prereq: GLG 160 or department permission.
- GLG 200 Introduction to Hydrology.** 3 hrs
Study of physical, chemical and biological elements of rivers, lakes, wetlands, and groundwater, and the economic, social, political, and legal issues currently associated with these systems. Required for the hydrogeology major.
Prereq: GES 108 or GLG 160 or GES 202 or department permission.
- GLG 228 Mineralogy.** 3 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: two hours weekly. Laboratory: two hours weekly.
Prereq: CHM 121.
- GLG 229 Rocks of Michigan.** 2 hrs
The identification and classification of rocks with special emphasis on characteristics used in the field.
Prereq: GES 108 or GLG 160.
- GLG 255 Field Geology I.** 2 hrs
Theory and practice of precision mapping using tape, alidade, plane table, and stadia rod in local area. With GLG 356 Field Geology II, satisfies the field requirement for major in geology. May include field study in a quarry.
Prereq: GES 108 or GLG 160 or department permission.
- GLG 278 Special Topics in Geology.** 1 hr
Treats subjects not provided for in the regular department offerings.
Prereq: Department permission.
- GLG 325 Geomorphology.** 3 hrs
A detailed study of surface features and the degradational, aggradational, and structural processes by which they are formed. Worldwide examples are used extensively.
Prereq: GES 108 or GLG 160 and GLG 161 or department permission.
- GLG 326 Structural Geology.** 3 hrs
Introduction to the terminology, relationship, and deformation of rocks with examples from specific areas. Laboratory problems are directed toward understanding of geological structures in three dimensions and their representation, interpretation, projection, and illustration as applied to economic problems. Lecture: two hours weekly. Laboratory: two hours weekly.
Prereq: GES 108 or GLG 160.
- GLG 329 Petrology.** 3 hrs
The origin, occurrence, association, chemical relationships, and distribution of igneous, sedimentary, and metamorphic rocks; laboratory study of rocks. Not open to students with credit in GLG 229. Winter term only.
Prereq: GLG 228.
- GLG 330 Sedimentation 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.
Prereq: GES 108 or GLG 160, GLG 228; competency in trigonometry or instructor permission.
- GLG 331 Paleontology.** 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: GLG 161 or BIO 105 or department permission.
- GLG 334 Geology of Construction.** 3 hrs
Geologic features of near-surface soil and bedrock materials; how the materials and their chemical and physical properties are related to construction. Exploration and exploitation of the materials associated with ground water supply and disposal, aggregates and construction problems of dams, reservoirs, excavations, foundations, highways, and beach control structures.
Prereq: GES 108 or GLG 160 or department permission.
- GLG 355 Geologic Field Methods.** 1 hr
Construction principles and use of conventional instruments in geologic surveying, note taking, and preparation of illustrations and reports. Not open to students with credit in GLG 356.
Prereq: GLG 228, GLG 326, GLG 329 prerequisite or corequisite, or department permission.
- GLG 356 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 in the Rocky Mountain west. With GLG 255, satisfies field requirement for geology major.
Prereq: GLG 255, GLG 326, GLG 329, and GLG 330 or department permission.
- GLG 370 Glacial Geology.** 3 hrs
A study of the glacial geomorphology and stratigraphy of the Pleistocene drift with emphasis on the character of the drift, sheets, their soils and lithology, and the techniques of study as applied to the Wisconsin Stage in the state of Michigan. Comparisons drawn with the movements and deposits of modern glaciers; Paleoclimatic cycles of Precambrian and Paleozoic glacial ages and theories stressed. Field trips and reports required.
Prereq: GES 108 or GLG 160, GLG 161, GLG 330 or department permission.
- GLG 378 Special Topics in Geology.** 2 hrs
Treats subjects not provided for in the regular department offerings.
Prereq: Department permission.
- GLG 387 Cooperative Education in Geology.** 3 hrs
Four to six months of full-time employment at a firm or agency, chosen for imparting a practical educational experience in geology. The program consists of two work experiences (GLG 387/487) alternated 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, geology major. Admittance by application only.

GLG 428 Optical Mineralogy. 4 hrs
Study of the optical properties of crystalline matter with petrographic microscope used to identify non-opaque and some opaque minerals, using crushed fragments and some thin-sections.
Prereq: GLG 228 and PHY 224.

GLG 430 Petroleum Geology. 3 hrs
A study of the origin, migration and accumulation of oil and natural gas. Exploration techniques in the use of structural geology, sedimentology, and stratigraphy. The various drilling coring methods, drilling equipment, and the procedures of drilling. Field trips to active drilling and/or producing areas and reports are required. Studies of specific oil and gas fields will be assigned.
Prereq: GLG 161, GLG 326, GLG 330 or department permission.

GLG 439 Economic Geology. 3 hrs
A study of the geochemical behavior of metallic elements; the origin, processes, controls, and classification of ore deposits; and fossil fuels. The occurrence and distribution of metallic and non-metallic deposits.
Prereq: GLG 228.

GLG 448 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: GES 108 or GLG 160, algebraic ability, and junior standing.

GLG 459 Groundwater Modeling. 3 hrs
Study of groundwater flow and contaminant transport rates using analytical, numerical, and statistical models.
Prereq: GES 475 and GLG 448.

GLG 460 Contaminant Hydrology. 3 hrs
Study of hydrochemistry, pollution pathways, and transport of contaminants.
Prereq: BOT 221, CHM 121-122, and GLG 448.

GLG 470 Quantitative Methods in Geography and Geology. 3 hrs
Introduction to current techniques and methods applicable to geographic and geologic problems. A laboratory course emphasizing statistical analyses and computer applications.
Prereq: Geography, geology, or earth science major, junior standing, or department permission.

GLG 478/479 Special Topics in Geology. 2/3 hrs
An experimental course for subject matter not provided in other departmental offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are studied.
Prereq: Department permission.

GLG 487 Cooperative Education in Geology. 3 hrs
Four to six months of full-time employment at a firm or agency, chosen for imparting a practical educational experience in geology. The program consists of two work experiences (GLG 387/487) alternated 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, geology major. Admission by application only.

GLG 488/489/490 Internship in Geology. 4/5/6 hrs
Supervised internship in some aspect of geology that is of mutual interest to the qualified student and the place the student will work. This experience is designed to integrate academic training with practical application. May be taken only once for credit.
Prereq: Department permission and placement.

GLG 497/498/499 Independent Study. 1/2/3 hrs
Advanced study on individual basis 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.

GEOGRAPHY COURSES IN SOCIAL SCIENCE

GEO 100 Future Worlds. 3 hrs
Introduces the student to reasons for studying the future from a geographical perspective, methods used in futuristics, the state of future shock today, the consequences of a shrinking world, and growing interdependence. Possible worlds that may exist in the year 2000 and beyond.

GEO 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.

GEO 110 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.

GEO 111 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.
Prereq: GEO 110.

GEO 112 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; futuristic travel directions; and travel-related organizations.

GEO 113 Foundations of Guest Service. 3 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.
Prereq: GEO 112 or department permission.

GEO 115 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.

GEO 212 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; case studies illustrating their significance from all regions of the world.
Prereq: GEO 110 or GEO 112 or department permission. (May be taken concurrently.)

GEO 215 Introduction to Urban and Regional Planning. 3 hrs
A general introduction to concepts and techniques of urban and regional planning. An overview of land use planning and ordinances, site analysis and planning, and preparation of general development plans. Discussion of urban and regional planning as a career, in both public agencies and private firms.
Prereq: Not open to freshmen.

GEO 235 Economic Geography. 3 hrs
Systematic treatment of economic activities in selected world locations. Areal factors included in the evaluation, production, and distribution of goods and services.

GEO 240 Geographic Perspectives on Third World Development.

3 hrs

A course designed to study the geographic nature of critical development issues. Explores both positive and negative consequences of world interdependence and the global economy.

Prereq: GEO 110 or department permission.

GEO 277/278/279 Special Topics in Geography.

1/2/3 hrs

Treats subjects not provided for in the regular department offerings.

Prereq: Department permission.

GEO 300 Location and Site Analysis.

3 hrs

Practical and theoretical application of models that explain the location of human activities on earth.

Prereq: GEO 235 recommended.

GEO 306 Comprehensive Planning and Zoning.

3 hrs

A course studying issues of comprehensive planning, zoning, and land use regulation. Topics include preparation of a General Development Plan, current and recent zoning issues, land use legislation, and the drafting and use of state and local zoning ordinances. A base course for Urban and Regional Planning students as well as a valuable perspective to anyone interested in rural, urban, or regional development issues.

Prereq: GEO 215.

GEO 310 Energy Awareness.

3 hrs

A study of production, transportation, and consumption of energy, including analysis of historic, modern, and future energy sources and the environmental effects of their development. GEO 110 or GES 108 recommended.

GEO 312 Travel Business Applications.

3 hrs

A survey of the operational procedures common to travel business ventures. Students will learn information-gathering techniques, the use of reference materials, the design of itineraries, reservations, and ticketing procedures, sales techniques, presentation and proposal preparation, and the emerging technologies available to travel planners.

Prereq: GEO 110 and GEO 112.

GEO 313 Geography of Michigan.

2 hrs

Detailed analysis of the natural setting, population and settlement characteristics, industry, recreation, and agriculture in the state.

Prereq: GEO 110 or GES 108.

GEO 314 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.

Prereq: GEO 110 or GES 108.

GEO 315 Travel and Tourism: The European Scene.

3 hrs

Consideration of Europe as the most significant continent for modern tourism. Emphasis is on the natural, cultural, and historical factors which form the foundation of this industry; and on the major economic, social, and environmental impacts which can be attributed to tourism.

Prereq: GEO 112 and GEO 212.

GEO 316 History and Geography of Modern Europe.

6 hrs

An interdisciplinary geographical-historical study of modern Europe with the geographical component emphasizing information of an urban, demographic, occupational, and environmental nature and the historical component stressing major political, social, and cultural developments. Must be taken concurrently with HIS 316.

Prereq: GEO 110 and one of HIS 101/102/103.

GEO 317 History and Geography of Spanish America.

6 hrs

An interdisciplinary presentation of the history and geography of Spanish America with emphasis on political, cultural, and socio-

economic forces from the conquest to the present. Similarities and differences within and between nations are stressed as are the special relationships that exist between the nations and the United States. Must be taken concurrently with HIS 317.

Prereq: GEO 110 and one of HIS 101/102/103.

GEO 318 Geography of Asia.

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: GEO 110 or GES 108.

GEO 319 Geography of Europe.

3 hrs

Systematic treatment of the natural setting, cultural patterns, economic activities, and developmental problems of the continent; selected significant regions analyzed in detail.

Prereq: GEO 110 or GES 108.

GEO 320 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: GEO 110 or GES 108.

GEO 321 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: GEO 110 or GES 108.

GEO 322 Geography of Africa.

3 hrs

A human ecological treatment of the African continent, involving resource identification and use as well as the varied nature of evolving human landscapes.

Prereq: GEO 110 or GES 108.

GEO 323 Geography of Australia and Pacific Islands.

3 hrs

The natural setting, distribution of the people, important occupations, and problems of future development in each of several regions.

Prereq: GEO 110 or GES 108.

GEO 326 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 HIS 326.

Prereq: GEO 110 and either HIS 103 or HIS 106.

GEO 328 Geography of Canada.

2 hrs

A detailed regional treatment of natural setting, distribution of the people, important occupations, and problems of future development in each part of Canada.

Prereq: GEO 110 or GES 108.

GEO 332 Urban Geography.

3 hrs

A study of geographic principles related to distribution, function, structure, and regional setting of urban centers.

Prereq: GEO 110.

GEO 333 Settlement Geography.

3 hrs

Cultural, functional, and ecological factors underlying human settlement patterns.

Prereq: GEO 110 or GES 108 or GEO 115.

GEO 340 Medical Geography.

3 hrs

An inquiry into ecosystemic relationships between human health and conditions of the environment, both natural and cultural. The

application of geographic concepts and techniques to interregional and intercultural health and health care problems.

Prereq: GEO 110 or department permission.

GEO 343 Geography of Sport. 3 hrs

A study of the geographic dimensions of sport, emphasizing such topics as origin, diffusion, and distribution of American sports and athletes, sports regions, and regional recruiting patterns.

GEO 344 Recreation Geography. 3 hrs

A study of the relationship between human recreation activities and the environment. The environment as a recreation resource; recreation travel patterns; types of recreational facilities; impact of leisure activities upon the environment; recreational surveys and planning.

Recommended: GES 114 or GEO 215 or GEO 115 or GEO 360 or BIO 224.

GEO 345 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: GEO 110 and GEO 212 or department permission.

GEO 348 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.

GEO 360 Cultural Geography. 3 hrs

Human landscape patterns; emphasis upon the processes concerned with their origins, locations, and persistence.

Prereq: GEO 110 or department permission.

GEO 361 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 impacts of urbanization.

Prereq: GEO 110 or department permission.

GEO 378 Special Topics in Geography. 2 hrs

Treats subjects not provided for in the regular department offerings.

Prereq: Department permission.

GEO 387 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 (GEO 387/487) alternated 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.

GEO 407 Housing and Residential Development. 3 hrs

A course for students interested in planning, administrative, and sociological aspects of housing, emphasizing the important role of housing in American society. Issues covered include housing programs, neighborhood development activities, construction and rehabilitation of residential units, and planning techniques and regulations for residential areas. Information is presented through lectures and readings; students will also work on a preliminary site layout of a housing development.

Prereq: GEO 215.

GEO 410 Site Planning Studio. 3 hrs

A studio course in urban planning, gives 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: GEO 215 and GEO 306.

GEO 423 Principles of City and Regional Planning. 3 hrs

Theory and practice of planning in the urban and regional contexts, with emphasis on the United States. Planning process at local, state, and regional levels.

Prereq: GEO 332 or department permission.

GEO 431 Historical Geography of the United States. 3 hrs

The sequence of human occupancy of the United States from pre-European times to the present. Temporal and spatial evolution of cultural landscapes.

Prereq: GEO 320 or department permission.

GEO 432 Political Geography. 3 hrs

A study of the theory and concepts of political geography, using contemporary examples. Size, location, resources, boundaries, population, and level of technology within and outside the political framework.

Prereq: GEO 110 or department permission.

GEO 433 Political Geography of the United States. 3 hrs

A study of the variety and diversity of geographic forms of political behavior, organization, and structure in the United States.

Prereq: GEO 110 or department permission.

GEO 434 The Geopolitical World. 3 hrs

Views of political space by world and regional states; strategies and capabilities for employing national power to carry out geopolitical goals.

Prereq: GEO 110 or department permission.

GEO 435 History of Urban Form and Function. 3 hrs

Analysis of the history of urban planning in selected regions of the world and in North American cities. Discussions of the current urban situation, and various urban planning theories.

Prereq: GEO 332 or department permission.

GEO 436 Tourism and Socio-Economic Development. 3 hrs

For students majoring in travel and tourism. Socio-economic impacts of tourism, national, and international development strategies.

Prereq: GEO 110 and GEO 112.

GEO 438 Industrial Location and Development. 3 hrs

Basic principles of industrial development including industrial location theory, industrial site strategy, corporate facilities planning, and community industrial development programming. Strengths and weaknesses of Michigan for economic expansion. Case studies and practical applications.

Prereq: GEO 300 or department permission.

GEO 440 World Food Systems. 3 hrs

An analysis of world agricultural technologies and patterns. The interrelationships among ecosystems, economic development, and political decision making in a variety of world settings.

Prereq: GEO 235 or department permission.

GEO 441 Transportation Geography and Planning. 3 hrs

Historical evolution and worldwide distribution of major transportation systems. Technological and social implications will be considered, with particular attention to travel and tourism.

Prereq: GEO 235 or department permission.

GEO 444 Census Applications to Spatial Analysis. 3 hrs
Utilization of census materials as data resources and tools with application to spatial analysis and social service problems. Designed to prepare students to intelligently assemble, organize, analyze, and utilize U.S. census data.

GEO 445 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 mannerisms, ethnic landscapes, architecturally significant buildings, historic cities and towns, and other types of historic landscapes will be covered.
Prereq: GEO 115 or 212 or GEO 360 or GHP 335.

GEO 446 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 technique to cultural and natural tourism resources. Strategies for the integrative use of interpretive methods, including tours, demonstrations, talks, person-to-person experiences, publications, exhibits, signage, and audiovisuals.
Prereq: GEO 445 or department permission.

GEO 478/479 Special Topics in Geography. 2/3 hrs
An experimental course for subject matter not provided in other department offerings. The content will change from semester to semester. Students may elect this course several times as long as different topics are studied.
Prereq: Department permission.

GEO 487 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 (GEO 387/487) alternated with full-time attendance at the University. A written report is required at the end of each employment period. Graded on a credit/no credit basis.
Prereq: GEO 387. Completion of junior year, geography major. Admittance by application only.

GEO 488/489/490 Internship in Geography. 4/5/6 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.
Prereq: Department permission and placement.

GEO 497/498/499 Independent Study. 1/2/3 hrs
Advanced study on individual basis 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.

GEOGRAPHY COURSES IN HISTORIC PRESERVATION

GHP 277/278/279 Special Topics in Historic Preservation. 1/2/3 hrs
Treats subjects not provided for in the regular program offerings.
Prereq: Department permission.

GHP 335 Historic Preservation. 3 hrs
Introduction to general concepts and goals of historic preservation. The built environment as a cultural heritage resource; objectives of cultural surveys and inventories; methods of preservation, conservation, planning, and interpretation.
Prereq: GEO 115 recommended.

GHP 377/378 Special Topics in Historic Preservation. 1/2 hrs
Treats subjects not provided for in the regular program offerings.
Prereq: Department permission.

GHP 387 Cooperative Education in Cultural Resource Management. 3 hrs
Four to six months of full-time employment at a firm or agency, chosen for imparting a practical educational experience in historic preservation, historic administration or heritage interpretation. The program consists of two work experiences (GHP 387/487) alternated 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, historic preservation or selected minor. Admittance by application only.

GHP 436 Historic Preservation Field Project. 3 hrs
Specially arranged supervised field experiences and application of theoretical viewpoints to field problems in historic preservation.
Prereq: Department permission.

GHP 437 Historic Preservation Field Project. 6 hrs
Specially arranged supervised field experiences and application of theoretical viewpoints to field problems in historic preservation.
Prereq: Department permission.

GHP 478/479 Special Topics in Historic Preservation. 2/3 hrs
Treats subjects not provided for in the regular program offerings.
Prereq: Department permission.

GHP 487 Cooperative Education in Historic Preservation. 3 hrs
Four to six months of full-time employment at a firm or agency, chosen for imparting a practical educational experience in historic preservation, historic administration, or heritage interpretation. The program consists of two work experiences (GHP 387/487) alternated with full-time attendance at the University. A written report is required at the end of each employment period. Graded on a credit/no credit basis.
Prereq: Completion of junior year, historic preservation or related minor.

GHP 488/489/490 Internship in Cultural Resource Management. 4/5/6 hrs
Supervised internship in some aspect of historic preservation, historic administration or heritage interpretation that is of mutual interest to the qualified student and the place the student will work. This experience is designed to integrate academic training with practical application. May be taken only once for credit.
Prereq: Department permission and placement.

GHP 497/498/499 Independent Study. 1/2/3 hrs
Advanced study on individual basis in area 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.

HISTORY AND PHILOSOPHY

Margot I. Duley
Department Head
701 Pray-Harrold
487-1018

Professors: Richard H. Abbott, Lee R. Boyer, W. Donald Briggs, Michael T. Carlsen-Jones, George H. Cassar, Margot I. Duley, Della M. Flusche, Thomas H. Franks, Sidney Gendin, Louis B. Gimelli, Richard D. Goff, Daryl M. Hafter, Michael W. Homel, Howard F. Kamler, H. Roger King, William A. Miller, Walter G. Moss, Lester B. Scherer, Janice J. Terry, Jiu-Hwa L. Upshur, JoEllen Vinyard, James C. Waltz
Associate Professors: Robert M. Citino, Margaret Crouch, Michael Reed, Francille Wilson
Assistant Professors: Roger D. Long, Kate Mehuron

Through study in this department students can gain knowledge of past events and ideas, develop skills in analysis and evaluation, and prepare for success in a variety of positions in education or with local, state, national, and international governmental and private agencies. Students also may develop a sound foundation for post-graduate study in the humanities or social studies, or in such applied fields as law, religion, and business. Additional educational opportunities are offered regularly through overseas travel-study programs and other off-campus enrichment experiences.

The department also participates in offering honors courses, programs in public law and government, public administration, language and international trade, African American studies, technology and society, and women's studies.

Degrees:

Bachelor of Arts and Bachelor of Science

Programs of Study

Majors:

Area studies (Africa, Asia-Far East, Latin America, Middle East and North Africa, Soviet Union)
 History
 History for elementary education
 History for secondary education
 Philosophy
 Social science
 Social science for secondary education

Minors:

Area studies (Africa, Asia-Far East, Latin America, Middle East and North Africa, Soviet Union)
 History
 History for elementary education
 History for secondary, K-12, and special education-secondary
 Philosophy
 Religious studies
 Social science group minor

Graduate programs under the auspices of the department are the Master of Arts in history, the M.A. program in social science, the M.A. program in liberal studies with a concentration in social science and American culture, and the Graduate Certificate in state and local history. See the Graduate Catalog for program descriptions.

Advising

Advising is available in the History and Philosophy department for all areas of study listed above, with the exception of programs in elementary education which are the responsibility of

the Teacher Education department. In the History and Philosophy department, advising appointments should be made through the department secretary (487-1018).

History, social science, area studies: Richard Goff
 History, social science, area studies, religion: Lester Scherer
 Philosophy: to be announced

HISTORY MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in history, certification code "CC" and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), political science ("CD"), psychology ("CE"), sociology ("CF"), or social science ("CX"). The certification test covering this field is #09, "History." See page 314.

HISTORY MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, 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 #09, "History." See page 315.

SOCIAL SCIENCE MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in social science, certification code "CX," and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), history ("CC"), political science ("CD"), psychology ("CE"), or sociology ("CF"). The certification test covering this field is #06, "Social Studies." See page 315.

AREA STUDIES MAJORS

The interdisciplinary area studies majors help students understand the background and specific problems of a world cultural or geo-political area: Africa, Asia-Far East, Latin America, Middle East and North Africa, or the Soviet Union. Courses drawn from several departments supply information on the area's economy, geography, history, politics, society, and general cultural background. The program also provides a foundation for graduate work with an area of specialization or preparation for careers in government service or private business. Students who enter the program choose either a 30 semester hour major or a 20 semester hour minor in area studies.

Each of the above majors and minors list required and/or elective courses. Students also can utilize the individual directed (independent) study courses available through some departments for one, two, or three semester hours of credit to be applied as elective credit in the major area. Majors are required to minor in one of the following: anthropology (except Soviet Union), economics, geography, history, political science, or sociology; except that Latin American majors may instead elect a minor in Spanish culture, Spanish language, or Spanish literature.

AFRICA

	Sem hours
Area studies major: Africa	30
1. Required basic courses	9
ECO 201-202 Principles of Economics I-II	6
GEO 110 World Regions	3

- 2. **Required area courses** 15
 - ANT 236 Peoples and Cultures of Africa 3
 - ECO 385 Economic Development 3
 - GEO 322 Geography of Africa 3
 - HIS 347 Sub-Saharan Africa to 1885 3
 - PLS 372 Government and Politics of Sub-Saharan Africa ... 3
- 3. **Area electives** 6

Choose six credits from the following:

 - ANT 135 Introduction to Cultural Anthropology, ANT/SOC 336 Social and Cultural Change, ANT 339 Economic Anthropology
 - ECO 370 Comparative Economic Systems
 - FA 222 African and African American Art
 - GEO 240 Geographic Perspectives on Third World Development
 - GEO 518 Problems of Sub-Saharan Africa
 - HIS 342 North Africa, 1798 to Present, HIS 348 Twentieth Century Africa

ASIA-FAR EAST

- | | Sem hours |
|--|-----------|
| Area studies major: Asia-Far East | 30 |
| 1. Required basic courses | 9 |
| ECO 201-202 Principles of Economics I-II | 6 |
| GEO 110 World Regions | 3 |
| 2. Required area courses | 14 |
| ECO 385 Economic Development | 3 |
| GEO 318 Geography of Asia | 3 |
| *HIS 441 The Far East to 1800 or | |
| *HIS 442 Modern China | 3 |
| HIS 555 Studies in Far Eastern History | 2 |
| PLS 374 Asian Political Systems | 3 |
| 3. Area electives | 7 |
| Choose seven credits from the following: | |
| ANT 135 Introduction to Cultural Anthropology, ANT/SOC 336 Social and Cultural Change | |
| FA 421 History of Oriental Art | |
| GEO 240 Geographic Perspectives on Third World Development | |
| GEO/HIS 326 History and Geography of Modern Asia | |
| HIS 301 The Religions of South and East Asia, *HIS 441 The Far East to 1800, or *HIS 442 Modern China | |
| <i>*One of these courses must be taken to fulfill area requirements. The other may be taken as an area elective.</i> | |

LATIN AMERICA

Students electing the Latin American area studies major are strongly urged to minor in Spanish language, literature, or culture.

- | | Sem hours |
|---|-----------|
| Area studies major: Latin America | 30 |
| 1. Required basic courses | 9 |
| ECO 201-202 Principles of Economics I-II | 6 |
| GEO 110 World Regions | 3 |
| 2. Required area courses | 15 |
| *ANT 233 Peoples and Cultures of Mexico or *ANT 234 Peoples and Cultures of Latin America | 3 |
| ECO 385 Economic Development | 3 |
| GEO 321 Geography of Latin America | 3 |
| *HIS 355 Latin America: Colonial Period, *HIS 356 Latin America: National Period, or *HIS 457 History of Mexico | 3 |
| PLS 367 Contemporary Political Systems of Latin America | 3 |
| 3. Area electives | 6 |
| Choose six credits from the following: | |
| ANT 135 Introduction to Cultural Anthropology, *ANT 233 Peoples and Cultures of Mexico, ANT/SOC 335 | |

- The Study of Non-Primitive Societies, ANT/SOC 336 Social and Cultural Change
 - ECO 370 Comparative Economic Systems
 - GEO 240 Geographic Perspectives on Third World Development, GEO/HIS 317 History and Geography of Spanish America, GEO 512 Middle America and the Caribbean World, GEO 513 South American Lands
 - *HIS 355 Latin America: Colonial Period, *HIS 356 Latin America: National Period, *HIS 457 History of Mexico, HIS 560 Studies in Latin American History
 - SPN 302 The Cultures of Spanish America, SPN 351/352 Survey of Spanish American Literature, SPN 445 Spanish-American Prose, SPN 454 Modernism in Spanish America
- *One of these courses must be taken to fulfill area requirements. The other may be taken as an area elective.*

MIDDLE EAST AND NORTH AFRICA

- | | Sem hours |
|--|-----------|
| Area studies major: Middle East and North Africa | 30 |
| 1. Required basic courses | 9 |
| ECO 201-202 Principles of Economics I-II | 6 |
| GEO 110 World Regions | 3 |
| 2. Required area courses | 9 |
| ECO 385 Economic Development | 3 |
| *HIS 341 The Middle East, 1798 to Present or *HIS 342 North Africa, 1798 to Present | 3 |
| PLS 371 Government and Politics of the Middle East ... 3 | |
| 3. Area electives | 12 |
| Choose 12 credits from the following: | |
| ANT 135 Introduction to Cultural Anthropology, ANT 236 Peoples and Cultures of Africa, ANT/SOC 336 Social and Cultural Change | |
| ECO 585 Economic Growth and Development | |
| GEO 240 Geographic Perspectives on Third World Development, GEO 322 Geography of Africa | |
| HIS 302 Near Eastern and Western Religions, *HIS 341 The Middle East, 1798 to Present, *HIS 342 North Africa, 1798 to Present, HIS 543 Nationalism and Modernization in the Middle East and North Africa | |
| LIT 351 World Mythology | |
| MUS 536 World Music I | |
| <i>*One of these courses must be taken to fulfill area requirements. The other may be taken as an area elective.</i> | |

SOVIET UNION

- | | Sem hours |
|--|-----------|
| Area studies major: Soviet Union | 30 |
| 1. Required basic courses | 9 |
| ECO 201-202 Principles of Economics I-II | 6 |
| GEO 110 World Regions | 3 |
| 2. Required area courses | 12 |
| GEO 314 Geography of Russia and Neighboring States ... 3 | |
| HIS 344 Russia Since 1855 | 3 |
| HIS 547 Nineteenth Century Ideological Background of the Russian Revolution | 3 |
| PLS 361 Government and Politics of the U.S.S.R. 3 | |
| 3. Area electives | 6 |
| Choose nine credits from the following: | |
| ECO 370 Comparative Economic Systems | |
| GEO/HIS 316 History and Geography of Modern Europe | |
| GEO 516 Problems in Soviet Geography | |
| HIS 332 Modern Europe 1815-1919, HIS 333 Europe Since 1919, HIS 343 Russia to 1855, HIS 550 Twentieth Century Russia | |
| PLS 462 Foreign Relations of the Soviet Union | |

HISTORY MAJOR

	Sem hours
History major	30
1. Required courses	9
HIS 101 Western Civilization to 1648; or HIS 102 Western Civilization, 1648 to World War I; or HIS 103 Twentieth Century Civilization	3
HIS 123 The United States to 1877 or HIS 124 The United States, 1877 to the Present	3
HIS 300 Historical Research and Writing	3
2. Restricted electives	15
Choose six hours of courses 300-level or above in two of the following areas and three hours in the remaining area:	
A. United States and Canada	
B. Europe	
C. Africa, Asia, History of Religions, Latin America	
3. Unrestricted electives	6
Note: Students majoring in history may count no more than four 100-level courses toward the major.	
HIS 100 The Comparative Study of Religion and HIS 481 The Teaching of Social Studies may not be counted towards the major.	

PHILOSOPHY MAJOR

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 teaching, the performing arts, and the sciences. A philosophy major also prepares students for graduate work in philosophy, law, theology, and other related liberal arts subjects.

	Sem hours
Philosophy Major	30
1. Required Courses	9
PHI 130 Introduction to Logic or PHI 281 Symbolic Logic	3
PHI 230 History of Philosophy: Ancient	3
PHI 231 History of Philosophy: Modern	3
2. Electives	21
Choose four courses at the 300- or 400-level.....	12
Choose 9 credits from other philosophy courses	9
Note: Only one in each of the following pairs of courses may be counted toward the major:	
A. PHI 100 Introduction to Philosophy or PHI 110 Philosophies of Life	
B. PHI 130 Introduction to Logic or PHI 132 Intro- duction to Critical Reasoning	

SOCIAL SCIENCE MAJOR

The social science major requires a total of 36 semester hours, including electives, chosen from history, anthropology, sociology, economics, geography, and political science.

The major must include at least eight semester hours each in three of the areas listed below.

Of the 36 semester hours, at least 14 must be in courses at the 300-level or above.

Students *minoring* in any of the fields listed above may not choose any courses from that field for this major.

	Sem hours
Areas of concentration (choose three)	
1. World history	8-9
a, b. Choose two of the following:	6
HIS 101 Western Civilization to 1648; HIS 102 West- ern Civilization, 1648 to World War I; HIS 103 Twentieth Century Civilization; HIS 106 Asian and African Civilizations	

c. One world history course at the 300-level or above.....	2-3
2. United States history	8-9
a. HIS 123 The United States to 1877	3
b. HIS 124 The United States, 1877 to the Present	3
c. One United States history course at the 300-level or above	2-3
3. Anthropology	8-9
a. ANT 135 Introduction to Cultural Anthropology	3
b. An anthropology course at the 300-level or above	3
c. Any other anthropology course	2-3
4. Sociology	8-9
a. SOC 105 Introductory Sociology	3
b. A sociology course at the 300-level or above	3
c. Any other sociology course	2-3
5. Economics	8-9
a. ECO 201/202 Principles of Economics I-II	6
b. An economics course at the 300-level or above	2-3
6. Geography	8-9
a. GEO 110 World Regions	3
b. A Area III geography course at the 300-level or above	3
c. Any other area III geography course	2-3
7. Political science	8-9
a. Choose one of the following:	3
PLS 112 American Government or PLS 113 American Government Honors	
b. A political science course at the 300-level or above ...	3
c. Any other political science course	2-3

Electives

Choose courses from any of the above fields to complete the required 36 hours.

MINORS OFFERED IN THE HISTORY AND PHILOSOPHY DEPARTMENT

HISTORY

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 history, certification code "CC." The certification test covering this field is #09, "History." See page 315.

AREA STUDIES

	Sem hours
Area studies minor: Africa	20
1. Required area courses (as listed for the major)	15
2. Area electives (as listed for the major)	5
	Sem hours
Area studies minor: Asia-Far East	20
1. Required area courses (as listed for the major)	14
2. Area electives (as listed for the major)	6
	Sem hours
Area studies minor: Latin America	20
1. Required area courses (as listed for the major)	15
2. Area electives (as listed for the major)	5
	Sem hours
Area studies minor: Middle East and North Africa	20
1. Required area courses (as listed for the major)	9
2. Area electives (as listed for the major)	11
	Sem hours
Area studies minor: Soviet Union	20
1. Required area courses (as listed for the major)	12
2. Area electives (as listed for the major)	8

HISTORY

	Sem hours
Minor in history	20-21
1. Required courses	6
HIS 101 Western Civilization to 1648; HIS 102 Western Civilization, 1648 to World War I; or HIS 103 Twentieth Century Civilization	3
HIS 123 The United States to 1877 or HIS 124 The United States, 1877 to the Present	3
2. Restricted electives	12
Choose six hours of 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, History of Religions, Latin America	
3. Unrestricted electives	2-3
<i>Note:</i> No more than three 100-level courses may be counted toward the minor.	
HIS 100 The Comparative Study of Religion and HIS 481 The Teaching of Social Studies may not be counted toward the minor.	

PHILOSOPHY

	Sem Hours
Minor in Philosophy	21
1. Required Courses	6
PHI 230 History of Philosophy: Ancient	3
PHI 231 History of Philosophy: Modern	3
2. Electives	15
Choose two courses at the 300 or 400 level	6
Choose 9 credits from other philosophy courses	9
Only one in each of the following pairs of courses counts toward the minor:	
A. PHI 100 Introduction to Philosophy of PHI 110 Philosophies of Life	
B. PHI 130 Introduction to Logic or PHI 132 Introduction to Critical Reasoning	

RELIGIOUS STUDIES

	Sem hours
Minor in religious studies	20-21
1. Required course	3
HIS 100 The Comparative Study of Religion	3
2. Restricted electives*	12
Choose four courses from the following:	
PHI 215 Philosophy of Religion	
ANT 338 Anthropology of Religion	
HIS 301 The Religions of South and East Asia, HIS 302 Near Eastern and Western Religions, HIS 303 History of American Religion	
LIT 251 The Bible as Literature	
PSY 225 Psychology of Religion	
SOC 320 Sociology of Religion	
3. Electives*	5-6
Choose two additional courses from the restricted electives list or from the following:	
PHI 220 Ethics, PHI 260 Existentialism	
ANT 135 Introduction to Cultural Anthropology	
CLA 301 Mythology	
FA 107 Art History Survey I, FA 340 History of Classical Art, FA 341 History of Renaissance Art	
HIS 327 Europe in the Making, 500-1300; HIS 330 Europe in the Renaissance and Reformation	
LIT 351 World Mythology, LIT 409 The Development of American Literature, LIT 414 English Renaissance Prose and Poetry 1500-1660	

(No more than three of the seven courses in the minor may be chosen from a single area—fine arts, literature, and history.)

*Certain independent study courses and special topics courses may be counted as restricted electives or electives with the approval of the advising coordinator of religious studies.

SOCIAL SCIENCE GROUP MINOR

The social science minor requires a total of 24 semester hours, including electives, chosen from history, anthropology, sociology, economics, geography, and political science.

The minor must include at least eight semester hours each in two of the areas listed below.

Students *majoring* in any of the fields listed above may not choose any courses from that field for this minor.

This minor cannot be taken together with the social science major.

	Sem hours
Minor in social science	24
Areas of concentration (choose two)	
1. World history	8-9
a, b. Choose two of the following:	6
HIS 101 Western Civilization to 1648; HIS 102 Western Civilization, 1648 to World War I; HIS 103 Twentieth Century Civilization; HIS 106 Asian and African Civilizations	
c. One world history course at the 300-level or above	2-3
2. United States history	8-9
a. HIS 123 The United States to 1877	3
b. HIS 124 The United States, 1877 to the Present	3
c. One United States history course at the 300-level or above	2-3
3. Anthropology	8-9
a. ANT 135 Introduction to Cultural Anthropology	3
b. An anthropology course at the 300-level or above	3
c. Any other anthropology course	2-3
4. Sociology	8-9
a. SOC 105 Introductory Sociology	3
b. A sociology course at the 300-level or above	3
c. Any other sociology course	2-3
5. Economics	8-9
a. ECO 201-202 Principles of Economics I-II	6
b. An economics course at the 300-level or above	2-3
6. Geography	8-9
a. GEO 110 World Regions	3
b. An Area III geography course at the 300-level or above	3
c. Any other Area III geography course	2-3
7. Political science	8-9
a. Choose one of the following:	3
PLS 112 American Government or PLS 113 American Government Honors	
b. A political science course at the 300-level or above	3
c. Any other political science course	2-3
Electives	

Two or three courses from any of the above fields, to complete the required 24 hours.

**HISTORY COURSES
BASIC COURSES**

HIS 100 The 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 basic studies philosophy/religion requirement. Does not satisfy basic studies history requirement. Does not count for social science major or history major or minor.)

HIS 101 Western Civilization to 1648. 3 hrs

A topical survey of western civilization from its Greco-Roman origins to the 17th century. Cultural development and institutional growth are emphasized. Greco-Roman contributions, the Judeo-Christian heritage, Byzantine and Islamic cultures, European expansion and militarism, the Renaissance, and the Reformation are among the major topics considered.

HIS 102 Western Civilization, 1648 to World War I. 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.

HIS 103 Twentieth 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.

HIS 106 Asian and African Civilizations. 3 hrs

The civilizations of the Moslem world, Africa, India, and East Asia in historical perspective. Philosophical outlook, cultural development, and technological advances are emphasized with attention also being given to social and economic changes in the period since 1500.

HIS 300 Historical Research and Writing. 3 hrs

Practice and development of the historian's skills by means of frequent written student exercises. Students will examine and criticize their own and one another's work. Required of history majors.

UNITED STATES AND CANADA

HIS/LIT 107 Society in Crisis: 1848 and 1968. 6 hrs

A comparison and contrast of the social crises that culminated in two revolutionary aftermaths (1848 in Europe and 1968 in the United States and Europe), focusing on alienation, women, the rise of nationalism and ethnic consciousness, and the revolutionary outlook and its ultimate frustration. Team taught by members of the History and English Departments. *These courses must be taken concurrently and satisfy one history requirement and one literature requirement. Note: See Honors Humanities Courses, page 30.*

HIS 123 The United States to 1877. 3 hrs

A study of United States history through the Reconstruction following the Civil War.

HIS 124 The United States, 1877 to the Present. 3 hrs

A study of United States history from the end of Reconstruction to the present.

HIS 152 From the Gay Nineties to the Crash. 3 hrs

A series of biographical portraits providing an intensive look at the profound cultural changes of the era 1890 to 1930, in both Europe and the United States. Team taught by members of the History and English Departments. *This course satisfies one history or one literature requirement. Note: See Honors Humanities Courses, page 30.*

HIS 303 History of American Religion. 3 hrs

A survey of religious institutions and ideas in relation to American culture from colonial times to the present.
Prereq: One course in American history.

HIS 305 Indians of the United States. 3 hrs

An ethnohistory of Indian peoples and nations of the United States from their origins to the present.
Prereq: One course in history or department permission.

HIS 313 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.

HIS 315 History of Black Americans. 3 hrs

A history of Americans of African ancestry from colonial times to the present. Emphasizes slavery, the post-Civil War South, northward migration and urban settlement, and philosophies of racial progress.
Prereq: One course in American history.

HIS 325 The Family in History. 3 hrs

A history of the family in a selected geographical area (for example, the United States or Europe), exploring the interaction between the family and broader cultural and economic forces over time, and examining in historical perspective the various stages of life, such as childhood, adolescence, courtship, marriage, and old age.

HIS 336 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.

HIS 350 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.

HIS 362 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.
Prereq: Junior standing or HIS 123 or HIS 124.

HIS 364 United States Military History. 3 hrs

A study of the origins and developments 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.
Prereq: One course in history.

HIS 365 The Old South. 3 hrs

The South from the colonial foundations to the formation of the Confederacy in 1861.
Prereq: HIS 123 and junior standing.

HIS 380 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.
Prereq: HIS 123 or equivalent.

HIS 383 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.

HIS 385 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.
Prereq: Junior standing.

HIS 414 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.

HIS 424 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.
Prereq: HIS 124.

HIS 425 The United States from 1941 to 1963. 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.
Prereq: HIS 124.

HIS 426 The United States from 1963 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.
Prereq: HIS 124.

HIS 461 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.

HIS 463 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.
Prereq: One course in history.

HIS 464 The Old West, 1540-1890. 3 hrs
A study of Spanish settlement, the fur trade, great explorations, settlement and expansion, transportation and mining frontiers, the cattle industry and cowboy culture, and the impact on the Indians.
Prereq: One course in history.

HIS 465 United States Constitutional History. 3 hrs
A history of the development of the American Constitution from English and American colonial origins to the present.
Prereq: HIS 123 or HIS 124 or department permission.

HIS 468 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.
Prereq: HIS 123 and junior standing.

HIS 469 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 conservative thought together with their general cultural implications.
Prereq: One course in history and junior standing.

HIS 482 The Age of Washington and Jefferson. 3 hrs
The formation of the new nation during the War for Independence, the creation of the Constitution, the Federalist era, the Republican administration through Madison's term in office, the War of 1812, and postwar diplomacy.
Prereq: HIS 123 or equivalent.

HIS 486 The United States as an Emerging World Power. 3 hrs
The passing of the frontier after the Civil War, the Industrial Revolution, the big city and its problems, Populist revolt and Progressive reform, Imperialism, and World War I.
Prereq: HIS 123 or HIS 124 or equivalent.

EUROPEAN HISTORY

HIS 104 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 Pericles, Nero, Napoleon I, and Adolf Hitler. Major literary monuments 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 Honors Humanities Courses, page 30.

HIS 127 The Splendid Centuries of Austria. 3 hrs
A survey of the art, music, and literature of Austria from the 17th to early 20th century in its intellectual, political, and social setting. Baroque and Rococo art, and Classical and Romantic music and literature are considered. Extensive use is made of recordings and slides. Team taught by a member of one of the fine arts Departments and a member of the History Department. *This course satisfies one fine arts or one history requirement.* Note: See Honors Humanities Courses, page 30.

HIS 128 Russia in the Age of Tolstoy and Dostoevsky. 3 hrs
An introduction to the rise of the revolutionary movement in Russia in the half century preceding World War I due to developments in peasant, urban, and aristocratic life. Students examine selected works of literature and some art and music. Team taught by members of the English and History Departments. *This course satisfies one literature or one history requirement.* Note: See Honors Humanities Courses, page 30.

HIS 151 Reason and Revolution. 3 hrs
An examination of the transition in political history, philosophy, art, literature, and music from Puritan England and Louis XIV's France to Napoleon. Team taught by members of the Art and History departments. *This course satisfies one art or one history requirement.* Note: See Honors Humanities Courses, page 30.

HIS 290 Introduction to the History of Technology. 3 hrs
An introduction to Western technology from medieval times to the present. Examines the process of technical change, the nature of technological systems, the diffusion of technological improvements, and the role of technology in broader historical movements.

HIS 309 France to 1789. 3 hrs
A study of the main currents in early modern times with special emphasis on the impact of the Protestant Revolt and the Renaissance on French society, the rise of absolutism, and the political and intellectual background of the French Revolution.

HIS 310 France since 1789. 3 hrs
An examination of the major trends in French history since the start of the Revolution. Stresses cultural, social, economic, intellectual, and political trends, and treats the ways in which France has been a seedbed for new movements in Europe.
Prereq: HIS 102 or HIS 332.

HIS 316 History and Geography of Modern Europe. 3 hrs
An interdisciplinary and geographical-historical study of modern Europe with the geographical component emphasizing information of 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 international trade. Must be taken concurrently with GEO 316.
Prereq: GEO 110 and either HIS 101, HIS 102, or HIS 103.

HIS 323 Greek History. 3 hrs
Examines the Greeks' achievements from the Bronze Age to the Roman conquest, focusing on the period after 800 B.C. Emphasizes political, social, and economic developments; also considers literary, intellectual, and artistic accomplishments.
Prereq: One course in history or department permission.

HIS 324 Roman History. 3 hrs
Examines the Romans' achievements from earliest times to the German conquest, focusing on the period 500 B.C.-A.D. 500. Emphasizes political, social, and economic developments; also considers literary, intellectual, and artistic accomplishments.
Prereq: One course in history or department permission.

HIS 327 Europe in the Making, 500-1300. 3 hrs
Examines the combination of classical, Christian, and barbarian elements to form a dynamic civilization in a previously undeveloped area; explores the political, social, and economic developments and the literary, intellectual, and artistic accomplishments within that period.
Prereq: One course in history or department permission.

HIS 330 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.

HIS 332 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.

HIS 333 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.

HIS 335 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.

HIS 338 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 post-war Germany.
Prereq: Junior or department permission.

HIS 343 Russia to 1855. 3 hrs
A survey of political, economic, and cultural trends in the history of Russia from Rurik to the death of Tsar Nicholas I, with special emphasis on the growth of tsarist absolutism.
Prereq: Junior standing or department permission.

HIS 344 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.

HIS 411 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.

HIS 412 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 HIS 411.

HIS 427 Europe from Absolutism 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.

HIS 435 Italy since 1815. 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 new liberal republic.
Prereq: Junior standing or department permission.

HIS 456 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 dissension within the communist bloc, stability and unrest within the democracies, and the impact of U.S.-Soviet detente.
Prereq: Junior standing or department permission.

HIS 471 Social and Intellectual History of Nineteenth 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.
Prereq: Junior standing or department permission.

AFRICA, ASIA, HISTORY OF RELIGIONS, LATIN AMERICA

HIS 301 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.
Prereq: HIS 100 or HIS 106.

HIS 302 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.
Prereq: HIS 100 or HIS 101.

HIS 317 History and Geography of Spanish America. 3 hrs
An interdisciplinary geographical-historical study of Spanish America, emphasizing political, cultural, and socio-economic forces from the conquest to the present. Stresses similarities and differences within and between nations and the special relationships that exist between the nations and the United States. A requirement for majors in language and international trade. Must be taken concurrently with GEO 317.
Prereq: GEO 110 and either HIS 101, HIS 102, or HIS 103.

HIS 326 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 GEO 326.
Prereq: GEO 110 and either HIS 103 or HIS 106.

HIS 341 The Middle East, 1798 to 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.

HIS 342 North Africa, 1798 to 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.

HIS 347 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.

HIS 348 Twentieth Century Africa. 3 hrs
A detailed examination of black 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.

HIS 355 Latin America: 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.
Prereq: Junior standing or department permission.

HIS 356 Latin America: National Period. 3 hrs
Surveys the history of Latin America from the independence era to the present, stressing political, social, intellectual, and economic topics.
Prereq: Junior standing or department permission.

HIS 375 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 faced by India since 1947.
Prereq: Junior standing or department permission.

HIS 441 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.
Prereq: One history course.

HIS 442 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.
Prereq: One history course.

HIS 443 Modern Japan. 3 hrs
Japan from 1800 to the present: collapse of the shogunate, 19th century reforms, rise of the empire to great power status, defeat in World War II, postwar changes. Political, economic and cultural developments are considered.
Prereq: Junior standing or department permission.

HIS 457 History of Mexico. 3 hrs
An introduction to Mexican history from the Amerindian period through the recent past. Examines political, social, economic, and cultural developments in the area comprising the present day nation as well as those areas in North America once included in Mexico.
Prereq: Junior standing.

COOPERATIVE EDUCATION

HIS 387/487 Cooperative Education in History. 3 hrs each
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 alternated with full-time attendance at the University.
Prereq: Junior standing. History or social science major. Admission to program by application only. Department approval.

INDEPENDENT STUDY

HIS 497/498/499 Independent Study in History. 1/2/3 hrs
Study on an individual basis in areas in which the department does not currently offer formal courses. These courses are restricted to highly proficient students. Students are limited to a maximum of three semester hours of independent study in history during any semester or session.
Prereq: Department permission.

SPECIAL TOPICS

HIS 179 Special Topics in Humanities. 3 hrs
This special topics course will be used to teach some aspects of the humanities that would not regularly be explored. A new course may be taught on an experimental basis using this heading. Dependent on the course offered, the special topic may satisfy a basic studies requirement. *Note: See Honors Humanities Courses, page 30.*

HIS 277/278/279 Special Topics in History. 1/2/3 hrs
An exploration of historical subject matter not provided in other departmental offerings. Content will change from semester to semester; up to three different topics may be offered in any one semester. Students may not count more than six hours of special topics courses as credit toward the major or minor.
Prereq: One course in history or department permission.

HIS 377/378/379 Special Topics in History. 1/2/3 hrs
An exploration of historical subject matter not provided in other departmental offerings. Content will change from semester to semester; up to three different topics may be offered in any one semester. Students may not count more than six hours of special topics courses as credit toward the major or minor.
Prereq: One course in history or department permission.

HIS 477/478/479 Special Topics in History. 1/2/3 hrs
An exploration of historical subject matter not provided in other departmental offerings. Content will change from semester to semester; up to three different topics may be offered in any one semester. Students may not count more than six hours of special topics courses as credit toward the major or minor.
Prereq: One course in history or department permission.

TEACHING METHODS COURSES

GEO 348 Teaching Social Studies in Elementary Schools. 3 hrs
(See Geography and Geology Department)

HIS 481 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.

PHILOSOPHY COURSES I. BASIC STUDIES COURSES

PHI 100 Introduction to Philosophy. 3 hrs
An introduction to philosophy by the study of important philosophical thinkers, problems, and methodologies.

PHI 110 Philosophies of Life. 3 hrs
An introduction to differing accounts of what constitutes a meaningful life and how an individual can attain it. Representative topics include the notions of pleasure, love, empathy, and power as discussed by such writers as Plato, Epicurus, Nietzsche, Lao Tse, and Buddha.

PHI 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.

PHI 132 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.

PHI 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 "aesthetic" attitude? Through considering such questions, the course introduces the student to philosophical reasoning and analysis.

PHI 215 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.

PHI 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.

PHI 221 Business Ethics. 3 hrs
An examination of the relationships between contemporary business values and traditional ethical values. Students will investigate various ethical theories and critically examine by means of case studies controversial current business issues.

PHI 222 Professional Ethics. 3 hrs
An analysis of professionalism and the relationships between contemporary professional values and traditional ethical values. Students will investigate various ethical theories and analyze current ethical issues in various professions by means of controversial case studies. Issues will come from such areas as accounting, architecture, clinical psychology, computer technology, engineering, journalism, law, medicine, ministry, nursing, pharmacology, physical therapy, politics, public administration, real estate, social work, teaching, veterinary medicine, and more.

PHI 225 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, Mussolini, Marx, and Thoreau.

PHI 226 Philosophy of Women. 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.

II. OTHER COURSES

PHI 122 American Studies: Success and the Pursuit of Happiness in 19th Century America. 3 hrs
An examination of the widespread 19th-century belief that worldly success produces happiness and an exploration of the proper relationship of knowledge and power, history and progress, wealth and

happiness. Readings include such authors as Benjamin Franklin, H.D. Thoreau, William James, Mark Twain, and Horatio Alger. Team taught by faculty in English and Philosophy. *This course satisfies one philosophy or one literature requirement.* Note: See Honors Humanities Courses, page 30.

PHI 124 The Age of Wagner. 3 hrs
An exploration of the personal, intellectual, and artistic influences on Wagner's life and work and a consideration of artists influenced by Wagner. Team taught by faculty in English and Philosophy. *This course satisfies one philosophy or one literature requirement.* Note: See Honors Humanities Courses, page 30.

PHI 150 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 Thoreau, Mark Twain, Henry Adams, Aldous Huxley, Lewis Mumford, and Garrett Hardin. *This course satisfies one philosophy or one literature requirement.* Note: See Honors Humanities Courses, page 30.

PHI 151 Reason and Revolution. 3 hrs
An examination of the transition in political history, philosophy, art, literature, and music from Puritan England and Louis XIV's France to Napoleon. Team taught by faculty in Art and Philosophy. *This course satisfies one art or one history requirement.* Note: See Honors Humanities Courses, page 30.

PHI 155 Narrative in Literature and Film. 3 hrs
An introduction to cinematic concepts and terminology, focusing primarily on narrative techniques in literature and parallel devices in film. Readings include several prose forms and a text dealing with the theory of film. Team taught by faculty in English and Philosophy. *This course satisfies one literature or one philosophy requirement. Students may not earn credit in both this course and LIT 300.* Note: See Honors Humanities Courses, page 30.

PHI 179 Special Topics in Humanities. 3 hrs
This special topics course will be used to teach some aspects of the humanities that would not regularly be explored. A new course may be taught on an experimental basis using this heading. Dependent on the course offered, the special topic may satisfy a basic studies requirement. Note: See Honors Humanities Courses, page 30.

PHI 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.
Prereq: One course in philosophy other than PHI 130 or PHI 132.

PHI 231 History of Philosophy: Modern. 3 hrs
A continuation of PHI 230 History of Philosophy: Ancient. A study of important philosophical developments in Europe from the Renaissance to the early 19th century. Covers such figures as Descartes, Spinoza, Leibnitz, Hobbes, Locke, Berkeley, Hume, and Kant.
Prereq: One course in philosophy other than PHI 130 or PHI 132.

PHI 232 Nineteenth Century Philosophy. 3 hrs
An introduction to the major philosophical themes of the 19th century that dominate 20th century European thought. These 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.
Prereq: One course in philosophy other than PHI 130 or PHI 132. Recommended: PHI 230 or PHI 231.

PHI 240 American Philosophy. 3 hrs
An examination of the philosophical tradition in the United States through a study of such movements as idealism, transcendentalism, realism, and pragmatism; from Jonathan Edwards to the present day.
Prereq: One course in philosophy other than PHI 130 or PHI 132.

- PHI 260 Existentialism.** 3 hrs
An examination of contemporary existentialist thought about the nature of reality and human existence as reflected in the works of such men as Marcel, Heidegger, Sartre, and Camus and the sources of existentialism as found in the works of Kierkegaard and Nietzsche.
Prereq: One course in philosophy other than PHI 130 or PHI 132.
Recommended: PHI 231.
- PHI 277/278/279 Special Topics in Philosophy.** 1/2/3 hrs
An exploration of philosophical subject matter not provided in other department offerings.
Prereq: Department permission.
- PHI 281 Symbolic Logic.** 3 hrs
An introduction to the notation and proof procedures of symbolic logic with emphasis upon the clarification and development of the notion of a formal language.
- PHI 290 Phenomenology.** 3 hrs
The course attempts to trace the history and development of the phenomenological movement from its origins in the notion of the intentionality of consciousness, 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 also will study the impact of phenomenology on such varied fields as psychology, sociology, and literature.
Prereq: One course in philosophy other than PHI 130 or PHI 132.
Recommended: PHI 231 or PHI 260.
- PHI 310 Aesthetics.** 3 hrs
A study of philosophical issues relating to works of art and other aesthetic objects. Possible topics include the nature of aesthetic attitude, evaluation, aesthetic meaning and truth, expression in art, the nature of a work of art and basic value of art, the kinds of concepts used to talk about the arts.
Prereq: One course in philosophy other than PHI 130 or PHI 132.
- PHI 325 Theory of Knowledge.** 3 hrs
An investigation of the nature, scope, and limits of knowledge. Some possible topics are the connection between belief and knowledge, knowledge of other people's minds, the reliability of memory, the possibility of certainty in knowledge, theories of truth.
Prereq: One course in philosophy other than PHI 130 or PHI 132.
Recommended: PHI 230 or PHI 231.
- PHI 355 Philosophy of Law.** 3 hrs
A consideration of philosophical questions about the law such as: What sorts of behavior should be illegal? What is punishment supposed to accomplish? When are we justified in punishing a person? How do judges arrive at decisions? Are there really legal principles that cover all the hard cases judges must deal with or do they use their own personal moral values? What is a legal system and how does it differ from a moral code?
Prereq: One course in philosophy other than PHI 130 or PHI 132, or department permission.
- PHI 370 Philosophical Issues in Literature.** 3 hrs
This course will focus on philosophical issues relevant to one or more of the following topic areas: philosophical issues in literature and film, the politics of narrative, and recent hermeneutical theory. Readings may include selections from Paul de Man, M. M. Bakhtin, Bell Hooks, Edward Said, or Barbara Johnson. May be repeated for credit with department permission
Prereq: One course in philosophy other than PHI 130 or PHI 132.
Recommended: PHI 232, PHI 260 or PHI 290.
- PHI 375 Metaphysics.** 3 hrs
A study of questions concerning basic structure and ultimate nature of reality. Possible topics include universals and particulars, space and time, determinism and freedom, the self, materialism, idealism, substance and process.
Prereq: One course in philosophy other than PHI 130 or PHI 132.
- PHI 377/378/379 Special Topics in Philosophy.** 1/2/3 hrs
An exploration of philosophical subject matter not provided in other department offerings.
Prereq: Department permission.
- PHI 380 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 PHI 130 or PHI 132.
Recommended: PHI 325.
- PHI 442 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 treats human action and the possibility and meaning of an adequate explanation of psychological phenomena.
Prereq: Two courses in philosophy other than PHI 130 or PHI 132.
- PHI 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.
- PHI 470 Contemporary European Philosophy.** 3 hrs
An exploration of two recent developments in European thought: post-structuralist critiques of the European philosophical tradition, and the hermeneutic attempt to establish interpretation as the basis of philosophical understanding. Considers the nature of discourse, the deconstruction of subjectivity, writing as a subversive practice and the problem of gender. Possible philosophers include Kristeva, Irigaray, Spivak, Foucault, Gadamer, Ricoeur, and Derrida.
Prereq: Two courses in philosophy other than PHI 130 or PHI 132. *Recommended:* PHI 232, PHI 260, or PHI 290.
- PHI 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 PHI 130 or PHI 132. *Recommended:* PHI 231.
- PHI 477/478/479 Special Topics in Philosophy.** 1/2/3 hrs
An exploration of philosophical subject matter not provided in other department offerings.
Prereq: Department permission.
- PHI 497/498/499 Independent Study in Philosophy.** 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.

MATHEMATICS

Don R. Lick
Department Head
515 Pray-Harroid
487-1444

Professors: Larry L. Badii, Robert G. Bartle, Donald A. Buckeye, Timothy Carroll, John L. Ginther, Geraldine Green, Paul E. Howard, K.G. Janardan, Don R. Lick, Richard W. Marshall, James H. Northey, Joanne S. Rankin, Nelly S. Ullman

Associate Professors: Gisela Ahlbrandt, Rita Chattopadhyay, Shenghui Chu, David Folk, C. J. Gardiner, Bob L. Goosey, Christopher E. Hee, David C. Johnson, Walter Parry, Mohammad Rafiq, Jay Ramanathan, Kim Rescorla, Ken Shiskowski, Bette Warren

Assistant Professors: Malunoud Al-Khafaji, Lora Durham, Carla Tayeh, James R. Walter, Mary Yorke

The program in mathematics is designed to give majors certain basic courses, and to ensure a broad background, yet allow enough electives 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.

Degrees:

Bachelor of Science and Bachelor of Arts

Programs of Study

Majors:

Mathematics
 Mathematics with concentration in statistics
 Mathematics for the Elementary Teaching Certificate
 Mathematics for secondary education

Minors:

Mathematics
 Mathematics for secondary, K-12, and special education-secondary
 Mathematics with concentration in statistics
 Mathematics for the Elementary Teaching Certificate

Joint Program with Economics:

Actuarial science and economics

Advising for students desiring to pursue a major in mathematics is available from the undergraduate advising coordinators. These students are listed initially as "mathematics intent." To be accepted into one of the Mathematics Department programs, the student should go to the appropriate advising coordinator and pick up a form for student program identification. Academic Advising will update the student's computer record code to indicate the program into which the student has been accepted. Other students needing general program advising should contact the appropriate undergraduate advising coordinator or the department secretary, who will direct students to appropriate faculty members.

Without department permission, no student may receive credit in courses MTH 104, 105, 107, 112, or 119 after credit for MTH 120 has been earned.

Students majoring in mathematics must complete at least nine semester hours and minors must complete at least six semester hours from courses numbered 300 or above.

Advising Coordinators:

Mathematics: Richard W. Marshall
 Secondary mathematics education: Richard W. Marshall
 Elementary mathematics education: John L. Ginther, Donald A. Buckeye

Actuarial examinations: Nelly S. Ullman, Bette Warren
 Actuarial science and economics: Nelly Ullman and Bette Warren (mathematics), Young-Iob Chung (economics)

Graduate study leads to the master's degree in mathematics. The M.A. degree is described in the Graduate Catalog. For information, contact the graduate advising coordinator, Ken Shiskowski.

MAJORS OFFERED IN THE MATHEMATICS DEPARTMENT

Students interested in lucrative careers in business and industry are advised to take the Actuarial Examinations, Part I after completing MTH 223 Multivariable Calculus and Part II after completing MTH 471 Probability and Statistics II. These are the first two of a series of examinations sponsored by the Society of Actuaries.

MATHEMATICS

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in mathematics, certification code "EX," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #22, "Mathematics." See page 318.

MATHEMATICS FOR THE ELEMENTARY TEACHING CERTIFICATE

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." The certification test covering this field is #22, "Mathematics." See page 319.

MATHEMATICS

Sem hours

Major in mathematics 34

In addition to the 34 semester hour requirement, non-teaching majors must take MTH 211 Discrete Mathematics or CSC 330 Discrete Mathematical Structures, as well as CSC 137 Introduction to FORTRAN Programming, CSC 138 Computer Science I, or CSC 237 Computer Programming and Numeric Methods, or an equivalent course as determined by the mathematics advising coordinator.

- Required courses** 22
 - MTH 120-121 Calculus I-II 8
 - MTH 122 Elementary Linear Algebra 3
 - MTH 223 Multivariable Calculus 4
 - MTH 370 Probability and Statistics I 4
 - MTH 411 Modern Algebra with Applications or MTH 416 Linear Algebra or MTH 420 Introduction to Analysis 3
- Restricted electives** 12

Choose 12 credits from the following:

 - MTH 307 Elementary Number Theory, MTH 319 Mathematical Modeling, MTH 325 Differential Equations, MTH 341 College Geometry or MTH 342 Elementary Space-Time Geometry, MTH 372 Problems in Actuarial Studies I, MTH 406 Introduction to Computability, MTH 411 Modern Algebra with Applications, MTH 416 Linear Algebra, MTH 418 Applied Linear Algebra, MTH 419 Advanced Mathematical

Modeling, MTH 420 Introduction to Analysis, MTH 424 Introduction to Complex Variables, MTH 425 Mathematics for Scientists, MTH 426 Differential Equations II, MTH 436 Introduction to Numerical Analysis, MTH 460 Applied Survey Sampling, MTH 461 Linear Regression Analysis, MTH 462 Design and Analysis of Experiments, MTH 471 Probability and Statistics II, MTH 472 Problems in Actuarial Studies II, MTH 474 Applied Statistics, MTH 475 Applied Combinatorics

3. Recommended courses for double majors

Students electing a double major with mathematics—business, the social sciences, biological, or physical science—should consult an advising coordinator to choose appropriate courses. MTH 411 Modern Algebra with Applications, MTH 416 Linear Algebra, and MTH 420 Introduction to Analysis are strongly recommended for double majors and those preparing for graduate work.

Biology: MTH 418 Applied Linear Algebra, MTH 471 Probability and Statistics II

Business: MTH 325 Differential Equations, MTH 418 Applied Linear Algebra, MTH 436 Introduction to Numerical Analysis, MTH 471 Probability and Statistics II

Chemistry: MTH 325 Differential Equations, MTH 418 Applied Linear Algebra, MTH 425 Mathematics for Scientists, MTH 436 Introduction to Numerical Analysis

Economics: MTH 325 Differential Equations, MTH 418 Applied Linear Algebra

Physics: MTH 325 Differential Equations, MTH 416 Linear Algebra, MTH 418 Applied Linear Algebra, MTH 425 Mathematics for Scientists, MTH 436 Introduction to Numerical Analysis

Psychology: MTH 418 Applied Linear Algebra, MTH 471 Probability and Statistics II

MATHEMATICS WITH CONCENTRATION IN STATISTICS

	Sem hours
Academic major in mathematics with concentration in statistics	37
1. Required Courses	28
MTH 120-121 Calculus I-II	8
MTH 122 Elementary Linear Algebra	3
MTH 223 Multivariable Calculus	4
MTH 370 Probability and Statistics I	4
MTH 461 Linear Regression Analysis	3
MTH 462 Design and Analysis of Experiments	3
MTH 471 Probability and Statistics II	3
2. Restricted electives	9
Students must take nine hours from among the following, at least six of which must be taken from the applied statistics electives:	
<i>Applied statistics electives:</i>	
MTH 460 Applied Survey Sampling	3
MTH 474 Applied Statistics	3
<i>Mathematics Electives:</i>	
MTH 416 Linear Algebra	3
MTH 418 Applied Linear Algebra	3
MTH 420 Introduction to Analysis	3
MTH 472 Problems in Actuarial Studies II	2
MTH 475 Applied Combinatorics	3
3. Additional Requirement	3
CSC 137 Introduction to FORTRAN Programming or CSC 138 Computer Science I or CSC 237 Computer Programming and Numeric Methods	

ACTUARIAL SCIENCE AND ECONOMICS

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. The first of these covers calculus and linear algebra and the second covers mathematical statistics. MTH 372 and 472 are designed to prepare students for these examinations.

	Sem hours
Major in actuarial science and economics	60
1. Required courses	53
<i>a. Basic studies</i>	<i>9</i>
CSC 137 Introduction to FORTRAN Programming, CSC 138 Computer Science I, or CSC 237 Computer Programming and Numeric Methods	3
ECO 201-202 Principles of Economics I-II	6
<i>b. Mathematics</i>	<i>29</i>
MTH 120-121 Calculus I-II	8
MTH 122 Elementary Linear Algebra	3
MTH 223 Multivariable Calculus	4
MTH 370, 471 Probability and Statistics I and II	7
MTH 436 Introduction to Numerical Analysis	3
MTH 372, 472 Problems in Actuarial Studies I and II ...	4
<i>c. Economics</i>	<i>15</i>
ECO 301 Intermediate Macroeconomic Analysis	3
ECO 302 Intermediate Microeconomic Analysis	3
ECO 320 Labor Economics	3
ECO 341 Money and Banking	3
ECO 415 Introduction to Econometrics	3
2. Restricted electives	7
Choose electives from courses at the 300 level and above in mathematics, computer science, or economics	

MINORS OFFERED IN THE MATHEMATICS DEPARTMENT

MATHEMATICS

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 certification test covering this field is #22, "Mathematics." See page 319.

MATHEMATICS FOR THE ELEMENTARY TEACHING CERTIFICATE

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 certification test covering this field is #22, "Mathematics." See page 320.

MATHEMATICS

	Sem hours
Minor in mathematics	20
1. Required courses	14-15
MTH 120-121 Calculus I-II	8
MTH 122 Elementary Linear Algebra	3

- MTH 211 Discrete Mathematics or **MTH 360 Statistical Methods or **MTH 370 Probability and Statistics I 3-4
2. **Restricted electives** 5-6
Choose five to six credits from the following*:
MTH 223 Multivariable Calculus, MTH 307 Elementary Number Theory, MTH 319 Mathematical Modeling, MTH 325 Differential Equations, MTH 341 College Geometry or MTH 342 Elementary Space-Time Geometry, **MTH 360 Statistical Methods or **MTH 370 Probability and Statistics I, MTH 372 Problems in Actuarial Studies I, MTH 406 Introduction to Computability, MTH 411 Modern Algebra with Applications, MTH 416 Linear Algebra, MTH 418 Applied Linear Algebra, MTH 419 Advanced Mathematical Modeling, MTH 420 Introduction to Analysis, MTH 424 Introduction to Complex Variables, MTH 425 Mathematics for Scientists, MTH 426 Differential Equations II, MTH 436 Introduction to Numerical Analysis, MTH 460 Applied Survey Sampling, MTH 461 Linear Regression Analysis, MTH 462 Design and Analysis of Experiments, MTH 471 Probability and Statistics II, MTH 475 Applied Combinatorics
3. **Additional Requirement** 3
CSC 137 Introduction to FORTRAN Programming or CSC 138 Computer Science I or CSC 237 Computer Programming and Numeric Methods
**Students minorng in mathematics must complete at least six hours at EMU from courses numbered 300 or above.*
***It is not permitted to count both MTH 360 and MTH 370 on the minor.*

MATHEMATICS WITH CONCENTRATION IN STATISTICS

- | | Sem hours |
|---|-----------|
| Minor in mathematics with concentration in statistics..... | 23 |
| 1. Required courses | 14 |
| MTH 120-121 Calculus I-II | 8 |
| MTH 122 Elementary Linear Algebra | 3 |
| MTH 360 Statistical Methods or MTH 370 Probability and Statistics I | 3 |
| 2. Restricted electives | 9 |
| Students must take nine hours from among the following, at least six of which must be taken from the statistics electives: | |
| <i>Statistics electives:</i> | |
| MTH 460 Applied Survey Sampling | 3 |
| MTH 461 Linear Regression Analysis | 3 |
| MTH 462 Design and Analysis of Experiments | 3 |
| MTH 471 Probability and Statistics II | 3 |
| MTH 474 Applied Statistics | 3 |
| <i>Mathematics electives:</i> | |
| MTH 211 Discrete Mathematics | 3 |
| MTH 223 Multivariable Calculus | 4 |
| 3. Additional Requirement | 3 |
| CSC 137 Introduction to FORTRAN Programming or CSC 138 Computer Science I or CSC 237 Computer Programming and Numeric Methods | |

MATHEMATICS COURSES

- MTH 097 Pre-College Mathematics: Arithmetic.** 5 hrs
(currently offered as MTH 100)
A developmental mathematics course designed to prepare students whose current mathematics skills are insufficient for them to pass a college-level mathematics course. The course covers basic

arithmetic and problem solving in a supportive but structured setting. This course plus MTH 098 will cover the same material as MTH 099. *Credit for this course will not count toward any degree program.*

Prereq: Program placement.

MTH 098 Pre-College Mathematics: Beginning Algebra. 5 hrs
(currently offered as MTH 101)

A developmental mathematics course designed to prepare those students whose current mathematics skills are insufficient for them to pass a college-level mathematics course. The course will cover beginning algebra in a supportive but structured setting. This course plus MTH 097 will cover the same material as MTH 099. *Credit for this course will not count toward any degree program.*

Prereq: Program placement.

MTH 099 Pre-College Mathematics. 5 hrs
(currently offered as MTH 102)

A developmental mathematics refresher course designed to prepare those students whose current mathematics skills are insufficient for them to pass a college-level mathematics course. The course will cover basic arithmetic through elementary algebra in a supportive but structured setting. *Credit for this course will not count toward any degree program.*

Prereq: Program placement.

MTH 104 Intermediate Algebra. 3 hrs

A review of elementary algebra and a continuation into the study of functions, graphs and quadratic equations.

Prereq: One year of high school algebra.

MTH 105 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: One and one-half to two years high school algebra or MTH 104.

MTH 107 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: One and one-half years of high school algebra or MTH 104, and one year of plane geometry.

MTH 108 Functional Mathematics I. 3 hrs

An introductory course to acquaint the student with the principal ideas of mathematics. Includes sets, logic, study of integers, rational and real numbers, number bases, exponents and logarithms, and axiomatic geometry. Emphasis is placed on the concepts involved. Open only to prospective elementary teachers.

MTH 109 Functional Mathematics II. 3 hrs

Review and extension of the real numbers to a study of the complex numbers, elementary number theory, logic and nature of proof, basic probability and statistics, and informal geometry. Open only to prospective elementary teachers.

Prereq: MTH 108.

MTH 112 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 to review these subjects. Emphasis will be on topics from college algebra and trigonometry that are used in calculus.

Prereq: Two years high school algebra, or MTH 105 and a high school course in trigonometry, or MTH 107, or department permission.

MTH 118 Mathematical Analysis for Social Sciences I. 3 hrs
Solutions of linear equations and inequalities, vectors and matrices, linear programming, sets, probability. Emphasis on applications.

Prereq: Two years of high school algebra or MTH 104 or equivalent. Students who feel weak in algebra are encouraged to elect MTH 104 or MTH 105 first.

MTH 119 Mathematical Analysis for Social Sciences II. 3 hrs
Functions, differentiation of algebraic functions, optimization, exponential and logarithmic functions and their derivatives, an introduction to the definite integral. Emphasis on problem setup and interpretation and applications.

Prereq: Two years of high school algebra or MTH 104 or equivalent. Students who feel weak in algebra are encouraged to elect MTH 104 or MTH 105 first.

MTH 120 Calculus I. 4 hrs

Calculus of functions of a single variable; differential calculus, including limits, derivatives, techniques of differentiation, the Mean Value Theorem and applications of differentiation to graphing, optimization, rates. Integral calculus, including indefinite integrals, the definite integral, the Fundamental Theorem of Integral Calculus, and applications of integration to area and volume.

Prereq: Students who feel well-prepared in precalculus mathematics (for example, with a "B" average in at least two years of high school algebra and a course in trigonometry) may take this course without further preparation. Those weak in algebra should complete MTH 105 with a "B" or better; those weak in trigonometry should complete MTH 107 with a "B" or better. Others should enroll in MTH 112 (provided they satisfy its prerequisites).

MTH 121 Calculus II. 4 hrs

Calculus of functions of a single variable continued; additional applications of definite integration to moments, centroids, arc length, surface area, and work. Transcendental functions, infinite series, methods of integration, review of conic sections.

Prereq: MTH 120 or equivalent.

MTH 122 Elementary Linear Algebra. 3 hrs

Vectors and matrices, operations on matrices, determinants, systems of linear equations, linear independence, linear transformations, applications.

Prereq: Students with a "B" average in high school and in high school mathematics through trigonometry may take this course in their first semester. Others should enroll in MTH 105 first (and in MTH 107 if not taken in high school).

MTH 150 Mathematical Reasoning. 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: One and one-half years of high school algebra or MTH 104 or equivalent.

MTH 177/178/179 Special Topics in Mathematics. 1/2/3 hrs

These special topics courses will be used to teach some aspects of mathematics or computer science at an elementary level that would not be regularly offered. This course does not count on a regular major or minor in mathematics.

MTH 206 College Algebra and Trigonometry for Elementary Teachers. 4 hrs

Basic algebraic and trigonometric concepts. Real and complex number systems, solutions of equations and inequalities, graphs of functions, determinants, sequences and series, permutations, com-

binations, and probability. Open only to prospective elementary teachers.

Prereq: One year high school algebra, plane geometry, and MTH 109 or MTH 210 or MTH 301.

MTH 210 Algebra for Elementary Teachers. 3 hrs

Field properties, complex numbers, number sentences, introduction to coordinate geometry, nature of proof, and concept of limit. Open only to prospective elementary teachers.

Prereq: MTH 108.

MTH 211 Discrete Mathematics. 3 hrs

Logic, proofs, mathematical induction, sets, relations, equivalence and order relations, graphs, trees, functions, binary operations, semi-groups, groups, rings, fields, finite combinatorics, pigeonhole principle, permutations, combinations, discrete probabilities.

Prereq: MTH 121 and MTH 122.

MTH 223 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: MTH 121 and MTH 122 or equivalent.

MTH 240 Geometry for Elementary Teachers. 3 hrs

Informal geometry of the plane and space, congruence and measurement, elementary theorems and proof, and plane coordinate geometry. Open only to prospective elementary teachers.

Prereq: MTH 108.

MTH 270 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: MTH 105 or two years of high school algebra.

MTH 301 Advanced Topics in Elementary Mathematics. 3 hrs

Acquaints 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: MTH 109 or MTH 210 or MTH 240.

MTH 304 Middle School Mathematics Methods and Content. 3 hrs

Consideration of the mathematics program in middle school and junior high school, its organization and content, methods of teaching and learning. Not open to freshmen, sophomores, or students on academic probation.

Prereq: MTH 240 or MTH 120.

MTH 306 Teaching of High School Mathematics. 3 hrs

Consideration of the mathematics program in the high school, its organization and content, methods of teaching and learning. Does not count on the major or minor. Not open to freshmen, sophomores, or students on academic probation.

Prereq: MTH 120.

MTH 307 Elementary Number Theory. 3 hrs

Primes, Euclidean algorithm and prime factorization, congruences, multiplicative functions, quadratic residues and reciprocity, con-

tinued fractions, Diophantine equations, possible applications to cryptography, and/or primality testing.

Prereq: MTH 211.

MTH 319 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: MTH 120 and MTH 122.

MTH 325 Differential Equations. 3 hrs

First and second order differential equations with applications, linear differential equations, power series solutions, Laplace transforms.

Prereq: MTH 121 and MTH 122.

MTH 341 College Geometry. 3 hrs

An introduction to several geometries such as affine, projective, space-time, and non-Euclidean.

Prereq: MTH 120 and MTH 122.

MTH 342 Elementary Space-Time Geometry. 2 hrs

In-depth study of a geometry other than Euclidean. Both synthetic and analytic treatment of Special Relativity.

Prereq: MTH 121.

MTH 360 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-assisted statistical analysis. A statistical software package (SAS) is used.

Prereq: MTH 121.

MTH 370 Probability and Statistics I. 4 hrs

Basic concepts of probability; expectation, variance, covariance distribution functions and their application to statistical tests of hypothesis; bivariate, marginal, and conditional distributions; treatment of experimental data. Applications to problems in science and/or social science are emphasized.

Prereq: MTH 223.

MTH 372 Problems in Actuarial Studies I. 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 useful in preparing for the Actuarial Examination, Part I—General Mathematics.)

Prereq: MTH 223; a minimum GPA in mathematics of 3.4 is strongly recommended.

MTH 381 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-teaching situations and effective use of learning aids. Required of all students on early elementary and later elementary curriculums. Not open to students on academic probation.

Prereq: MTH 108 and junior standing.

MTH 382 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: MTH 210.

MTH 387 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 (MTH 387 and MTH 487) alternated with full-time attendance at the University. Use on mathematics major subject to department permission. Graded on a credit/no credit basis.

Prereq: Junior or senior majoring in mathematics, MTH 223, admittance to program by application only, department permission.

MTH 400 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: MTH 121 and MTH 122.

MTH 403 Current Research in Elementary School Mathematics. 3 hrs

A brief history of mathematics education, 1890 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: MTH 301 and MTH 381.

MTH 406 Introduction to Computability. 3 hrs

Computable functions, register machines, recursion, minimalization, Church's thesis, Turing machines, diagonal method, universal programs, decidability, recursive and recursively enumerable sets, undecidability, applications to computer science and the foundations of mathematics.

Prereq: MTH 223 or CSC 330.

MTH 411 Modern Algebra with Applications. 3 hrs

An introduction to the theory and concepts of modern algebra as well as to their role in unifying other mathematical notions and to their application in such areas as switching circuit design and coding theory: groups, rings, fields, Boolean algebras.

Prereq: MTH 121, MTH 122, and MTH 211; or department permission.

MTH 416 Linear Algebra. 3 hrs

Vector spaces, linear transformations, eigen values, inner product spaces, principal axis theorem, applications.

Prereq: MTH 121, MTH 122, and MTH 211; or department permission.

MTH 418 Applied Linear Algebra. 3 hrs

Discussion of mathematical algorithms that make wide use of linear algebra methods; their implementation in computer systems and their applications to real life problems. Numerical solution of simultaneous linear equations, the simplex algorithm, linear programming, and their applications.

Prereq: MTH 120, MTH 122; CSC 137 or CSC 138 or CSC 237 or department permission.

MTH 419 Advanced Mathematical Modeling. 3 hrs

A course involving an in-depth study of mathematical models of greater complexity than is possible in MTH 319, including both deterministic and probabilistic models. An important part of the course should include an opportunity for a student to become involved in an actual modeling problem.

Prereq: MTH 319.

MTH 420 Introduction to Analysis. 3 hrs
 Real numbers, elementary topology of the real line, sequences and series, continuity, uniform continuity, differentiation, integration, sequences and series of functions.
Prereq: MTH 121 and MTH 211; or department permission.

MTH 424 Introduction to Complex Variables. 3 hrs
 Complex numbers, analytic functions, elementary functions and their mapping properties, conformal mapping and applications; contour integrals, Cauchy-Goursat Theorem and its consequences, Taylor and Laurent series, calculus of residues.
Prereq: MTH 223.

MTH 425 Mathematics for Scientists. 3 hrs
 The scientific applications of mathematics. Topics chosen will reflect the interests of the class. Possible areas of study include Fourier series and transforms, complex variables, generalized functions, Laplace transform, Bessel functions, curve fitting, partial differential equations, and the calculus of variations. A record of topics studied each semester will be kept in the mathematics files.
Prereq: MTH 223.

MTH 426 Differential Equations II. 3 hrs
 Systems of linear differential equations, transforms, qualitative theory of systems, existence and uniqueness theorems.
Prereq: MTH 325.

MTH 436 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 non-linear systems, numeric solution of differential equations, error analysis.
Prereq: MTH 223; and CSC 137 or CSC 138 or CSC 237 or department permission.

MTH 460 Applied 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: MTH 360 or MTH 370.

MTH 461 Linear Regression Analysis. 3 hrs
 Topics include modeling a response as a simple or multiple regression model, validity of assumptions, using models for estimation and prediction, multicollinearity, auto-correlation of error terms, residual analysis, stepwise regression. A statistical software package (SAS) is used extensively.
Prereq: MTH 122 and MTH 360 or MTH 370.

MTH 462 Design and Analysis of Experiments. 3 hrs
 A basic course in principles of experimental designs 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: MTH 360 or MTH 370 or equivalent.

MTH 471 Probability and Statistics II. 3 hrs
 Nature of statistics; distributions, measure of central value and dispersion; sampling; statistical inference estimation and tests of hypothesis. Methods of computation applications and data analy-

sis will be stressed. Non-parametric statistics: sequential tests, analysis of variance.
Prereq: MTH 223, MTH 370 and CSC 137 or department permission.

MTH 472 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: MTH 471 (may be taken concurrently); a minimum GPA in mathematics of 3.4 is strongly recommended.

MTH 474 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 to assumed distributions; medians vs. means and range vs. standard deviations; demonstrations of basic theorems; randomness and independence.
Prereq: MTH 360 or MTH 370.

MTH 475 Applied Combinatorics. 3 hrs
 An introduction to general counting methods, generating functions, recurrence relations, principle of inclusion-exclusion, Polya's enumeration formula, and selected topics in combinatorics.
Prereq: MTH 223 and a computer science course.

MTH 477/478/479 Special Topics in Mathematics. 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.

MTH 480 Honors Course in Mathematics. 2 hrs
 The content of this course varies with the instructor and the individual student. It consists of advanced reading and/or an individual project of a difficult nature. The work will be done independently with periodic reports to the instructor.
Prereq: Completion of the requirements for a major with 3.5 grade point average in mathematics.

MTH 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 consists of two work experiences (MTH 387 and MTH 487) alternated with full-time attendance at the University. Use on mathematics major subject to department permission. Graded on a credit/no credit basis.
Prereq: Junior or senior majoring in mathematics, admittance to program by application only, MTH 387, department permission.

MTH 497/498/499 Independent Study in Mathematics. 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.

MUSIC

James B. Hause
Department Head
N101 Alexander
487-4380

Professors: Armand R. Abramson, Nelson Amos, Carter J. Eggers, Joseph Gurt, James B. Hause, Oscar M. Henry, Rodney L. Hill, Anthony Iannaccone, Sylvan S. Kalib, Glenda E. Kirkland, Dady Mehta, Max E. Plank, J. Whitney Prince, Leonard L. Riccinto, Edward J. Szabo, Mary D. Teal, Mary Ida Yost

Associate Professors: Ernest Brandon, Anne B. Gajda, Rachel B. Harley, Michael G. McGuire, Kristy Meretta, Louise R. Patrick, Diane Winder, Willard Zirk

Assistant Professors: Daniel Foster, Donald C. Hartmann, Kevin Miller, Garik Pedersen, David Pierce, John R. Smith, David O. Woike

The department of music offers five baccalaureate degree programs as well as cultural enrichment for all students. Music is presented in the context of a broad liberal education; as preparation for teaching of vocal and instrumental music at the elementary and secondary levels; as preparation for becoming a music therapist; as individual and group study for performance media; as basic training for professional careers as instrumentalists, singers, conductors, composers, arrangers, and music scholarship; and as preparation for concentrated graduate study and college teaching.

The department collaborates with other departments in dance, radio, television, and theatre. A marketing minor also is available to students interested in music-related businesses.

Housed in the Alexander Music Building, the department has three rehearsal halls, a recital hall, an organ recital/teaching studio, an electronic music studio, a computer lab, and 65 practice rooms.

The Music Department is a member of the National Association of Schools of Music.

Degrees:

Bachelor of Arts
 Bachelor of Music
 Bachelor of Music Education
 Bachelor of Music Therapy
 Bachelor of Science

Programs of Study

Curricula:

Music education (instrumental and vocal) for elementary education
 Music education (instrumental and vocal) for K-12 education
 Music performance
 Music therapy

Major:

Music
 Music education (instrumental and vocal) for elementary education

Minors:

General music
 Music education for elementary education

Advising is according to student interest. Advisers are posted each term in the department office, or the advising coordinator may be contacted for further information.

Advising Coordinator:

Curricula for teachers of instrumental music, vocal music, and music therapy: Mary Teal
 Curriculum for music performance: Mary Teal

Music major: Mary Teal
 General music, elementary music education minors: Mary Teal

Enrollment in any music curriculum will be determined by the results of instrumental or vocal auditions and theory-placement examinations in musicianship. All new students should write the director of music auditions and scholarships 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.

Address all correspondence to:

Department of Music
 Eastern Michigan University
 Ypsilanti, MI 48197
 (313) 487-4380

Music fees for students accepted for private music lessons are assessed according to the following applied music fee schedule:

Music majors: \$60 per semester for all instruction.

Other University students: \$60 per semester for a weekly one-hour lesson, \$30 per semester for a weekly half-hour lesson.

Students from public schools and the community, and EMU staff and families: \$90 per semester for a weekly one-hour lesson, \$45 per semester for a weekly half-hour lesson, if teacher time is available.

Student recitals are a participatory expectation of all 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. Ensemble music may be included on the programs. In such event, the recitalist must have a principal solo role in the music performed. Additional approval of senior 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.

All full-time (minimum 12 hours) music majors are required to attend a quota of music recitals and concerts each semester. Majors should consult with their major applied instructor or department adviser for specific requirements.

Graduate study leads to the Master of Arts degree in music. For description of graduate courses, see the Graduate Catalog.

MUSIC EDUCATION (INSTRUMENTAL)

MAJOR

K-12 TEACHER CERTIFICATION

Successful completion of this course of studies 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 certification test covering this field is #39, "Music Education." See page 321.

MUSIC EDUCATION (VOCAL) MAJOR

K-12 TEACHER CERTIFICATION

Successful completion of this course of studies 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 certification test covering this field is #39, "Music Education." See page 322.

MUSIC MAJOR**ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in music education, certification code "JX." The certification test covering this field is #39, "Music Education." See page 323.

CURRICULUM FOR MUSIC PERFORMANCE

The Bachelor of Music degree curriculum is available for students using voice, guitar, keyboard, or an orchestral instrument as the principal performing medium. All basic studies requirements must be completed including one approved course in cross-cultural or international studies. (Complete pattern sheet is available in the department.)

Area	Sem hours
Symbolics and communication	14-18
Requirements 1, 2, 3, 4, and 5 (page 26)	
Science and technology	9-14
Requirements 1, 2, and 3 (page 27)	
Social science	12
Requirements 1, 2, 3, and 4 (page 28)	
Arts and humanities	9
Requirements 1, 2, and 3 (page 29)	
One course in art, music, or theatre arts (automatically met by fine arts courses below)	
Fine arts	92-98
1. Applied music	40
Recommended at four semester hours for eight semesters with both a junior and senior recital required	32
Music courses chosen according to area of specialization	8
2. Supporting courses	48-52
MUS 101-102 Music Theory I-II	6
MUS 118, 128 Music Literature I, II	2
MUS 119, 129 Aural Skills I, II	2
MUS 201-202 Music Theory III-IV	6
MUS 218, 228 Music Literature III, IV	2
MUS 219, 229 Aural Skills III, IV	2
MUS 301-302 History of Music	6
MUS 413 Orchestration	2
MUS 414 Band Arranging	2
Secondary instruments	4
Ensembles	8
Conducting	2-4
3. Electives	4-6
(If a student takes a two-course sequence in conducting, only four hours of electives are available)	
Physical education and health	2
Physical education activity courses	2
(Any two courses in military science or two semesters of Marching Band may be applied)	
Total	136-149

CURRICULUM FOR MUSIC THERAPY

The Bachelor of Music Therapy degree is awarded on completion of this curriculum. The degree program is approved by the National Association for Music Therapy.

All students must take the courses specified in education and fine arts.

Area	Sem hours
Symbolics and communication	14-15
Requirements 1 and 2 (page 26)	5-6
Choose one course from the following:	

CTA 225 Listening Behavior, CTA 226 Non-Verbal Communication, CTA 227 Interpersonal Communication, CTA 374 Intercultural Communication	3
SOC 250 Social Statistics I	3
HHS 226 Computers for Health and Human Services	3
Science and technology	19-20
A course in physical science	3
BIO 105 Biology and the Human Species	4
ZOO 326 Human Physiology	3
PSY 101/102 General Psychology	3-4
PSY 360 Abnormal Psychology	3
Choose one psychology elective	3
Social science	12
Requirements 1 and 2 (page 28)	6
SOC 105 Introductory Sociology	3
SOC 202 Social Problems	3
Arts and humanities	6
Requirements 1, 2, and 3 (page 29)	6
One course in art, music, or theatre arts (automatically met in fine arts courses below)	
Education	3
SGN 251 Education of Exceptional Children	3
Fine arts	84
1. Music theory and history courses	28
MUS 101-102 Music Theory I-II	6
MUS 118, 128 Music Literature I, II	2
MUS 119, 129 Aural Skills I, II	2
MUS 201-202 Music Theory III-IV	6
MUS 218, 228 Music Literature III, IV	2
MUS 219, 229 Aural Skills III, IV	2
MUS 301-302 History of Music	6
MUS 413 Orchestration	2
2. Applied music	34
MUS 326 Conducting	2
Ensembles	4
AMU 100-300 Applied Music (principal instrument) ..	14
Minimal performance skills as recommended by the National Association for Music Therapy	14
Most students should be able to meet some of these skill requirements upon entrance or they can be achieved through the courses listed below:	
Voice: MUS 232 Voice Class and AMU 101-A01 Applied Music	2
Piano: MUS 251-254 Functional Piano and MUS 305 Keyboard Skills	6
Guitar: MUS 274 Functional Guitar	2
Secondary instrument classes	4
MUS 211 Basic Brass Class, MUS 241 Percussion, MUS 261 Basic String Class: Violin, MUS 281 Basic Woodwind Class	
3. Music therapy courses	22
MUS 103 Introduction to Music Therapy	2
MUS 221 Methods and Materials in Music Therapy	2
MUS 222-223 Pre-clinical Training Practicum in Music Therapy I-II	2
MUS 303-304 Music Therapy Principles I-III	8
MUS 404-405 Psychology of Music I-II	4
MUS 424-425 Pre-clinical Training Practicum in Music Therapy III-IV	2
MUS 488 Clinical Training in Music Therapy	2
Physical education and health	2
Choose two activity courses from the following:	
PEG 103 Couple, Square, and Ballroom Dancing; PEG 155 Jazz I; PEG 158 Folk Dancing; PEG 161 Modern Dance; PEG 255 Jazz II; PEG 258 Intermediate Folk Dancing; PEG 261 Intermediate Modern Dance	
Total	132-134

MUSIC MAJOR

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 20-24 semester hours in some other department. Students will not earn a teaching certificate by completing this major.

Students must complete all basic studies requirements including one approved course in cross-cultural or international studies. (Complete pattern sheet is available in the department.)

Area	Sem hours
Major in music	41
1. Required courses	38
MUS 101-102 Music Theory I-II	6
MUS 118, 128 Music Literature I, II	2
MUS 119, 129 Aural Skills I, II	2
MUS 201-202 Music Theory III-IV	6
MUS 218, 228 Music Literature III, IV	2
MUS 219, 229 Aural Skills III, IV	2
MUS 301-302 History of Music	6
MUS 413 Orchestration	2
MUS 414 Band Arranging	2
AMU 100-300 Applied Music (principal instrument) ..	12
MUS 251-252 Functional Piano	2
2. Electives in music	3

MINORS OFFERED IN THE MUSIC DEPARTMENT

Students seeking admission to either the general minor in music or the minor in elementary music education must complete an application at the Department of Music office and take placement tests in applied music and basic musicianship. Each must work out a course of study with a designated music adviser.

ELEMENTARY MUSIC EDUCATION 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 music education, certification code "JX." The certification test covering this field is #39, "Music Education." See page 323.

GENERAL MUSIC

Minor in general music 20 sem hours

MUSIC COURSES THEORY-LITERATURE AND HISTORY

MUS 100 Introduction to Music Theory. 3 hrs
Designed for the non-music major. A preparatory course for MUS 101 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.

MUS 101 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. Generally taken concurrently with MUS 118 and MUS 119.
Prereq: Department permission. Music majors/minors or placement examination.

MUS 102 Music Theory II. 3 hrs
Continuation of MUS 101. For music majors and minors. Generally taken concurrently with MUS 128 and MUS 129.
Prereq: MUS 101, MUS 118, MUS 119, or examination, MUS 251 or equivalents.

MUS 106 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 on-campus performances. Non-music majors only.

MUS 107 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. Non-music majors only.

MUS 118 Music Literature I. 1 hr
Stylistic analysis and aural presentation of selected musical 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 MUS 101. Generally taken concurrently with MUS 101 and MUS 119.
Prereq: Department permission. Music majors/minors.

MUS 119 Aural Skills I. 1 hr
Development of fundamental sight singing techniques as well as skills in notating performed melodic and harmonic musical examples. Objectives of the course parallel those of MUS 101. Generally taken concurrently with MUS 101 and MUS 118.
Prereq: Department permission. Music majors/minors or placement examination.

MUS 127 The Splendid Centuries of Austria. 3 hrs
A survey of the art, music, and literature of Austria from the 17th to early 20th century in its intellectual, political, and social setting. Baroque and Rococo art, and Classical and Romantic music and literature are considered. Extensive use is made of recordings and slides. Team taught by a member of one of the fine arts Departments and a member of the History Department. *This course satisfies one fine arts or one history requirement. Note: See Honors Humanities Courses, page 30.*

MUS 128 Music Literature II. 1 hr
A continuation of MUS 118. Stylistic analysis and aural presentation of selected musical 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 MUS 102. Generally taken concurrently with MUS 102 and MUS 129.
Prereq: MUS 119 or placement examination. Music majors/minors.

MUS 129 Aural Skills II. 1 hr
A continuation of MUS 119. 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 MUS 102. Generally taken concurrently with MUS 102 and MUS 128.
Prereq: Music majors/minors. MUS 101, MUS 118, MUS 119, or placement examination.

MUS 179 Special Topics in Humanities. 3 hrs
This special topics course will be used to teach some aspects of the humanities that would not regularly be explored. A new course may be taught on an experimental basis using this heading. Dependent on the course offered, the special topic may satisfy a basic studies requirement. *Note: See Honors Humanities Courses, page 30.*

- MUS 201 Music Theory III.** 3 hrs
Continuation of MUS 102 with more emphasis on harmonic, melodic, compositional, and structural techniques of 19th and 20th centuries. Generally taken concurrently with MUS 218 and MUS 219.
Prereq: MUS 102, MUS 128, MUS 129, or placement examination, MUS 252 or equivalent.
- MUS 202 Music Theory IV.** 3 hrs
Continuation of MUS 201. For music majors/minors. Generally taken concurrently with MUS 218 and MUS 219.
Prereq: MUS 201, MUS 228, MUS 229, or placement examination, MUS 253 or equivalent.
- MUS 203 Jazz Styles, History, and Analysis.** 2 hrs
Presents stylistic, historical, and analytical perspectives in jazz from its origin through the present. Includes vocal jazz, extensive use of recordings.
Prereq: Music major/minor, sophomore standing, MUS 102, or department permission.
- MUS 218 Music Literature III.** 1 hr
A continuation of MUS 128. Stylistic analysis and aural presentation of selected musical 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 MUS 201. Generally taken concurrently with MUS 201 and MUS 219.
Prereq: MUS 102, MUS 128, MUS 129, or placement examination. Music major/minors.
- MUS 219 Aural Skills III.** 1 hr
A continuation of MUS 129. Development of intermediate/advanced sight singing techniques as well as skills in notating performed melodic and harmonic musical examples. Objectives of the course parallel those of MUS 201. Generally taken concurrently with MUS 201 and MUS 218.
Prereq: Music major/minors. MUS 102, MUS 128, MUS 129, or placement examination.
- MUS 228 Music Literature IV.** 1 hr
A continuation of MUS 218. Stylistic analysis and aural presentation of selected musical 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 MUS 202. Generally taken concurrently with MUS 202 and MUS 229.
Prereq: MUS 201, MUS 218, MUS 219; or placement examination. Music major/minors.
- MUS 229 Aural Skills IV** 1 hr
A continuation of MUS 219. Development of advanced sight singing techniques as well as skills in notating performed melodic and harmonic musical examples. Objectives of the course parallel those of MUS 202. Generally taken concurrently with MUS 202 and MUS 228.
Prereq: Music major/minors. MUS 201, MUS 218, MUS 219; or placement examination.
- MUS 301 History of Music.** 3 hrs
A chronological study of Western music in its historical and cultural setting. Recognition of idioms, changing sounds, styles, and forms of music in medieval, Renaissance, and Baroque periods, approximately through 1750. Students survey the history of their instruments.
Prereq: MUS 202.
- MUS 302 History of Music.** 3 hrs
A continued chronological study of Western music in its historical and cultural setting, beginning about 1750. Emphasis similar to MUS 301 but with a strong concentration in contemporary music. Covers classical, Romantic, and present periods.
Prereq: MUS 301.
- MUS 317 Music Composition.** 2 hrs
Original writing and analysis of music, beginning with the smaller forms. May be repeated for credit.
Prereq: MUS 202 and department permission.
- MUS 341 Contrapuntal Techniques.** 2 hrs
Writing in polyphonic forms with concomitant analysis.
Prereq: MUS 202.
- MUS 401 Music Theory-Literature V.** 2 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; the study of orchestration with assignments in writing for instruments individually as well as in combination.
Prereq: MUS 202.
- MUS 402 Music Theory-Literature VI.** 2 hrs
Continuation of MUS 401.
Prereq: MUS 401.
- MUS 413 Orchestration.** 2 hrs
Practical work in setting compositions for full orchestra and various other instrumental ensembles.
Prereq: MUS 202.
- MUS 414 Band Arranging.** 2 hrs
Arranging for band; transcription from other media; original composition; analysis of representative work.
Prereq: Senior standing and department permission.

MUSIC EDUCATION

- MUS 104 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 tonality. Lecture: two hours per week. Laboratory: one hour per week.
Prereq: Elementary education or special education major.
- MUS 151 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. Non-music majors only.
- MUS 152 Class Piano.** 2 hrs
Continuation of MUS 151 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: MUS 151 or department permission.
- MUS 211 Basic Brass Class.** 1 hr
The teaching and playing of trumpet and trombone. Majors and minors only.
- MUS 212 Brass Class.** 1 hr
The teaching and playing of French horn, euphonium, and tuba. Majors and minors only.
- MUS 224 Recreational Music.** 2 hrs
For recreation majors. Specific activities, techniques, and resources for directing recreational music programs.
- MUS 232 Voice Class.** 1 hr
Improving the singing and speaking voice through the study of breath control, tone production, and diction. Not open to students with voice as a principal instrument.
Prereq: The ability to read music in the clef appropriate to student's voice classification.

- MUS 235 Diction in Singing.** 2 hrs
The physiological descriptions and laboratory practice of diction as used in singing.
Prereq: Department permission.
- MUS 241 Percussion.** 1 hr
The teaching and playing of snare drum, tympani, and keyboard percussion with an emphasis on group lesson techniques; survey of accessory instruments; introduction of methods, literature, and use of the percussion ensemble. Majors and minors only.
- MUS 261 Basic String Class: Violin.** 1 hr
The teaching and playing of the violin from a pedagogical approach. Designed primarily for music education and music therapy majors. Small and large group instruction and current methods including rote and Suzuki approaches. Majors and minors only.
- MUS 262 String Class: Viola.** 1 hr
Continuation of MUS 261; teaching and playing of viola. Majors and minors only.
Prereq: MUS 261.
- MUS 263 String Class: Cello and Double Bass.** 1 hr
The teaching and playing of cello and double bass. Majors and minors only.
- MUS 271 Beginning Classical Guitar.** 2 hrs
Group instruction in classical guitar through the study of standard beginning methods and repertoire.
Prereq: Department permission.
- MUS 272 Intermediate Classical Guitar.** 2 hrs
Group instruction in classical guitar through the study of standard intermediate methods and repertoire.
Prereq: MUS 271.
- MUS 274 Functional Guitar.** 2 hrs
Functional skills for playing guitar. Students will learn guitar notation, chords, and various accompaniment styles. Intended primarily for music education majors, music education minors, and music therapy majors.
Prereq: Department permission.
- MUS 281 Basic Woodwind Class.** 1 hr
The teaching and playing of clarinet. Majors and minors only.
- MUS 282 Woodwind Class.** 1 hr
The teaching and playing of flute and saxophone. Majors and minors only.
- MUS 283 Woodwind Class.** 1 hr
The teaching and playing of oboe and bassoon. Majors and minors only.
- MUS 320 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 classrooms. Non-majors only.
Prereq: MUS 104 and junior standing.
- MUS 330 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 principles. Concurrent placement in schools for observation and pre-student teaching experience. Open to music education majors and minors only.
Prereq: Junior standing. Completion of MUS 254 and AMU 114/115/116, or AMU 105/106 and AMU 134/135/136; MUS 202; satisfactory academic record and department permission. Coreq: MUS 326.

MUS 331 Music Education in the Secondary School. 3 hrs
Care and treatment of adolescent voices; classification and training of voices; song interpretation; organization and administration of all types of choral ensembles; theory, history, and literature of music classes; evaluation of numerous materials suitable for choral organizations and other classes in the secondary school; psychology and philosophy of music education. Open to music education majors only.

Prereq: Junior standing; satisfactory completion of MUS 330. Proficiency in piano and voice; satisfactory academic record and department permission. Coreq: MUS 328.

MUS 332 Instrumental Music in the Public Schools. 3 hrs
Designed to prepare students to teach instrumental music; covers organization of beginning classes, special problems of strings, selection of suitable materials, techniques of teaching, public relations, and other areas of interest in the development of orchestras 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.
Prereq: Junior standing.

MUS 333 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.
Prereq: MUS 332 and junior standing.

MUS 334 Band Methods. 3 hrs
Designed to assist students in their preparation as band directors in secondary schools; charting and drills for marching band; rehearsal procedures and selection of suitable materials for the concert band. Open only to instrumental music education majors. No students on academic probation.
Prereq: MUS 332 and junior standing.

MUS 361 Methods and Materials for Teaching Piano. 3 hrs
Study of methods and materials suitable for use with beginning- and intermediate-level students.
Prereq: Junior standing and department permission.

MUSIC THERAPY

MUS 103 Introduction to Music Therapy. 2 hrs
An orientation to music therapy. Introductory survey of the various impaired and disabled populations served, current career opportunities, and exploration of activities utilized by music therapists to achieve specific therapeutic goals. Observation of registered music therapists in hospital, clinical, and school settings is required.
Prereq: Admission to music therapy program or department permission.

MUS 221 Methods 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 dysfunctions. Presentation of specifically designed music therapy experiences.
Prereq: MUS 102, MUS 103.

MUS 222 Pre-clinical Training Practicum in Music Therapy I. 1 hr
Introductory field work experience in music therapy. Observation and documentation of music therapy sessions in clinical or educational settings.
Prereq: MUS 102, MUS 103.

MUS 223 Pre-clinical Training Practicum in Music Therapy II.

1 hr

Continuation of MUS 222. Leadership or co-leadership of music therapy sessions.

Prereq: MUS 222.

MUS 303 Music Therapy Principles I.

4 hrs

Examination of the research literature dealing specifically with the influence of music on behavior, including neuro-physiological effects. In-depth study of diagnostic categories and systematic application of music therapy treatment to people within these categories. Laboratory experience is required in which music therapy treatment is provided to individuals with various dysfunctions.

Prereq: Admission to music therapy program, PSY 101/102, MUS 221, MUS 222, and MUS 223.

MUS 304 Music Therapy Principles II.

4 hrs

Continuation of MUS 303. 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.

Prereq: MUS 303.

MUS 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: MUS 304 or department permission.

MUS 405 Psychology of Music II.

2 hrs

Continuation of MUS 404. In-depth exploration of empirical research in the field, with opportunities to conduct individual investigation of selected topics.

Prereq: MUS 404.

MUS 424 Pre-clinical Training Practicum in Music Therapy III.

1 hr

Field work experience in clinical or educational setting under supervision of a registered music therapist. Taken concurrently with MUS 404.

Prereq: Senior standing in music therapy program; MUS 304.

MUS 425 Pre-clinical Training Practicum in Music Therapy IV.

1 hr

Field work experience continued. Taken concurrently with MUS 405.

Prereq: MUS 424.

MUS 488 Clinical Training in Music Therapy.

2 hrs

Six months in a hospital, clinical, or educational setting affiliated with the National Association for Music Therapy.

Prereq: Senior standing, completion of all other music therapy curriculum requirements, and successful completion of guitar, keyboard and voice competency examinations.

COOPERATIVE EDUCATION**MUS 387 Cooperative Education in Music.**

3 hrs

A cooperative work experience in the field of music.

Prereq: Department permission.

MUSIC HONORS**MUS 490 Honors Course in Music.**

2 hrs

Provides superior students with the opportunity for an intensive program of independent study, original composition, performance, or 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 30).

Honors program available. Consult with department adviser, Mary Teal.

APPLIED MUSIC COURSES

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 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 graduation requirements will be recommended at that time.

At the time of admission to a music curriculum, students with piano as a secondary instrument must demonstrate the required level of proficiency for graduation in their chosen curriculum, or elect piano every semester until the required proficiency is attained.

Study is available on the following instruments:

Voice	Harp	Saxophone	Piano
Guitar*	Trumpet	Harpsichord	Organ
Percussion	Cornet	Violin	Flute
Trombone	Viola	Oboe	Euphonium
Cello	Bassoon	French horn	String bass
Clarinet	Tuba		

*Guitar does not qualify as a principal instrument in the Bachelor of Music Education curriculum. Acceptable for Bachelor of Arts, Bachelor of Science, or Bachelor of Music degree with major in music.

Principal Instruments

The baccalaureate degrees require varying semester hours of work on the principal applied music instrument as indicated in the course requirements of the specific curriculum and major.

Students are admitted to the 100 series level below at different degrees of competency; therefore some students will require more time to achieve the proficiency needed for admission to the 300 series level. Permission to move to 300 series level may be given by the faculty jury with the permission of the teacher.

Instrumental music education majors enrolled in applied music will be formed into appropriate small ensembles at the discretion of the applied teacher. The total number of hours spent each week in lessons and small ensembles will be limited to the number of credit hours.

AMU 100 01-04.

1 to 2 hrs

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 either music major curriculum.

AMU 100 11-22.

1 to 4 hrs

Lower level work for music majors and minors only. May be repeated for credit.

AMU 100 01-22.

1 hr

For music minors. May be repeated for credit.

AMU 300 31-62.

1 to 4 hrs

Upper level work for music majors and minors. May be repeated for credit.

SECONDARY INSTRUMENTS**MUS 251 Functional Piano.**

1 hr

Required for all music majors and minors with no previous piano experience. Teaches keyboard skills necessary both for accompa-

niment of simple music and for developing musical understanding basic to all coursework in music
Prereq: Majors or minors only.

MUS 252 Functional Piano. 1 hr
 Continuation of MUS 251.
Prereq: MUS 251 or equivalent. Majors or minors only.

MUS 253 Functional Piano. 1 hr
 Continuation of MUS 252. Stresses keyboard harmony, accompaniment, sight-reading, piano literature, and technique.
Prereq: MUS 252. Majors or minors only.

MUS 254 Functional Piano. 1 hr
 Continuation of MUS 253. Additional accompaniment experience, keyboard harmony, improvisation, piano literature, and techniques. Any break in the continuity of Functional Piano courses will require an audition before resumption of study.
Prereq: MUS 253 or equivalent. Majors or minors only.

MUS 305 Keyboard Skills. 2 hrs
 Sight reading, harmonization, transposition, improvisation, and score reading. Open to keyboard majors and to others by department permission.
Prereq: MUS 102, MUS 254. Majors or minors only.

MUS 326 Conducting. 2 hrs
 Fundamentals of baton technique, score reading, and interpretation of instrumental and vocal music.
Prereq: Junior standing. Majors or minors only.

MUS 327 Instrumental Conducting. 2 hrs
 A practical course in instrumental conducting; score preparation, baton technique, study of technical and musical problems in conducting traditional and contemporary works.
Prereq: MUS 326.

MUS 328 Choral Conducting. 2 hrs
 A practical course in choral conducting; baton technique, score analysis, study of technical and musical problems in conducting traditional and contemporary works.
Prereq: MUS 326.

LARGE ENSEMBLES

MUS 131 University Choir. 1 hr
 An ensemble of advanced singers. Open to all students in the University.
Prereq: Department permission.

MUS 134 University Women's Chorus. 1 hr
 Open to all women students.
Prereq: Department permission.

MUS 135 University Men's Chorus. 1 hr
 Open to all men students.
Prereq: Department permission.

MUS 136 Madrigal Ensemble. 1 hr
 Chamber music for mixed voices. Open to all students.
Prereq: Department permission.

PEG 140 Marching Band. 1 hr
 (See Department of Health, Physical Education, Recreation, and Dance.)

MUS 149 Athletic Band. 1 hr
 The Athletic Band rehearses music and performs for a schedule (determined by the instructor) of the University's men's and women's basketball and volleyball home games. The Athletic Band also may perform for post-season basketball competition. MUS 149 may not serve to fulfill Group V basic studies requirement.
Prereq: Department permission.

MUS 248 Orchestra. 1 hr
 Open to all students in the University.
Prereq: Department permission.

MUS 249 Band. 1 hr
 MUS 249 includes Concert Winds, Symphonic Band, and Marching Band. Open to all students of the University. Enrollment in MUS 249 requires attendance for the entire semester. Students electing MUS 249 may also elect PEG 140 for one credit.

MUS 350 Contemporary Chamber Ensemble. 1 hr
 Various mixed ensembles of soloists. Devoted to performance of 20th-century music, especially of the last 15 years. Compositions require performers on all instruments, solo voices, and, on occasion, electronic music. Open to all qualified musicians.
Prereq: Department permission.

MUS 351 Collegium Musicum. 1 hr
 Various ensembles of soloists—instrumental, vocal, and mixed. Opportunity to perform old and new music infrequently heard. Open to all qualified students.
Prereq: Department permission.

MUS 445 The Opera. 2 hrs
 The history and literature of opera from its inception to the present day as music and theater.
Prereq: Voice major or department permission.

MUS 448/449 Opera Workshop. 1/2 hrs
 A laboratory-performance course that deals with performance of opera scenes and, when feasible, complete works. Musical, technical, and dramatic aspects of production.
Prereq: Department permission.

SMALL ENSEMBLES

MUS 244 Jazz Ensemble. 1 hr
 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: Department permission.

MUS 245 Brass Ensemble. 1 hr
 Chamber music for brass.
Prereq: Department permission.

MUS 246 String Ensemble. 1 hr
 Chamber music for strings.
Prereq: Department permission.

MUS 247 Woodwind Ensemble. 1 hr
 Chamber music for woodwinds.
Prereq: Department permission.

MUS 475 Chamber Music Performance. 2 hrs
 Study and performance of literature for small chamber groups. May be repeated for credit.
Prereq: Department permission.

PHILOSOPHY

(SEE UNDER HISTORY AND PHILOSOPHY)

PHYSICS AND ASTRONOMY

Dan Trochet
 Department Head
 303 Strong Hall
 487-4144

Professors: James C. Porter, Dan Trochet, Jon K. Wooley
Associate Professors: Edward F. Gabl, Diane A. Jacobs, Alexandria Oakes, Richard F. Roth, Natthi Sharma, James P. Sheerin, Marshall Thomsen
Assistant Professors: Weidian Shen, Bonnie L. Wylo
Instructor: David D. Reid

The Department of Physics and Astronomy offers majors in physics, physics research, and engineering physics. Minors are offered in astronomy, general science, and physics. The department also administers interdisciplinary offerings in applied science and general science. Transfer students who wish to major in physics, physics research, or engineering physics must take a minimum of nine semester hours, and those who wish to minor must take a minimum of six semester hours of course work at the 300-level or above in this department.

Degrees:
 Bachelor of Arts and Bachelor of Science

Programs of Study

Curriculum:

Applied science

Group majors:

- Elementary science for elementary education
- General science
- General science-Biology for secondary education
- General science-Chemistry for secondary education
- General science-Earth Science for secondary education
- General science-Mathematics for secondary education
- General science-Physics for secondary education
- Physics for secondary education

Group minors:

- General science
- Physical science

Majors:

- Engineering physics
- Geophysics
- Physics research
- Physics

Minors:

- Astronomy
- Astronomy for secondary, K-12, and special education-secondary
- General science
- General science for secondary, K-12, and special education-secondary
- Physics
- Physics for secondary, K-12, and special education-secondary

Advising is assigned according to the indicated field of study.

Advising coordinators:

- Applied science curriculum: Dan Trochet
- Astronomy minor: Jon Wooley
- Engineering physics: Edward Gabl, Alexandria Oakes, Weidian Shen
- Physics major: Diane Jacobs, David Reid, Marshall Thomsen
- General science major/minor: Jon Wooley, Bonnie Wylo
- Geophysics: James Sheerin

Physics-research major: Edward Gabl, Richard Roth, James Sheerin

Graduate study leads to the master's degree in physics research, physics education, or general science. These programs are described in the Graduate Catalog.

APPLIED SCIENCE CURRICULUM

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 16-18 semester hours in each of two departments (chemistry, mathematics, or physics) and 36 semester 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 basic studies requirements, all students on this curriculum must complete all other courses specified.

Area	Sem hours
Symbolics and communication	14-18
Science and technology	68-70
1. Required courses	50
<i>Chemistry courses</i>	<i>15</i>
CHM 121-124 General Chemistry I-II with labs	8
CHM 241 Materials Science	3
CHM 281 Quantitative Analysis	4
<i>Mathematics and computer science courses</i>	<i>17</i>
MTH 120-121 Calculus I-II	8
MTH 122 Elementary Linear Algebra	2
MTH 223 Multivariable Calculus	4
CSC 237 Computer Programming and Numeric Methods ...	3
<i>Physics courses</i>	<i>18</i>
PHY 223 Mechanics, Sound, and Heat	5
PHY 224 Electricity and Light.....	5
PHY 370 Introduction to Modern Physics	3
PHY 372 Modern Physics Laboratory	1
PHY 456 Electronics for Scientists	4
2. Restricted electives	18-20
Choose 18-20 credits from one of the following groups to complete the major: chemistry, mathematics, or physics	
<i>Chemistry:</i> CHM 371, 372 Organic Chemistry I and II; CHM 373 Organic Chemistry Laboratory; CHM 461, 462 Physical Chemistry I and II; and electives chosen in consultation with advising coordinator in applied science	
<i>Mathematics:</i> MTH 325 Differential Equations, MTH 425 Mathematics for Scientists, and electives chosen in consultation with advising coordinator in applied science	
<i>Physics:</i> PHY 330 Intermediate Mechanics I, PHY 452 Electrical Measurements, PHY 471 Nuclear Physics, one of the following laboratory courses (PHY 332 Mechanics Laboratory or PHY 442 Optics Laboratory) and electives at the 300 or 400 level, chosen in consultation with the advising coordinator in applied science	
Social science	12
Arts and humanities	12-14
Practical arts	6
IT 122 Engineering Graphics I.....	3
IT 223 Engineering Graphics II	3
Physical education and health	2
Physical education activity courses	2
(Any two courses in military science may be applied)	
Electives	2-10
Total.....	124

GENERAL SCIENCE MAJORS WITH BIOLOGY MINOR SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and biology, certification code "DA." The certification tests covering this field are #16, "Science," and #17, "Biology." See page 324.

WITH CHEMISTRY MINOR SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and chemistry, certification code "DC." The certification tests covering this field are #16, "Science," and #18, "Chemistry." See page 325.

WITH EARTH SCIENCE MINOR SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and geology/earth science, certification code "DH." The certification tests covering this field are #16, "Science," and #20, "Geology/Earth Science." See page 326.

WITH MATHEMATICS MINOR SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and mathematics, certification code "EX." The certification tests covering this field are #16, "Science," and #22, "Mathematics." See page 327.

WITH PHYSICS MINOR SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and physics, certification code "DE." The certification tests covering this field are #16, "Science," and #19, "Physics." See page 329.

PHYSICS MAJOR SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in physics, certification code "DE," and, depending on the minor selected, an additional endorsement. This program of studies meets all requirements of the National Science Teachers Association. The certification test covering this field is #19, "Physics." See page 330.

GROUP MAJOR/MINOR IN GENERAL SCIENCE

This 56 semester 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 semester hour cognate minor in one of the areas listed above and a 36 hour group major composed of courses from the other four areas.

	Sem hours
Group major (36 hrs) with cognate minor (20-21 hrs)	56-57
1. Cognate minor in one of the following five science areas	20-21
Biology	20
Chemistry	20
Earth science	21
Mathematics	20
Physics	20
<i>Select courses for your minor in consultation with an adviser in the appropriate department.</i>	
2. Group major	36
With a biology minor, take the following for the group major:	
AST 205 Principles of Astronomy; CHM 121-122 General Chemistry I-II with lab; GES 108 Earth Science; GES 324 Weather; MTH 105 College Algebra; MTH 107 Plane Trigonometry; PHY 221 Mechanics, Sound, and Heat; PHY 222 Electricity and Light	28
Approved electives in chemistry, earth science, mathematics, and physics	8
With a chemistry minor, take the following for the group major:	
AST 205 Principles of Astronomy; BIO 105 Biology and the Human Species; BIO 224 Principles of Conservation; GES 108 Earth Science; GES 324 Weather; MTH 105 College Algebra; MTH 107 Plane Trigonometry; PHY 221 Mechanics, Sound, and Heat; PHY 222 Electricity and Light	32
Approved electives in biology, earth science, mathematics, and physics	4
With an earth science minor, take the following for the group major:	
AST 205 Principles of Astronomy; BIO 105 Biology and the Human Species; BIO 224 Principles of Conservation; CHM 121-122 General Chemistry I-II with lab; MTH 105 College Algebra; MTH 107 Plane Trigonometry; PHY 221 Mechanics, Sound, and Heat; PHY 222 Electricity and Light	29
Approved electives in biology, chemistry, mathematics, and physics	7
With a mathematics minor, take the following for the group major:	
AST 205 Principles of Astronomy; BIO 105 Biology and the Human Species; BIO 224 Principles of Conservation; CHM 121-122 General Chemistry I-II with lab; GES 108 Earth Science; GES 324 Weather; PHY 221 Mechanics, Sound, and Heat; PHY 222 Electricity and Light	31
Approved electives in biology, chemistry, earth science, and physics	5
With a physics minor, take the following group major:	
AST 205 Principles of Astronomy; BIO 105 Biology and the Human Species; BIO 224 Principles of Conservation; CHM 121-122 General Chemistry I-II with lab; GES 108 Earth Science; GES 324 Weather; MTH 120-121 Calculus I-II	31
Approved electives in biology, chemistry, earth science, and mathematics	5
Approved electives:	
AST 204 Astronomical Investigations; BIO 205 Field Biology; BIO 207 Elements of Ecology; BOT 221 Gen-	

eral Botany; ZOO 222 General Zoology; CHM 123 General Chemistry II; CHM 270-271 Organic Chemistry with lab; CSC 137 Introduction to FORTRAN Programming; GES 114 National Parks and Monuments; GES 200 The Oceans; GES 309 Plate Tectonics; GLG 228 Mineralogy; GLG 229 Rocks of Michigan; MTH 120 Calculus I; MTH 121 Calculus II; MTH 122 Elementary Linear Algebra; MTH 223 Multivariable Calculus; PHY 330 Intermediate Mechanics I; PHY 370 Introduction to Modern Physics; PHY 372 Modern Physics Laboratory. This list is not complete, consult with the general science adviser for other possible courses.

GEOPHYSICS MAJOR

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 persons for employment in the modern day geoscience area. This major also will prepare the student for graduate work in either geophysics, geology, or physics.

	Sem hours
Required physics and geology courses	58-60
PHY 223 Mechanics, Sound, and Heat	5
PHY 224 Electricity and Light	5
PHY 229 Strength and Elasticity of Materials	4
PHY 330 Intermediate Mechanics I	3
PHY 350 Electricity and Magnetism I	3
PHY 481 Mathematical Physics	3
GLG 160 Physical Geology	4
GLG 228 Mineralogy	3
GLG 161 Historical Geology	4
GLG 255 Field Geology I	2
GES 309 Plate Tectonics	3
GLG 326 Structural Geology	3
GLG 329 Petrology	3
GLG 330 Sedimentation and Stratigraphy	4
GLG 356 Field Geology II	3
Select two of the following:	
PHY 370 Introduction to Modern Physics	3
PHY 436 Vibration and Sound	3
PHY 452 Electrical Measurements	4
PHY 456 Electronics for Scientists	4
PHY 485 Fluid Dynamics	3
Required mathematics courses	21
MTH 120-121 Calculus I-II	8
MTH 122 Elementary Linear Algebra	3
CSC 237 Computer Programming and Numeric Methods ...	3
MTH 223 Multivariable Calculus	4
MTH 325 Differential Equations	3
Required chemistry courses	8
CHM 121-124 General Chemistry I-II with labs	8

PHYSICS RESEARCH MAJOR

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 on the graduate level is highly recommended.

	Sem hours
Major in physics research (all required courses)	70
1. Total physics and astronomy courses	49
<i>A. Required physics courses</i>	<i>37</i>
*PHY 223 Mechanics, Sound, and Heat	5
*PHY 224 Electricity and Light	5
PHY 330 Intermediate Mechanics I	3
PHY 350 Electricity and Magnetism I	3
PHY 360 Heat and Thermodynamics or PHY 462 Statistical Mechanics	3
PHY 370 Introduction to Modern Physics	3
PHY 431 Intermediate Mechanics II	3
PHY 450 Electricity and Magnetism II	4
PHY 475 Introduction to Quantum Mechanics	3
PHY 481 Mathematical Physics	3
PHY 417 Undergraduate Research Laboratory or PHY 490 Special Problems (Honors)	2
*A student changing to a physics major after completing PHY 221 Mechanics, Sound, and Heat and PHY 222 Electricity and Light may request substitution for PHY 223 Mechanics, Sound, and Heat and PHY 224 Electricity and Light. The total number of hours is not reduced by this substitution.	
<i>B. Restricted electives</i>	<i>3-12</i>
Choose three of the following laboratory courses:	
PHY 332 Mechanics Laboratory, PHY 372 Modern Physics Laboratory, PHY 442 Optics Laboratory, PHY 456 Electronics for Scientists, PHY 458 Microcomputer and Digital Electronics, PHY 471 Nuclear Physics	
<i>C. General electives in physics and astronomy</i>	<i>0-9</i>
No physics or astronomy courses numbered less than 300 are to be used as electives on this major. PHY 325 is not to be used as an elective on this major.	
2. Additional required courses	21
MTH 120-121 Calculus I-II	8
MTH 122 Elementary Linear Algebra	3
MTH 223 Multivariable Calculus	4
MTH 325 Differential Equations	3
CSC 237 Computer Programming and Numeric Methods ...	3

PHYSICS MAJOR

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 pre-medicine or pre-law or who are interested in combining physics with an allied field such as biology, chemistry, astronomy, or geology or with the field of business.

	Sem hours
Major in physics	50
1. Total physics and astronomy courses	32
<i>A. Required physics courses</i>	<i>20</i>
*PHY 223 Mechanics, Sound, and Heat	5
*PHY 224 Electricity and Light	5
PHY 330 Intermediate Mechanics I	3
PHY 350 Electricity and Magnetism I	3
PHY 370 Introduction to Modern Physics	3
PHY 406 Ethical Issues in Physics	1
*A student changing to a physics major after completing PHY 221 Mechanics, Sound, and Heat and PHY 222 Electricity and Light may request substitution for PHY 223 Mechanics, Sound, and Heat and PHY 224 Electricity and Light. The total number of hours is not reduced by this substitution.	
<i>B. Restricted electives</i>	<i>3-12</i>
Choose three of the following laboratory courses:	
PHY 332 Mechanics Laboratory, PHY 372 Modern Physics Laboratory, PHY 442 Optics Laboratory, PHY 456	

Electronics for Scientists, PHY 458 Microcomputer and Digital Electronics, PHY 471 Nuclear Physics

C. General electives in physics and astronomy 0-9

No physics or astronomy courses numbered less than 300 are to be used as electives on this major. PHY 325 is not to be used as an elective on this major.

2. **Additional required courses** 18
 MTH 120-121 Calculus I-II 8
 MTH 122 Elementary Linear Algebra 3
 MTH 223 Multivariable Calculus 4
 CSC 237 Computer Programming and Numeric Methods ... 3

ENGINEERING PHYSICS MAJOR

Students following this program will earn a Bachelor of Science degree with a major in physics and a minor in mathematics and have a strong background in engineering mechanics. Graduates will be well qualified to fill engineering-oriented positions.

	Sem hours
Concentration in physics-engineering	77
1. Required physics courses	28
PHY 223 Mechanics, Sound, and Heat	5
PHY 224 Electricity and Light	5
PHY 360 Heat and Thermodynamics	3
PHY 370 Introduction to Modern Physics	3
PHY 372 Modern Physics Laboratory	1
PHY 440 Optics	3
PHY 442 Optics Laboratory	1
PHY 456 Electronics for Scientists	4
PHY 458 Microcomputer and Digital Electronics	3
2. Physics electives	6
Choose six credits from the following:	
PHY 332 Mechanics Laboratory, PHY 406 Ethical Issues in Physics, PHY 431 Intermediate Mechanics II, PHY 436 Vibration and Sound, PHY 471 Nuclear Physics, PHY 497/498 Independent Study in Physics	
3. Required engineering mechanics courses	14
PHY 229 Strength and Elasticity of Materials	4
PHY 230 Engineering Dynamics	4
PHY 420 Engineering Physics Design	3
PHY 485 Fluid Dynamics	3
4. Required chemistry courses	8
CHM 121-122 General Chemistry I with lab	4
CHM 241-242 Materials Science with lab	4
5. Required mathematics courses	21
MTH 120-121 Calculus I-II	8
MTH 122 Elementary Linear Algebra	3
MTH 223 Multivariable Calculus	4
CSC 237 Computer Programming and Numeric Methods ... 3	
MTH 325 Differential Equations	3
6. Suggested electives	18
ENG 424 Technical Writing	3
CTA 350 Persuasion	3
ECO 201 Principles of Economics I	3
GEO 310 Energy Awareness	3
ECO 337 Energy Economics and Policies	3
PHI 130 Introduction to Logic	3

MINORS OFFERED IN THE PHYSICS AND ASTRONOMY DEPARTMENT

ASTRONOMY

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 astronomy, certification code "DO." The certification test covering this field is #21, "Astronomy." See page 331.

GENERAL SCIENCE (AVAILABLE ONLY TO MAJORS IN ONE OF THE SCIENCES)

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 science, certification code "DX." The certification test covering this field is #16, "Science." See page 331.

PHYSICS

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 physics, certification code "DE." The certification test covering this field is #19, "Physics." See page 332.

ASTRONOMY GROUP MINOR

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.

	Sem hours
Group minor in astronomy	24
1. Required courses	11
AST 204 Astronomical Investigations	1
AST 205 Principles of Astronomy	4
AST 315 Applied Astronomy	3
AST 370 Astronomical Concepts	3
2. Restricted electives	13
Choose 13 credits from approved courses in physics, astronomy, mathematics, or chemistry in consultation with the advising coordinator for astronomy.	

GROUP MINOR IN GENERAL SCIENCE

A group minor in general science must be combined with an academic major in biology, chemistry, earth science, mathematics, or physics.

	Sem hours
Group minor in general science	24
With a major in biology, take the following courses:	
AST 205 Principles of Astronomy, CHM 121-122 General Chemistry I with lab, GES 108 Earth Science, MTH 105 College Algebra, PHY 221 Mechanics, Sound, and Heat	19
Approved electives in chemistry, earth science, mathematics, or physics	5

With a **major in chemistry**, take the following courses:
 AST 205 Principles of Astronomy, BIO 105 Biology and the Human Species, GES 108 Earth Science, MTH 105 College Algebra, PHY 221 Mechanics, Sound, and Heat 19
 Approved electives in biology, earth science, mathematics, or physics 5
 With a **major in earth science**, take the following courses:
 AST 205 Principles of Astronomy, BIO 105 Biology and the Human Species, CHM 121-122 General Chemistry I with lab, MTH 105 College Algebra, PHY 221 Mechanics, Sound, and Heat 19
 Approved electives in biology, chemistry, mathematics, or physics 5
 With a **major in mathematics**, take the following courses:
 AST 205 Principles of Astronomy, BIO 105 Biology and the Human Species, CHM 121-122 General Chemistry I with lab, GES 108 Earth Science, PHY 221 Mechanics, Sound, and Heat 20
 Approved electives in biology, chemistry, earth science, or physics 4
 With a **major in physics**, take the following courses:
 AST 205 Principles of Astronomy, BIO 105 Biology and the Human Species, CHM 121-122 General Chemistry I with lab, GES 108 Earth Science, MTH 120 Calculus I 20
 Approved electives in biology, chemistry, earth science, or mathematics 4
 Approved electives: BIO 224 Principles of Conservation, CHM 123-124 General Chemistry II with lab, GES 324 Weather, CSC 137 Introduction to FORTRAN Programming, PHY 222 Electricity and Light.
 This list is not complete; consult with the general science adviser for other possible courses.

PHYSICS

	Sem hours
Minor in physics	20
1. Required physics courses	13
*PHY 223 Mechanics, Sound, and Heat	5
*PHY 224 Electricity and Light	5
PHY 370 Introduction to Modern Physics	3
*A student changing to a physics minor after completing PHY 221 Mechanics, Sound, and Heat and/or PHY 222 Electricity and Light may request substitution for PHY 223 and/or PHY 224. The total number of hours is not reduced by this substitution.	
2. Restricted electives	1-4
Choose one of the following laboratory courses: PHY 332 Mechanics Laboratory, PHY 372 Modern Physics Laboratory, PHY 442 Optics Laboratory, PHY 452 Electrical Measurements, PHY 456 Electronics for Scientists, PHY 458 Microcomputer and Digital Electronics, PHY 471 Nuclear Physics	
3. Electives in physics to complete the 20-hour minor ...	3-6
No physics courses numbered less than 300 are to be used as electives on this minor. No astronomy courses can be used on this minor.	
4. All students earning a minor in physics must also take, as a minimum, the following courses in mathematics. MTH 120-121 Calculus I-II	8

PHYSICS COURSES

PHY 100 Science for Elementary Teachers. 3 hrs
 Designed to stimulate interest in science by the use of simple and inexpensive equipment to demonstrate scientific principles. Sound, light, heat, electricity, and magnetism. Does not count toward a

physics major or minor. Open to students pursuing any curriculum for elementary teachers.

PHY 110 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 115 Physics in the Modern Home. 4 hrs
 A course for non-science majors including the areas of mechanics, heat, sound, electricity, light, and modern physics with special emphasis on application in the environment of the home. Three lecture hours and two lab hours per week. Does not count on a physics major or minor.

PHY 140 Light, Color, and Photography for Artists and Others. 4 hrs
 A course for non-scientists who wish to put their experience with optics on a scientific foundation. Based on general physical principles; emphasizes optical phenomena rather than the mathematical treatment of the phenomena. Optical instruments, the eye, color, photography, lasers, and holography. Three lecture hours and one two-hour laboratory per week. Does not count on a physics major or minor.

PHY 177/178/179 Special Topics in Physics. 1/2/3 hrs
 This special topics course will be used to teach some 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: See department for prerequisites.*

PHY 210 Musical Acoustics. 4 hrs
 For students with a major interest in music. The physical bases of sound production, transmission, and reception. Application to topics such as intervals, temperament, acoustics of rooms, and tone production in the various types of musical instruments. Does not count on a physics major or minor.

PHY 211 Elementary Physical Science. 3 hrs
 Designed particularly for teachers in elementary science. An elementary study of common machines, weather, matter, energy, heat, sound, light, magnetism, and electricity. 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. Does not count on a physics major or minor.

PHY 216 Science of High Fidelity. 3 hrs
 Scientific base of high-fidelity equipment for the home and studio. Lecture-demonstrations cover components and fundamental physics. Laboratory experiences involve basic physics and testing of modern equipment.

PHY 221 Mechanics, Sound, and Heat. 4 hrs
 A basic course in college physics for liberal arts students who desire an introduction to physics and for preprofessional students who do not require a rigorous knowledge of problem solving. All physics majors and pre-engineers must elect PHY 223. The laws of mechanics, sound, and heat with more emphasis on applications and somewhat less on problems. Laboratory: two consecutive hours, one day per week. *Prereq: MTH 105, MTH 107, or a "B" average in high school mathematics through trigonometry.*

PHY 222 Electricity and Light. 4 hrs
A continuation of PHY 221. Static and current electricity, magnetism, and light. Laboratory: two consecutive hours, one day per week.
Prereq: PHY 221.

PHY 223 Mechanics, Sound, and Heat. 5 hrs
A basic course in college physics for students majoring in physical science and those on a pre-engineering curriculum. Laws of mechanics, sound, and heat together with their application. Laboratory: two consecutive hours, one day per week.
Prereq: MTH 120-121 (MTH 121 may be taken concurrently).

PHY 224 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 223.

PHY 229 Strength and Elasticity of Materials. 4 hrs
Fundamental principles of mechanics applied to solids. Equilibrium, elasticity, stress and strain, generalized Hooke's Law. Tension, torsion, shear, bending, deflection of beams, theory of columns, and strain energy. Four lecture-recitation periods per week.
Prereq: PHY 223.

PHY 230 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, MTH 121, MTH 122.

PHY 256 Introduction to Electronics. 3 hrs
An introduction to electronic circuits and electronics devices for medical technology students and others desiring familiarization with electronics. Two lecture hours and one three-hour laboratory period per week. Does not apply on physics majors or minors.
Prereq: MTH 105.

PHY 277/278/279 Special Topics in Physics. 1/2/3 hrs
This special topics course will be used to teach some 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: See department for prerequisites.

PHY 296 Science in Science Fiction. 3 hrs
Current science fiction in paperback edition serves as a springboard for a wide-ranging study of the physical sciences. Does not count on a physics major or minor.

PHY 297/298/299 Independent Study in Physics. 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.

PHY 325 Methods of Teaching the Physical Sciences. 3 hrs
A study of strategies and procedures used in secondary school teaching. Students will be provided with the opportunity to familiarize themselves with the newer science curricula; visit secondary school classrooms; present classroom demonstrations and conduct laboratory work; learn to use modern teaching aids, especially the computer, in classroom teaching; and develop means of evaluating cognitive and affective learning. Two recitation and two laboratory hours per week. Open to prospective teachers following the junior-senior high school curriculum who are majoring or minoring in general science or a physical science. Not

open to students on academic probation. Does not count on physics major or minors.

Prereq: Junior standing or department permission.

PHY 330 Intermediate Mechanics I. 3 hrs
The statics and dynamics of a particle, projectiles with air resistance, central forces, dynamics of a system of particles, vibrational motion and pendulums.
Prereq: PHY 224, MTH 121, MTH 122.

PHY 332 Mechanics Laboratory. 1 hr
A laboratory course providing experimental studies in intermediate mechanics. Three hours of laboratory per week.
Prereq: PHY 330; may be taken concurrently.

PHY 350 Electricity and Magnetism I. 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 fields; 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 force; and electromagnetic induction.
Prereq: PHY 224, MTH 223.

PHY 360 Heat and Thermodynamics. 3 hrs
An intermediate course in the fundamentals of heat and thermodynamics. Thermal expansion, specific heat, change of state, heat transfer, elementary kinetic theory, thermodynamic laws, entropy, and other thermodynamic functions.
Prereq: PHY 222/224, MTH 223.

PHY 370 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: MTH 120 and PHY 222 or PHY 224.

PHY 372 Modern Physics Laboratory. 1 hr
A laboratory course providing experimental studies in such areas as late classical, relativistic, quantum, and nuclear physics. Three hours of laboratory per week.
Prereq: PHY 370; may be taken concurrently.

PHY 377/378/379 Special Topics in Physics. 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.

PHY 387 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 (PHY 387 and PHY 487) alternated with full-time attendance at the University. Use on physics major or minor subject to department permission. Offered on a graded credit/no credit basis.
Prereq: Junior standing. Admittance by application only.

PHY 390/391 Physics Project. 2 hrs each
A suitable project in physics is to be done on an individual basis. Arrangements must be made with a physics staff member before the beginning of the semester.
Prereq: Department permission.

PHY 397/398/399 Independent Study in Physics. 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.

PHY 406 Ethical Issues in Physics. 1 hr
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: PHY 224.

PHY 417 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. Open to seniors nearing completion of a physics major.

Prereq: Department permission.

PHY 420 Engineering Physics Design. 2 hrs
This course seeks to integrate knowledge of wide-ranging topics in engineering physics in order to solve design problems. Major emphasis is placed on a group-oriented term project which must successfully be completed from concept through analysis to layout and report.

Prereq: At least 30 hours of physics courses or department permission.

PHY 431 Intermediate Mechanics II. 3 hrs
A continuation of PHY 330. Mechanics of a rigid body, generalized coordinates, the Lagrangian and Hamiltonian functions, relative motion.

Prereq: PHY 330, MTH 223.

PHY 433 Robot Motions. 3 hrs
This course provides an introduction to the kinematics, dynamics, and trajectory control of robot manipulators.

Prereq: PHY 330.

PHY 436 Vibration and Sound. 3 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 columns; electro-acoustic transducers; architectural acoustics.

Prereq: PHY 221/223 and PHY 222/224; MTH 223.

PHY 440 Optics. 3 hrs
An intermediate course dealing with fundamentals of geometrical and physical optics. Reflection, refraction, lenses and optical instruments, spectrometers and spectra, interference, diffraction and polarization.

Prereq: PHY 221/223 and PHY 222/224; MTH 121.

PHY 442 Optics Laboratory. 1 hr
A laboratory course providing experimental studies in geometrical, physical, and quantum optics. Three hours of laboratory per week.

Prereq: PHY 440; may be taken concurrently.

PHY 450 Electricity and Magnetism II. 4 hrs
A brief review of electrostatics and magnetostatics. The following topics will be covered: Faraday's Law, displacement current, Maxwell's equations, Poynting vector, plane wave solutions, polarization, wave propagation in dielectrics and conductors, disper-

sion, Fresnel's equations, guided waves, dipole radiation, Lienard-Wiechert potentials, and radiation theory.

Prereq: PHY 350; MTH 325.

PHY 452 Electrical Measurements. 4 hrs

An intermediate course in electricity. The fundamental principles involved in measuring electric and magnetic quantities, the use of high grade electrical apparatus. Experiments 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.

Prereq: PHY 221/223 and PHY 222/224.

PHY 456 Electronics for Scientists. 4 hrs

Theory and application of passive and semiconductor circuit elements. Analog and digital circuit analysis and design problems. Lecture: three hours per week. Laboratory: three hours per week.

Prereq: PHY 222/224 and MTH 121.

PHY 458 Microcomputer and Digital Electronics. 4 hrs

Physical and logical structure of microcomputer systems. Interface techniques and applications to measurements. Basic digital electronics used in microcomputers: logic gates, memories, and interface circuits. Laboratory: three consecutive hours, one day per week.

Prereq: PHY 456 or department permission.

PHY 462 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.

Prereq: PHY 224, MTH 223.

PHY 463 Finite Element Analysis. 3 hrs

An introduction to the concepts and methods of finite element analysis. Finite element computer programs are used in this course to analyze stresses in materials and to solve problems in acoustics, heat flow, and electricity and magnetism.

Prereq: PHY 330, CSC 137 or CSC 237 or ORI 215.

PHY 471 Nuclear Physics. 4 hrs

Radioactivity, scintillation counters, cloud chambers, particle accelerators, transmutation of the elements, waves and particles, fission, fusion, stellar energies, nuclear reactors, cosmic rays, nuclear forces. Laboratory: two consecutive hours, one day per week.

Prereq: PHY 370 and MTH 121.

PHY 475 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 Schroedinger and Heisenberg equations to elementary systems, Pauli's theory of electron spin.

Prereq: PHY 370, MTH 223.

PHY 477/478/479 Special Topics in Physics. 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.

Prereq: See department for prerequisites.

PHY 481 Mathematical Physics. 3 hrs

Advanced mathematical topics 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 transforms, eigen-value functions, perturbation and group theory, special functions.

Prereq: MTH 325 and PHY 330.

PHY 485 Fluid Dynamics. 3 hrs

An introduction to the statics and dynamics of real and ideal fluids: properties of fluids, mathematical models, dimensional analysis, boundary layer flow, flow in pipes, compressible, incompressible, laminar, and turbulent flow.

Prereq: PHY 230 or PHY 330; PHY 360.

PHY 487 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 (PHY 387 and PHY 487) alternated with full-time attendance at the University. Use on physics major or minor subject to department permission. Offered on a graded credit/no credit basis.

Prereq: PHY 387. Admittance by application only.

PHY 490/491 Special Problems (Honors Courses). 2 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.

Prereq: 20 semester hours of physics, a "B" average in physics, and department permission.

PHY 495 Readings in Physics (Honors Course). 1 hr

Designed to give individual students a planned intensive reading program in some field of physics, the subject being chosen jointly by the student and the instructor. A part of this course will be the presentation of an hour-long talk in the chosen subject at an open meeting of the Physics Department staff and students.

Prereq: 20 semester hours of physics and department permission.

PHY 497/498/499 Independent Study in Physics. 1/2/3 hrs

An extensive 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.

ASTRONOMY COURSES

AST 203 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 scheduled a few evenings each semester. AST 204 may be taken concurrently with this course. Cannot be applied toward a physics major or minor.

AST 204 Astronomical Investigations. 1 hr

A laboratory course for the beginning astronomy student. The techniques and concepts of astronomy. Two hours of laboratory per week.

Prereq or coreq: AST 203 or AST 205.

AST 205 Principles of Astronomy. 4 hrs

An astronomy course for students desiring a comprehensive introduction to astronomy. Topics discussed in AST 203 are covered in more detail and additional topics are introduced. Especially recommended for science students. AST 204 may be taken concurrently. Not open to students with credit in AST 203. May count on the 30-hour physics major.

AST 297/298/299 Independent Study in Astronomy. 1/2/3 hrs

An intensive study of a problem or group of problems under the direction of a department faculty member.

Prereq: Approval of the faculty member and department permission.

AST 315 Applied Astronomy. 3 hrs

The practical aspects of astronomy such as the analysis of observational data, astronomical coordinate systems, determination of time, and position on the earth. May count on the 30-hour physics major.

Prereq: AST 205, MTH 120 (may be taken concurrently).

AST 370 Astronomical Concepts. 3 hrs

Topics introduced in AST 205 are discussed in a more rigorous fashion. Celestial mechanics, binary stars, and topics in astronomy and astrophysics also are presented.

Prereq: AST 205, PHY 223, PHY 224 (may be taken concurrently). MTH 120, MTH 121 (may be taken concurrently).

AST 379 Special Topics. 3 hrs

This special topics course will be used to teach some aspects of astronomy at an advanced level that would not be regularly offered. A new course may be taught on an experimental basis with this offering.

Prereq: Department permission

AST 497/498/499 Independent Study in Astronomy. 1/2/3 hrs

An intensive study of a problem or group of problems under the direction of a department faculty member.

Prereq: Approval of the faculty member and department permission.

POLITICAL SCIENCE

Joanna V. Scott
Department Head
601 Pray-Harroid
487-3113

Professors: Robert C. Grady, Benjamin T. Hourani, James D. Johnson, Karen E. Lindenberg, James S. Magee, Joseph F. Ohren, Barnabas A. Racz, Leonas Sabaliunas, M. Hisham Sabki, Joanna Scott

Associate Professors: Ronald E. Brown, David W. Hortin, F. Elaine Martin, James W. Pfister, Laura A. Reese, Raymond A. Rosenfeld

Assistant Professor: Adrian J. Lottie

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.

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.

Degrees:

Bachelor of Arts and Bachelor of Science

Programs of Study

Majors:

Political science
Political science for elementary education
Political science for secondary education
Public administration
Public law and government
Public safety administration

Minors:

Political science
Political science for elementary education
Political science for secondary, K-12, and special education-secondary
Public administration
Public law and government

Pre-Professional Program:

Pre-law

Advising is coordinated by the Political Science Office. Faculty advisers 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.

Advising Coordinators:

Political science: Robert C. Grady
Public administration: Benjamin T. Hourani
Public law and government: David W. Hortin
Pre-law: David W. Hortin

Graduate study in the Department of Political Science leads to a Master of Public Administration degree or an interdisciplinary Master of Arts in social science with a concentration in political science. The M.P.A. and M.A. programs are described in the Graduate Catalog.

POLITICAL SCIENCE MAJOR SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies 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"), or social science ("CX"). The certification test covering this field is #10, "Political Science." See page 334.

POLITICAL SCIENCE MAJOR ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in political science, certification code "CD." The certification test covering this field is #10, "Political Science." See page 336.

POLITICAL SCIENCE MAJOR

Students majoring in political science are expected to complete PLS 112 American Government or PLS 113 American Government Honors prior to beginning the required core courses and to complete the required core courses within their first 18 hours in the major. At least four courses in the major numbered 300 or above must be completed at Eastern Michigan University. A maximum of three semester hours of independent study or internship/cooperative education courses may be applied to the 30 semester hours required for the major.

	Sem hours
Major in political science	30
1. Required course	3
PLS 112 American Government or PLS 113 American Government Honors	3
2. Required core courses	9
Choose three courses from the following:	
PLS 210 Introduction to Political Analysis	3
PLS 211 Introduction to Comparative Government	3
PLS 212 Introduction to International Politics	3
PLS 213 Introduction to Political Thought	3
3. Area of concentration	9
Choose three courses from one of the three groups listed below. If Group I is chosen, the three concentration courses must be in Subgroup A.	
<i>Group I—American politics, public law, and administration</i>	
<i>Subgroup A: Group I area concentration</i>	
PLS 202 State and Local Government	3
PLS 216 Municipal Government	3
PLS 270 Public Administration	3
PLS 280 The American Presidency	3
PLS 312 American Constitutional Law I	3
PLS 327 American Foreign Policy Process	3
PLS 330 Urban Politics	3
PLS 358 Parties, Elections, and Interest Groups	3
PLS 359 Public Opinion and Propaganda	3
PLS 364 The Legislative Process	3
PLS 381 Public Policy Analysis	3
PLS 385 Judicial Process and Behavior	3
PLS 470 Seminar in Political Science	3

Subgroup B: Group I other electives

PLS 301 The American Legal System	3
PLS 313 American Constitutional Law II	3
PLS 315 Consumer Law and Politics	3
PLS 332 Intergovernmental Relations and Federalism	3
PLS 334 Personnel Administration in Government	3
PLS 335 Labor in American Politics	3
PLS 352 Politics of Government Budgeting	3
PLS 365 Women and Politics	3
PLS 387 Cooperative Education in Political Science	3
PLS 431 Theories of Public Organization	3
PLS 456 Criminal Law I	3
PLS 480 Field Seminar in Political Science/Public Administration	3
PLS 486 Internship in Political Science/Public Administration	3
PLS 487 Cooperative Education in Political Science	3
PLS 488 Internship in Political Science/Public Administration	6
PLS 489 Internship in Political Science/Public Administration	9

Group II—Comparative politics and international relations

PLS 341 International Law	3
PLS 342 International Organizations	3
PLS 354 Government and Politics of Canada	3
PLS 361 Government and Politics of the U.S.S.R.	3
PLS 367 Contemporary Political Systems of Latin America	3
PLS 371 Government and Politics of the Middle East ...	3
PLS 372 Government and Politics of Sub-Saharan Africa ...	3
PLS 374 Asian Political Systems	3
PLS 412 Comparative Legal Systems	3
PLS 462 Foreign Relations of the Soviet Union	3
PLS 470 Seminar in Political Science	3

Group III—Political theory and methods

PLS 308 Political Violence and Revolution	3
PLS 310 Methods of Political Research	3
PLS 382 Politics and the 21st Century	3
PLS 410 Political Science in Fiction	3
PLS 418 20th Century Political Theory	3
PLS 420 Democracy and Power	3
PLS 422 American Political Theory	3
PLS 470 Seminar in Political Science	3

4. Restricted electives 9

At least two of these elective courses (six semester hours) must be in one of the two groups not selected for concentration. The other elective (three semester hours) may be chosen from any of the courses offered by the Political Science Department, including independent studies, special topics, internship/cooperative education, and courses listed under Subgroup B in Group I.

PUBLIC ADMINISTRATION MAJOR

Public administration focuses on applied aspects of government policies including their socio-economic environment, theories of public organization, public personnel administration, public budgeting and accounting, public policy analysis, decision-making in public bureaucracies, bureaucratic communications and public relations, administrative leadership, public service and collective bargaining, judicial administration, and legislative administration.

The major is interdisciplinary, involving political science, economics, sociology, business administration, computer science/business computer systems, and English composition. Students who complete the major have access to a broad range of careers in government service or business or enter graduate or professional schools for further study.

A minor is to be selected in consultation with a public administration adviser. Recommended are: computer science, economics, general business, management, and writing. Other appropriate minors include communication, conservation and resource use, criminology and criminal justice, gerontology, historic preservation, journalism, labor studies, land use analysis, military science, public law and government, and social work.

With permission of the public administration adviser, six semester hours of internship credit (PLS 480, PLS 486, PLS 488, or PLS 489) or six semester hours of cooperative education credit (PLS 387 and PLS 487) may be substituted for two of the restricted electives.

Courses to be completed prior to beginning the major are:
PLS 112 or PLS 113 American Government or PLS 202 State and Local Government
ECO 201-202 Principles of Economics I-II
SOC 105 Introductory Sociology

	Sem hours
Major in public administration	36
1. Required courses	18
PLS 270 Public Administration	3
PLS 334 Personnel Administration in Government	3
PLS 352 Politics of Government Budgeting	3
PLS 381 Public Policy Analysis	3
PLS 431 Theories of Public Organization	3
ACC 246 Accounting for Public Administrators	3
2. Restricted electives	18
Choose one course from each of the following six categories:	
a. ECO 350 Government Finance, ECO 455 Cost-Benefit Analysis	
b. CSC 137 Introduction to FORTRAN Programming, ORI 215 End-User Computing	
c. SOC 250 Social Statistics I, ORI 265 Business Statistics I, ECO 310 Economic Statistics	
d. PLS 310 Methods of Political Research, SOC 304 Methods in Sociological Research	
e. ENG 225 Intermediate English Composition, JRN 314 Writing for Public Relations, ENG 328 Writing: Style and Language, ENG 424 Technical Writing, MGT 202 Business Communications	
f. PLS 216 Municipal Government, PLS 330 Urban Politics, PLS 332 Intergovernmental Relations and Federalism, PLS 470 Seminar in Political Science	

CURRICULUM FOR PUBLIC SAFETY ADMINISTRATION

The Public Safety Administration Program is an interdisciplinary program involving coursework in three Departments in 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—law enforcement, public safety, fire protection, private security, and corrections—with a competency based curriculum resting on a strong liberal arts foundation.

The public safety manager's focus is on public policy, politics, and administration. The public safety manager is concerned with 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. But the administrator'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 an interdisciplinary foundation group, an administration group, and a public safety administration component including three areas: a public safety administration group, an area concentration, and an academy or internship component. The program combines both major and minor requirements, and graduating students will be awarded a baccalaureate degree in public administration.

Transfer students from associate degree programs in related fields can matriculate into the program (students transferring from another college must complete all basic studies coursework as required by the University for the bachelor's degree).

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 I-B-2. CTA 124 Fundamentals of Speech (3)
 I-B-3. *One of the following:*
 CTA 227 Interpersonal Communication (3)
 ENG 326 Research Writing (3)
 *CTA 374 Intercultural Communication (3)
 I-B-4. SOC 250 Social Statistics I (3)
 I-B-5. IDT 201 Microcomputer Applications in Technology (3)
 II-B-1. *One of the following:*
 CHM 119 Fundamentals of Chemistry (4)
 PHY 221 Mechanics, Sound, and Heat (4)
 II-B-2. PSY 101 General Psychology (3)
 II-B-3. See inside back cover
 III-B-1. See inside back cover
 III-B-2. See inside back cover
 III-B-3. SOC 105 Introductory Sociology (3)
 III-B-4. SOC 202 Social Problems (3)
 IV-B-1. See inside back cover
 IV-B-2. See inside back cover
 IV-B-3. See inside back cover
 IV-B-4. See inside back cover
 Physical education, military science, or equivalent (2)

Sem hours

Public Administration Core

1. **Foundation Group** 15
 ANT 135 Introduction to Cultural Anthropology or SOC
 214 Racial and Cultural Minorities 3
 PLS 202 State and Local Government or PLS 216
 Municipal Government or PLS 330 Urban Politics .. 3
 PLS 313 American Constitutional Law II or CRM 372
 Criminal Justice in Contemporary Society 3
 CTA 352 Communication in Negotiation or CTA 354
 Organizational Communication 3
 PLS 310 Methods of Political Research or SOC 304
 Methods in Sociological Research 3
 2. **Administration Group** 15
 PLS 270 Public Administration 3
 PLS 334 Personnel Administration in Government 3
 PLS 352 Politics of Government Budgeting 3
 PLS 381 Public Policy Analysis 3
 PLS 431 Theories of Public Organization 3

Public Safety Administration Focus

1. **Public Safety Administration Group** 12
 IDT 380 Planning and Decision-Making for Public Safety 3
 IDT 381 Public Relations and Public Safety 3
 PLS 450 Managing Public Safety Agencies 3
 PLS 451 Seminar in Public Safety Administration 3
 2. **Area Concentration** 15
 Students must select three courses from one and two
 courses from the other concentration below:
 Police/Fire Administration
 CRM 431 Police in Modern Society 3
 IDT 433 Arson Investigation 3
 IDT 434 Hazardous Materials 3

- IDT 435 Incident Command 3
 PLS 456 Criminal Law I 3
Corrections Administration
 HED 390 Drug Use and Abuse 3
 IDT 255 Emergency Preparedness Planning 3
 PSY 360 Abnormal Psychology 3
 CRM 430 Sociology of Corrections 3
 IDT 475 Managing Correctional Agencies and Facilities 3
 3. **Academy or Internship/Coop** 6
 Pre-service students must complete an internship or coop-
 erative education placement or an accredited acad-
 emy program; in-service students may substitute
 credits from an accredited academy program
 PLS 488 Internship in Public Administration 6

PUBLIC LAW AND GOVERNMENT MAJOR

Public law and government offers students a broad foundation in political science with a concentration in public law. It provides course work in constitutional law, civil liberties and civil rights, substantive and procedural criminal law, the law and the legal process, the courts, the judicial process, and judicial administration. Although the emphasis is on American public law, course work also is offered in international law and comparative legal systems. Careers accessible to students selecting this major include law, court administration, paralegal service, legislative service, other government service, opinion research, journalism, teaching, business, and elective public office. Some students enter graduate or professional schools, including law school. Students are expected to complete PLS 112 or PLS 113 American Government prior to beginning this major. At least four courses in the major numbered 300 or above must be completed at Eastern Michigan University. A maximum of six semester hours of independent study or internship/cooperative education may be applied to the 36 semester hours required for the major.

Sem hours

- Major in public law and government** 36
 1. **Required courses** 9
 PLS 301 The American Legal System 3
 PLS 312/313 American Constitutional Law I/II 3
 PLS 341 International Law or PLS 412 Comparative
 Legal Systems 3
 2. **Restricted electives** 9
 Choose one course in each of the following three groups:
 Group I-American politics and administration
 PLS 202 State and Local Government; PLS 216 Municipal
 Government; PLS 270 Public Administration; PLS
 280 The American Presidency; PLS 327 American
 Foreign Policy Process; PLS 330 Urban Politics; PLS
 332 Intergovernmental Relations and Federalism; PLS
 334 Personnel Administration in Government; PLS
 335 Labor in American Politics; PLS 352 Politics of
 Government Budgeting; PLS 358 Parties, Elections,
 and Interest Groups, PLS 359 Public Opinion and
 Propaganda; PLS 364 The Legislative Process; PLS
 365 Women and Politics; PLS 381 Public Policy
 Analysis; PLS 431 Theories of Public Organization
 Group II-Comparative politics and international relations
 PLS 211 Introduction to Comparative Government, PLS
 212 Introduction to International Politics, PLS 342
 International Organizations, PLS 354 Government
 and Politics of Canada, PLS 361 Government and
 Politics of the U.S.S.R., PLS 367 Contemporary Po-
 litical Systems of Latin America, PLS 371 Govern-
 ment and Politics of the Middle East, PLS 372
 Government and Politics of Sub-Saharan Africa, PLS
 374 Asian Political Systems, PLS 462 Foreign Rela-
 tions of the Soviet Union

Group III-Political theory and methods

PLS 210 Introduction to Political Analysis, PLS 213 Introduction to Political Thought, PLS 308 Political Violence and Revolution, PLS 310 Methods of Political Research, PLS 382 Politics and the 21st Century, PLS 410 Political Science in Fiction, PLS 418 20th Century Political Theory, PLS 420 Democracy and Power, PLS 422 American Political Theory

3. **Other electives** 12
Choose four courses from the following:
PLS 312 American Constitutional Law I, PLS 313 American Constitutional Law II, PLS 315 Consumer Law and Politics, PLS 341 International Law, PLS 385 Judicial Process and Behavior, PLS 387 Cooperative Education in Political Science, PLS 412 Comparative Legal Systems, PLS 456 Criminal Law I, PLS 470 Seminar in Political Science, PLS 480 Field Seminar in Political Science/Public Administration, PLS 486 Internship in Political Science/Public Administration, PLS 487 Cooperative Education in Political Science, PLS 488 Internship in Political Science/Public Administration, PLS 489 Internship in Political Science/Public Administration, PLS 497/498/499 Independent Study in Political Science
4. **Cognate electives** 6
Choose one course from each of the following two categories:
 - a. HIS 465 United States Constitutional History, PHI 355 Philosophy of Law
 - b. SOC/CRM 412 Law and Society, CRM 460 Criminal Law II

MINORS OFFERED IN THE POLITICAL SCIENCE DEPARTMENT

POLITICAL SCIENCE

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 reconunendation for endorsement in political science, certification code "CD." The certification test covering this field is #10, "Political Science." See page 336.

POLITICAL SCIENCE

Students must complete at least three courses in the political science minor numbered 300 or above at Eastern Michigan University. A maximum of three semester hours of independent study or internship/cooperative education may be applied to the 21 semester hours required for the minor.

	Sem hours
Minor In political science	21
1. Required course	3
PLS 112 American Government or PLS 113 American Government Honors	3
2. Required core courses	6
Choose two courses from the following:	
PLS 210 Introduction to Political Analysis, PLS 211 Introduction to Comparative Government, PLS 212 Introduction to International Politics, PLS 213 Introduction to Political Thought	
3. Area of concentration	6
Choose two courses from one of the three areas of concentration (Groups I, II, and III) listed under the political science major	

4. **Other electives** 6
Choose one course from one of the two areas of concentration not chosen for the concentration. The other elective may be chosen from any of the courses offered by the Department of Political Science

PUBLIC ADMINISTRATION

	Sem hours
Minor In public administration	24
1. Required course	3
PLS 270 Public Administration	3
2. Restricted electives	12
Choose four of the following courses:	
PLS 334 Personnel Administration in Government, PLS 352 Politics of Government Budgeting, PLS 381 Public Policy Analysis, PLS 431 Theories of Public Organization	
ACC 246 Accounting for Public Administrators	
ECO 350 Government Finance	
3. Electives	9
Choose three courses from the remaining required or elective courses in the public administration major. With permission of a public administration adviser, three semester hours of internship credit (PLS 480, 486, 488, or 489) or three semester hours of cooperative education credit (PLS 387 or 487) may be applied to the public administration minor.	

PUBLIC LAW AND GOVERNMENT

Students must complete at Eastern Michigan University at least three courses in the public law and government minor numbered 300 or above. A maximum of four semester hours of independent study or internship/cooperative education courses may be applied to the 24 semester hours required for this minor.

	Sem hours
Minor in public law and government	24
1. Required courses	6
PLS 301 The American Legal System	3
Choose one course from the following:	3
PLS 312 American Constitutional Law I, PLS 313 American Constitutional Law II, PLS 341 International Law, PLS 412 Comparative Legal Systems	
2. Restricted electives	6
Choose one course from two of the three groups (I, II, and III) under restricted electives in the public law and government major	
3. Other electives	9
Choose three courses from those listed as other electives in the public law and government major	
4. Cognate electives	3
Choose one course from the following:	3
HIS 465 United States Constitutional History	
LAW 403 Employment Law, LAW 479 Special Topics in Business Law	
PHI 355 Philosophy of Law	
SOC/CRM 412 Law and Society, CRM 460 Criminal Law ■	

PRE-PROFESSIONAL PROGRAM IN PRE-LAW

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 Political Science Department provides counseling for pre-law 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 pre-law students to plan their own academic programs. Given the increasing competitiveness of admission to law school, it is doubly 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 pre-law 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 also enter law school to enhance their career potential.

Whatever major/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 pre-law advisers are advanced English composition, persuasive speech, logic, and accounting. Mathematics and science courses are frequently cited as helpful in developing needed analytical skills.

Pre-law 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 Political Science, Sociology, Economics, History and Philosophy, and Marketing departments. The major and minor in public law and government, offered by the Political Science Department, provide a firm foundation on which to build a career in law.

POLITICAL SCIENCE COURSES

PLS 112 American Government. 3 hrs
A study of the institutions and processes of American national government. Includes critical comparisons with major foreign governmental systems. Satisfies the political science requirement of all curriculums. Not open to those with credit in PLS 113.

PLS 113 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 governmental systems. Satisfies the political science requirement of all curriculums. Not open to those with credit in PLS 112.

PLS 202 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. Satisfies the political science requirements of all curriculums.
Prereq: PLS 112/113, or department permission.

PLS 210 Introduction to Political Analysis. 3 hrs
A study of the conceptual and analytical foci 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.
Prereq: PLS 112/113.

PLS 211 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, principally but not exclusively European.
Prereq: PLS 112/113.

PLS 212 Introduction to International Politics. 3 hrs
The fundamentals of great power politics, the impact of efforts at international organization.
Prereq: PLS 112/113.

PLS 213 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.
Prereq: PLS 112/113.

PLS 216 Municipal Government. 3 hrs
A study of forms and functions of municipal government.
Prereq: PLS 112/113/202.

PLS 270 Public Administration. 3 hrs
The nature of public administration; problems connected therewith—direction and organization; recruitment, training, and promotion of personnel; maintenance of loyalty and efficiency.
Prereq: PLS 112/113/202.

PLS 277/278/279 Special Topics in Political Science. 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 as long as different topics are studied, but it may be taken only twice for credit toward a major or minor in political science.
Prereq: PLS 112/113/202.

PLS 280 The American Presidency. 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: PLS 112/113/202.

PLS 297/298/299 Independent Study in Political Science. 1/2/3 hrs
Approved studies on an individual basis in areas in which the department does not offer formal courses.
Prereq: PLS 112/113/202.

PLS 301 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.
Prereq: PLS 112/113/202.

PLS 308 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.
Prereq: PLS 112/113/202.

PLS 310 Methods of Political Research. 3 hrs
Acquaints students with philosophic and methodological problems and analytic techniques in the study of politics.
Prereq: PLS 112/113/202.

PLS 312 American Constitutional Law I. 3 hrs
PLS 313 American Constitutional Law II. 3 hrs
The environment of judicial decision-making will be ascertained 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.
Prereq: PLS 112/113/202.

PLS 315 Consumer Law and Politics. 3 hrs
A study of the politics of the consumer movement; executive, legislative, and judicial responses to consumer demands at the federal, state, and local levels. Investigation of the body of legislation and court decisions that affect the consumer in the market place.
Prereq: PLS 112/113/202.

PLS 327 American Foreign Policy Process. 3 hrs
An introduction to the formulation and execution of American foreign policy, including consideration of the role of public opinion, the press, interest groups, Congress, the president, deterrence theory, and decision-making in crisis situations.
Prereq: PLS 112/113/202.

PLS 330 Urban Politics. 3 hrs
An examination of the urban political environment in the United States; structure, processes, power relationships, ethnic considerations, fiscal constraints, and selected specific policy areas are considered.
Prereq: PLS 112/113/202.

PLS 332 Intergovernmental Relations and Federalism. 3 hrs
A study of intergovernmental relations in the United States focusing on recent trends in the federal system. Examines significant developments and alternatives in shared governmental responsibilities, such as metropolitan reorganization, grant programs, and regionalism.
Prereq: PLS 112/113/202.

PLS 334 Personnel Administration in Government. 3 hrs
An examination of the basic personnel management practices of public bureaucracies. Topics include the development of the merit system and the civil service; public sector requirements for hiring, promotion, pay, and benefits; discipline and grievance handling; the development and impact of public sector collective bargaining.
Prereq: PLS 112/113/202.

PLS 335 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 voter mobilization; American labor voting patterns; the political impact of labor organization on the civil service; American role in international union affairs.
Prereq: PLS 112/113/202.

PLS 341 International Law. 3 hrs
An introduction to the principles and practices of public international law. The origin and development, the nature and sources of international law. Special emphasis will be placed upon the legal problems of peace and war and the future perspectives of international law in the relations of nations.
Prereq: PLS 112/113/202.

PLS 342 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.
Prereq: PLS 112/113/202.

PLS 352 Politics of Government Budgeting. 3 hrs
An analysis of the political significance and the procedures of governmental budgeting in the United States.
Prereq: PLS 112/113/202.

PLS 354 Government and Politics of Canada. 3 hrs
Analysis of the Canadian political system in terms of historical background; political environment; constitutional structure; legislative, ex-

ecutive, and judicial processes; political parties and pressure groups; public opinion and voting behavior; political problems and trends.
Prereq: PLS 112/113.

PLS 358 Parties, Elections, and Interest Groups. 3 hrs
The organization, operation, and function of American political parties and their impact on the American political system. The impact of interest groups and elections is also stressed.
Prereq: PLS 112/113.

PLS 359 Public Opinion and Propaganda. 3 hrs
The nature, formation, measurement, and role of public opinion; the structure of control and the performance of the mass media; the nature of techniques, strategies, and effects of propaganda.
Prereq: PLS 112/113.

PLS 361 Government and Politics of the U.S.S.R. 3 hrs
A study of Soviet political institutions including constitutional developments, structure, and operation of the government. Emphasis placed on the role of the Communist Party.
Prereq: PLS 112/113/202.

PLS 364 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: PLS 112/113.

PLS 365 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 selected European and Asian political systems.
Prereq: PLS 112/113.

PLS 367 Contemporary Political Systems of Latin America. 3 hrs
A study of the governmental structure and the nature of political activity in selected Latin-American nations, with an emphasis on issues such as urbanization, military influence, students, and labor, and the development of political parties.
Prereq: PLS 112/113/202.

PLS 371 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: PLS 112/113/202.

PLS 372 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, multi-racial conflict, and politics of independent states in sub-Saharan Africa.
Prereq: PLS 112/113/202.

PLS 374 Asian Political Systems. 3 hrs
A study of the politics and government of China, Japan, the mainland Southeast Asian states, Indonesia, and India.
Prereq: PLS 112/113/202.

PLS 377/378/379 Special Topics in Political Science. 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 as long as different topics are studied, but it may be taken only twice for credit toward a major or minor in political science.
Prereq: PLS 112/113/202.

- PLS 381 Public Policy Analysis.** 3 hrs
An advanced course in public administration dealing with modern administrative techniques, budget analysis, the politics of resource allocation, and regulatory problems.
Prereq: PLS 270.
- PLS 382 Politics and the 21st Century.** 3 hrs
A study of the political and public policy directions of the future. Consideration will be given to world-wide political developments and alternative political futures as affected by accelerating socio-political and technological change.
Prereq: PLS 112/113/202.
- PLS 385 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 structures and functions, decision-making procedures and political ideology, and judicial review.
Prereq: PLS 112/113/202.
- PLS 387 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 (PLS 387 and PLS 487) alternated with full-time attendance at the University. Applications of credit toward political science programs subject to department approval. Graded credit/no credit.
Prereq: Junior standing. Major in political science, public administration, or public law and government. Departmental recommendation required.
- PLS 410 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 essayists, aphorists, dramatists, pamphleteers, poets, and novelists.
Prereq: Political science major or minor. At least nine hours of political science course work completed. Junior or senior standing or department permission.
- PLS 412 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 selected foreign countries.
Prereq: PLS 112/113/202.
- PLS 418 20th Century Political Theory.** 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: PLS 112/113.
- PLS 420 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: PLS 210/213/225.
- PLS 422 American Political Theory.** 3 hrs
A concise survey of American political thought. The origins, growth, and present state of American political ideologies will be examined.
Prereq: PLS 112/113/202.
- PLS 431 Theories of Public Organization.** 3 hrs
An introduction to theories of organization as related to public bureaucracies in a democratic political context.
Prereq: PLS 270 or department permission.
- PLS 450 Managing Public Safety Agencies.** 3 hrs
Analysis of public sector management elements, including planning, organizing, leading, controlling, and communicating, presented in the context of and applied to internal police/fire and corrections administration.
Prereq: PLS 270 and PLS 431, or department permission.
- PLS 451 Seminar in Public Safety Administration.** 3 hrs
A capstone seminar in the public safety administration concentration; integrates previous coursework in law, management, and politics by focusing on contemporary problems and issues in public safety operations, including attention to leadership, organizational conflict, and resource allocation/utilization; utilizes a case approach.
Prereq: Senior standing and department permission.
- PLS 456 Criminal Law I.** 3 hrs
A study of criminal law currently in use in the United States with emphasis upon the way its basic concepts function; its principal components and problems central to its impact upon the political system.
Prereq: PLS 112/113.
- PLS 462 Foreign Relations of the Soviet Union.** 3 hrs
A study of Soviet foreign policy, methods, and related problems from 1917 to the present. The Sino-Soviet rift and its implications.
Prereq: PLS 112/113/202.
- PLS 470 Seminar in Political Science.** 3 hrs
Examination and utilization of research techniques in the preparation of a major seminar paper in political science, public administration, or public law and government.
Prereq: PLS 112/113/202.
- PLS 477/478/479 Special Topics in Political Science.** 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 as long as different topics are studied, but it may be taken only twice for credit toward a major or minor in political science.
Prereq: PLS 112/113/202.
- PLS 480 Field Seminar in Political Science/Public Administration.** 3 hrs
Designed to help students relate their field experience to some aspect of political science or public administration.
Prereq: Department permission.
- PLS 486/488/489 Internship in Political Science/Public Administration.** 3/6/9 hrs
Extends classroom learning through practical experience with legislative, administrative, and other public sector agencies at all levels of government. Open to majors and minors in political science and public administration.
Prereq: Department permission.
- PLS 487 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 (PLS 387 and PLS 487) alternated with full-time attendance at the University. Applications of credit toward political science programs subject to department approval. Graded credit/no credit.
Prereq: Senior standing. PLS 387. Departmental recommendation required.
- PLS 497/498/499 Independent Study in Political Science.** 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.

PSYCHOLOGY

Kenneth W. Rusiniak
 Department Head
 537 Mark Jefferson
 487-1155

Professors: Jeffrey Dansky, Dennis J. Delprato, Barry Fish, Monroe Friedman, Norman Gordon, V. Kay Hodges, Peter A. Holmes, Stuart A. Karabenick, John Knapp, Jerry O'Dell, James Roff, Kenneth W. Rusiniak, Alida S. Westman, Zakhour I. Youssef

Associate Professors: Marilyn K. Bonem, Barbara E. Brackney, John L. McManus

Assistant Professors: James Todd, Silvia Von Kluge

Psychology, as a discipline, is concerned with the experience, behavior, needs, desires, and potentialities of human beings. It is basic to many career fields and to any life pursuit where other human beings are encountered.

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.

Degree:

Bachelor of Science

Programs of Study:

Major:

Psychology
 Psychology for secondary education

Minor:

Psychology
 Psychology for secondary, K-12, and special education-secondary

Advising is available to all students and can be obtained from any department faculty. It is recommended that students see a faculty member specializing in the area of the student's interest if graduate study is anticipated. Information may be obtained in the psychology office.

Advising coordinator: Kenneth W. Rusiniak

Graduate study leads to a master's degree in psychology with programs in general psychology, clinical psychology, and clinical behavioral psychology. Also offered is the specialist's degree in school psychology. These programs are described in the Graduate Catalog.

PSYCHOLOGY MAJOR

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in psychology, certification code "CE," and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), history ("CC"), political science ("CD"), sociology ("CF"), or social science ("CX"). The certification test covering this field is #11, "Psychology." See page 337.

PSYCHOLOGY MAJOR

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 degree is required to enter professional career work.

	Sem hours
Major in psychology	30
1. Required courses	13-14
PSY 101/102 General Psychology	3-4
PSY 205 Quantitative Methods in Psychology	3
PSY 301 Introductory Experimental Psychology	4
PSY 453 History and Systems of Psychology	3
2. Restricted electives	12
Choose one course from each of the following groups:	
<i>Adjustment and personality</i>	
PSY 360 Abnormal Psychology, PSY 451 Dynamics of Personality	
<i>Biological</i>	
PSY 357 Sensation and Perception, PSY 457 Physiological Psychology, PSY 458 Comparative Animal Behavior	
<i>Learning and motivation</i>	
PSY 304 Learning, PSY 356 Motivation	
<i>Developmental and social</i>	
PSY 309 Social Psychology, PSY 321 Child Psychology	
3. Electives	4-5
Choose four or five credits in consultation with advising coordinator.	

MINORS OFFERED IN THE PSYCHOLOGY DEPARTMENT

PSYCHOLOGY

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 psychology, certification code "CE." The certification test covering this field is #11, "Psychology." See page 338.

PSYCHOLOGY

The minor provides students entering many career fields a fuller scientific understanding of human experience, behavior, needs, desires, and potentialities. The minor is flexible; within limits it may be designed to meet the needs of each student.

	Sem hours
Minor in psychology	20
1. Required courses	3-4
PSY 101/102 General Psychology	3-4
2. Electives	16-17
Choose 16-17 credits in consultation with advising coordinator.	

PSYCHOLOGY COURSES

PSY 101 General Psychology. 3 hrs
 Principles, theories, and methods evolving from the scientific analysis of behavior. This or PSY 102 is a prerequisite to all other courses. Not open to those who have earned credit in PSY 102.

PSY 102 General Psychology. 4 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 PSY 101.

- PSY 203 Self-analysis and Control.** 3 hrs
Behavioral principles and techniques that can be applied to behavioral self-analysis and self-management. Student-initiated self-improvement projects encouraged.
Prereq: PSY 101102.
- PSY 205 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: PSY 101102, and MTH 104 or equivalent.
- PSY 207 Psychology of Adjustment.** 3 hrs
Systematic presentation of issues, concepts, principles, and theories of human adjustment.
Prereq: PSY 101102.
- PSY 225 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 intense emotional experience.
Prereq: PSY 101102.
- PSY 240 Psychology of Sex.** 3 hrs
Survey of the psychological research concerned with human sexuality from a psychological point of view with an emphasis on research findings.
Prereq: PSY 101102.
- PSY 242 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 101102.
- PSY 301 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: PSY 205.
- PSY 304 Learning.** 3 hrs
Includes learning theories and empirical research as developed by Thorndike, Guthrie, Tolman, Hull, Skinner, Mowrer, and others, plus selected contemporary topics.
Prereq: PSY 301.
- PSY 309 Social Psychology.** 3 hrs
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. Not open to those with credit in SOC 308.
Prereq: SOC 105 and PSY 101102.
- PSY 321 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: PSY 101102.
- PSY 322 Psychology of Adolescence.** 3 hrs
An opportunity to formulate, examine, and understand a comprehensive, balanced picture of the physical, mental, emotional, social, and ideological developments and adjustments during adolescence.
Prereq: PSY 101102.
- PSY 323 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 effects, and the problems of isolation and institutionalization.
Prereq: PSY 101102.
- PSY 330 The Psychology of Contemporary Issues.** 3 hrs
The application of psychological principles and methodology to selected contemporary world problems such as arms control, disarmament, and cybernetics.
Prereq: PSY 101102.
- PSY 340 Psychological Perspectives on Prejudice and Discrimination.** 3 hrs
The psychological processes underlying the phenomena of prejudice and discrimination. A review of materials on personality and development relevant to the practice of discrimination and to the experience of prejudice on the part of both minority and majority group individuals.
Prereq: PSY 101102 and sophomore standing.
- PSY 350 Environmental Psychology.** 3 hrs
The psychological effects of various environmental settings and configurations on human behavior. Selected qualities of architectural spaces, urban environments, and natural settings.
Prereq: PSY 101102.
- PSY 351 Industrial Psychology.** 3 hrs
Applications of psychological methods and principles to industrial problems.
Prereq: PSY 101102, and junior or senior standing.
- PSY 352 Psychological Testing and Evaluation.** 3 hrs
Principles and theory of psychological testing. Introduction to evaluation, administration, and interpretation of group and individual tests used in diagnosis and prognosis.
Prereq: PSY 101102, and junior or senior standing.
- PSY 356 Motivation.** 3 hrs
Review and analysis of research and theory on the determinants of the direction, persistence, and vigor of behavior.
Prereq: PSY 301.
- PSY 357 Sensation and Perception.** 3 hrs
Analysis of the psychological literature relating to sensory and perceptual experience.
Prereq: PSY 301.
- PSY 358 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: Junior standing, PSY 205 or equivalent.
- PSY 360 Abnormal Psychology.** 3 hrs
Modern theories of the origin of mental disorders and personality disturbances, nature and mechanism of the various forms of abnormal behavior, prevention and treatment, social significance of aberrations.
Prereq: PSY 101102, and junior or senior standing.
- PSY 361 Psychotherapy.** 3 hrs
Survey of the therapeutic systems and research on psychotherapy.
Prereq: PSY 360.
- PSY 362 The Psychology of Stress and Relaxation.** 3 hrs
An introduction to the theoretical aspects of stress, stress reactions, stress assessment, stress management, and prevention.
Prereq: PSY 101102.

PSY 365 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: PSY 101/102.

PSY 366 Health Psychology/Behavioral Medicine. 3 hrs
The application of behavioral-science theory, principles, and techniques to understanding of health and illness and to prevention, diagnosis, treatment, rehabilitation, and health-care delivery.
Prereq: PSY 101/102.

PSY 387 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 (PSY 387 and PSY 487) alternated with full-time attendance at the University.
Prereq: Two 300-level psychology courses and department permission.

PSY 388 Psychology in the Field Setting. 2 hrs
A practical work experience in a supervised mental health setting that integrates scholarly and practical aspects of psychology. Approximately three hours of field work each week and completion of a journal of goals and experiences.
Prereq: PSY 101/102, concurrent enrollment in a three-hour psychology class, and/or department permission.

PSY 397/398/399 Individual Reading in Psychology. 1/2/3 hrs
Supervised reading on psychological problems.
Prereq: PSY 101/102, and prior department approval of a planned reading program.

PSY 401 Honors Seminar: Contemporary Issues and Methods in Psychology. 3 hrs
Prepares the honors student to design and develop an original senior honors thesis in current issues, methods, and research opportunities in selected specialty areas of psychology.
Prereq: PSY 301.

PSY 445 Consumer Psychology. 2 hrs
A survey of psychological principles, theories, and methodology relating to consumer behavior.
Prereq: PSY 101/102.

PSY 448 Seminar in Psychology. 2 hrs
A synthesis of various approaches to the study of psychology. Development, presentation, and critical appraisal of individual student projects. Open to seniors majoring or minoring in psychology.

PSY 450 Psychology of Individual Differences. 2 hrs
Analysis of research on variability between individuals and groups regarding intelligence, aptitudes, achievement, motivation, perception, and attitudes.
Prereq: PSY 101/102.

PSY 451 Dynamics of Personality. 3 hrs
Physiological, psychological, and cultural determinants of human personality; analysis of selected theories of human personality.
Prereq: Six hours in psychology and junior or senior standing.

PSY 453 History and Systems of Psychology. 3 hrs
Historical development of modern psychological theories; contemporary systems, including functionalism, behaviorism, phenomenology, psychoanalysis, and dynamic psychologies.
Prereq: Twelve hours of psychology and senior standing.

PSY 457 Physiological Psychology. 3 hrs
Analysis of the relationships among brain functions, physiological processes, and behavior. Open to junior and senior science majors with department permission.
Prereq: PSY 301. Recommended: BI 105 or ZOO 222.

PSY 458 Comparative Animal Behavior. 3 hrs
Modern solutions to the innate versus learned behavior controversy; species differences with respect to behavior and behavioral capacities.
Prereq: PSY 301.

PSY 460 Psychology of Film. 3 hrs
The psychology of film and audience. Viewer psychology, presentation of psychology, family, violence, and sexuality in film.
Prereq: Junior standing and/or two courses in psychology.

PSY 478/479 Special Topics in Psychology. 2/3 hrs
An examination of topics in psychology not covered in other department offerings. May be elected more than once as long as different topics are studied.
Prereq: PSY 101/102, and department permission.

PSY 487 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 (PSY 387 and PSY 487) alternated with full-time attendance at the University.
Prereq: PSY 387 and department permission.

PSY 497/498/499 Individual Research in Psychology. 1/2/3 hrs
Supervised investigation of psychological problems.
Prereq: PSY 205 and department permission.

SOCIOLOGY, ANTHROPOLOGY, AND CRIMINOLOGY

Gregg Barak
Department Head
 712 Pray-Harrold
 487-0012

Professors: Gregg Barak, Patrick Easto, Allen S. Ehrlich, Stuart Henry, Lawrence K. Kersten, Gordon E. Moss, Joseph Rankin, Barbara Richardson, Marie Richmond-Abbott, Patricia Ryan, Karen P. Sinclair, Marcello Truzzi, Bruce L. Warren, Ira M. Wasserman, Jay Weinstein, Ronald M. Westrum

Associate Professors: E. L. Cerroni-Long, Christina J. Johns, Mansoor Moaddel

Assistant Professors: Anthony Adams, Mark Lanier, Nancy N. Thalhofer

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 gerontology, bilingual-bicultural education, and women's studies.

Degrees:
 Bachelor of Arts and Bachelor of Science

Programs of Study
Curriculum:
 Criminology and criminal justice

Majors:
 Anthropology
 Sociology
 Sociology for secondary education

Minors:
 Anthropology
 Criminology and criminal justice
 Sociology
 Sociology for elementary education
 Sociology for secondary, K-12, and special education-secondary

Interdisciplinary minors in Anthropology/Sociology:
 Health and illness studies
 Socio-cultural perspectives on the family

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 adviser 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.

Advising Coordinators:
 Undergraduate: Nancy Thalhofer
 Graduate criminology and criminal justice: Christina Johns
 Graduate sociology: Patricia Ryan

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.

CURRICULUM IN CRIMINOLOGY AND CRIMINAL JUSTICE

The Criminology and Criminal Justice curriculum provides students with a multi-disciplinary understanding of crime and justice within the framework of broader social processes. This curricu-

lum is a three-tiered structure comprising basic studies, a core curriculum, and selected concentrations. The typical student will move from basic studies to the core of the program and then into one of four specialized concentrations, where s/he will be introduced to courses on the principles and application of the chosen specialty.

The curriculum for basic studies 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 Criminology—a multi-disciplinary perspective on the nature, extent, and causes of crime. Criminology (CRM 371) should be the first core course taken by the typical student, followed by Criminal Justice in Contemporary Society (CRM 372). 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. Specific courses marked with an asterisk (*) also satisfy basic studies requirements—the specific requirement is enclosed within brackets [...]. You may need to refer to pp. 26-30 in this catalog for exceptions to the general basic studies requirements.

	Sem hours
Core requirements	48-49
All of the following courses must be taken as part of the requirements for the Criminology and Criminal Justice curriculum:	
*PSY 101/102 General Psychology [Area II.2.]	3-4
*PLS 112 American Government [Area III.1.] or PLS 202 State and Local Government	3
*SOC 105 Introductory Sociology [Area III.3.]	3
*SOC 202 Social Problems [Area III.4b.]	3
Criminology and criminal justice	18
CRM 354 Juvenile Delinquency	3
CRM 370 Corporate and White Collar Crime	3
CRM 371 Criminology	3
CRM 372 Criminal Justice in Contemporary Society	3
SOC/CRM 412 Law and Society	3
CRM 447 Advanced Criminology	3
Research methods	6
*SOC 250 Social Statistics I [Area I.4.]	3
SOC 304 Methods in Sociological Research	3
<i>(Note: SOC 341-342 Quantitative Methods of Social Research I-II may be substituted for SOC 250 and SOC 304)</i>	
Sociology/Antropology	12
*ANT 135 Introduction to Cultural Anthropology [Area III.3.]	3
*SOC/ANT 214 Racial and Cultural Minorities [Area III.4c.]	3
SOC 308 Social Psychology	3
SOC 462 Complex Organizations	3

Concentration	21
Students choose one of the following concentrations to fulfill their curriculum requirements.	
Concentration (1): Legal Studies	
<i>Take all of the following courses:</i>	9
*PHI 130 Introduction to Logic, PHI 355 Philosophy of Law, PLS 456 Criminal Law I	
<i>Choose one of the following courses:</i>	3
PLS 364 The Legislative Process, PLS 385 Judicial Process and Behavior	
<i>Choose three of the following courses:</i>	9
CRM 460 Criminal Law II, CRM 488 Field Internship in Criminology and Criminal Justice	
ANT 330 Anthropology of Law and Politics	
LAW 293 Legal Environment of Business, LAW 295 Legal Research	

BE 211 Introduction to Paralegalism and Legal Terminology, BE 304 Legal Writing, Research, and Analysis I, BE 412 Court Documents and Court Rules
 CTA 357 Interviewing as Communication
 PLS 315 Consumer Law and Politics
 IT 213 Construction Safety

Concentration (2): Law Enforcement

Take all of the following courses: 15

CRM 431 Police in Modern Society
 PLS 456 Criminal Law I, PLS 385 Judicial Process and Behavior
 SWK 120 Introduction to Social Work Services and Professional Roles
 PSY 340 Psychological Perspectives on Prejudice and Discrimination

Choose two of the following courses: 6

SOC 306 The Urban Community, SOC 448 Collective Behavior
 CRM 460 Criminal Law II, CRM 488 Field Internship in Criminology and Criminal Justice
 PSY 360 Abnormal Psychology
 PLS 308 Political Violence and Revolution
 HED 390 Drug Use and Abuse or SWK 431 Substance Abuse

Concentration (3): Corrections

Take all of the following courses: 15

CRM 430 Sociology of Corrections
 SWK 120 Introduction to Social Work Services and Professional Roles, SWK 463 Social Work Practice with Legal Offenders
 PSY 360 Abnormal Psychology
 G&C 450 An Introduction: Counseling Concepts and Skills

Choose two of the following courses: 6

SOC 402 Group Dynamics
 CRM 488 Field Internship in Criminology and Criminal Justice
 PSY 340 Psychological Perspectives on Prejudice and Discrimination, PSY 365 Behavior Modification
 HED 390 Drug Use and Abuse or SWK 431 Substance Abuse
 CTA 357 Interviewing as Communication

Concentration (4): Management and Administration

Take all of the following courses: 12

SOC 451 Sociology of Work and Occupations
 PLS 270 Public Administration, PLS 381 Public Policy Analysis
 SWK 470 Supervising Staff and Volunteers

Choose three of the following courses: 9-10

CRM 488 Field Internship in Criminology and Criminal Justice
 ANT 345 Field Methods in Community Studies
 PSY 301 Introductory Experimental Psychology
 PLS 334 Personnel Administration in Government
 MGT 202 Business Communications, MGT 386 Organizational Behavior and Theory
 LAW 403 Employment Law
 CTA 357 Interviewing as Communication

SOCIOLOGY

SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in sociology, certification code "CF," and, depending on the minor selected, endorsement in economics ("CA"), geography

("CB"), history ("CC"), political science ("CD"), psychology ("CE"), or social science ("CX"). The certification test covering this field is #12, "Sociology." See page 339.

ANTHROPOLOGY MAJOR

The program in anthropology advances the goals of liberal education and provides majors with a foundation for graduate study. Anthropology is the comparative study of human behavior and basic institutions of human societies such as economics, law, politics, religion, medicine, and kinship in a cross-cultural perspective. Flexibility within the major and in the choice of a minor allows students to select courses meeting their special interests.

	Sem hours
Major in anthropology	30
1. Required courses	9
ANT 135 Introduction to Cultural Anthropology	3
ANT 140 Introduction to Prehistoric Anthropology	3
ANT 439 Anthropological Theory	3
2. Restricted electives	6
Choose one 200-level anthropology course	3
Choose one 300-level anthropology course	3
3. Electives	15
Choose 15 credits from anthropology courses. The following courses may be included with permission from one of the anthropology faculty:	
LIN 401 Introduction to Linguistic Science	
Sociology courses at the 300-level or above	

SOCIOLOGY MAJOR

This major includes the study of social class, community, 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.

	Sem hours
Major in sociology	30
1. Required courses	18
SOC 105 Introductory Sociology	3
ANT 135 Introduction to Cultural Anthropology	3
SOC 250 Social Statistics I	3
SOC 304 Methods in Sociological Research	3
SOC 308 Social Psychology	3
SOC 403 Modern Sociological Theory	3
2. Restricted electives	6
Choose two courses from the following:	
SOC 306 The Urban Community, SOC 307 Industrial Sociology, SOC 310 Contemporary American Class Structure, SOC 462 Complex Organizations, and SOC 405 Honors Seminar	
3. Electives	6
Choose from courses in sociology, anthropology, or social work. Courses taken in social work or anthropology as elective credit for the sociology major must be at the 300-level or above.	

MINORS OFFERED IN THE SOCIOLOGY, ANTHROPOLOGY, AND CRIMINOLOGY DEPARTMENT

SOCIOLOGY

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 sociology, certification code "CF." The certification test covering this field is #12, "Sociology." See page 341.

ANTHROPOLOGY

	Sem hours
Minor in anthropology	20
1. Required courses	15
ANT 135 Introduction to Cultural Anthropology	3
ANT 140 Introduction to Prehistoric Anthropology	3
One anthropology course at the 200 level	3
One anthropology course at the 300 level or above	3
ANT 439 Anthropological Theory	3
2. Electives	5
Choose five credits from anthropology. With permission of one of the anthropology faculty, sociology or criminology courses at the 300-level or above may be chosen.	

CRIMINOLOGY/CRIMINAL JUSTICE

	Sem hours
Minor in criminology and criminal justice	20
1. Required courses	12
PLS 301 The American Legal System	3
CRM 371 Criminology	3
CRM 372 Criminal Justice in Contemporary Society	3
SOC/CRM 412 Law and Society	3
2. Electives	8
Choose eight credits from the following:	
ANT 330 Anthropology of Law and Politics	
PHI 355 Philosophy of Law	
PLS 270 Public Administration, PLS 412 Comparative Legal Systems, PLS 456 Criminal Law I	
PSY 207 Psychology of Adjustment, PSY 360 Abnormal Psychology	
SOC 402 Group Dynamics, SOC 448 Collective Behavior, CRM 460 Criminal Law II	
Any social work course at the 400-level	

SOCIOLOGY

	Sem hours
Minor in sociology	20-21
1. Required courses	14-15
SOC 105 Introductory Sociology	3
ANT 135 Introduction to Cultural Anthropology	3
Sociology or criminology courses at the 300-level or above	8-9
2. Electives	6
Any course in anthropology counted toward elective credit for the sociology minor must be at the 300-level or above. Social work courses may not be counted toward the sociology minor.	

INTERDISCIPLINARY MINORS OFFERED IN THE SOCIOLOGY, ANTHROPOLOGY, AND CRIMINOLOGY DEPARTMENT

SOCIO-CULTURAL PERSPECTIVES ON THE FAMILY

This minor combines the perspectives of anthropology and sociology by examining the socio-cultural determinants and consequences of the family in the United States and other cultures. Students in such diverse fields as business, law, teaching, communication, nursing, and technology learn how the family is integrated into the segment of society in which they intend to work. It is designed for students planning to work directly with families as social workers, family life professionals, or clinical psychologists.

	Sem hours
Minor in socio-cultural perspectives on the family	21
1. Required courses	21
ANT 135 Introduction to Cultural Anthropology	3
ANT 309 Culture and Personality	3
SOC 105 Introductory Sociology	3
SOC 204 Marriage and Family	3
SOC 303 Sociology of Childhood and Youth	3
SOC 344 Sociology of Sex Roles	3
SOC 450 The Family	3

HEALTH AND ILLNESS STUDIES

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.

	Sem hours
Minor in health and illness studies	21
1. Required courses	15
SOC 105 Introductory Sociology	3
ANT 135 Introduction to Cultural Anthropology	3
SOC 311 Social Gerontology	3
SOC 312 Medical Sociology	3
ANT 329 Medical Anthropology	3
2. Electives	6

SOCIOLOGY COURSES

SOC 105 Introductory Sociology. 3 hrs
Basic sociological concepts are used to analyze aspects of American society in intergroup relations, rural and urban communities, social classes, and in family, educational, religious, governmental, and economic institutions.

SOC 202 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 sub-groups, and personality disorders.
Prereq: SOC 105.

SOC 204 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: SOC 105.

SOC 205 Minority Women in the United States. 3 hrs
This course surveys the situation of 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 feminist movement. Not open to students with credit in ANT 205.

SOC 214 Racial and Cultural Minorities. 3 hrs
Racial and cultural minorities in the modern world with particular references to the black and Hispanic, and European and Oriental immigrants in the United States; racial myths, doctrines, and movements; conflict and accommodation of majority and minority peoples; proposed solutions of ethnic problems.
Prereq: SOC 105 or ANT 135.

SOC 250 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: SOC 105 and 1 1/2 years high school algebra or MTH 104.

SOC 277/278/279 Current Topics in Sociology. 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 as long as different topics are studied, but only twice for credit toward a major or minor in sociology.
Prereq: SOC 105.

SOC 303 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: SOC 105.

SOC 304 Methods in Sociological Research. 3 hrs
Methods used in sociological research and their various applications. Participation in conducting a survey.
Prereq: Three courses in sociology and junior standing.

SOC 306 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: SOC 105.

SOC 307 Industrial Sociology. 3 hrs
The social structure of the workplace, the work experience of the participants and the relation of both to the community and to society. Formal structure of large-scale organizations and the operation of small groups within them.
Prereq: SOC 105.

SOC 308 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 SOC 308 and PSY 309.
Prereq: SOC 105 and PSY 101.

SOC 309 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 with credit in ANT 309.
Prereq: SOC 105 or ANT 135 and PSY 101.

SOC 310 Contemporary American Class Structure. 3 hrs
The determinants and consequences of social class structure in America. The nature of social classes, status groups, and the distribution of power from various theoretical perspectives. The relationships between social class and the family, schools, govern-

ment, religion, and recreation both with reference to the total system and to various racial and regional subsystems.
Prereq: SOC 105.

SOC 311 Social Gerontology. 3 hrs
Demographic and socio-cultural 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: SOC 105.

SOC 312 Medical Sociology. 3 hrs
Social behavior and social organization as factors in disease distribution. The sociological analysis of medical care, organization, and practitioners.
Prereq: SOC 105 and sophomore standing.

SOC 320 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: SOC 105 or ANT 135.

SOC 321 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, including a variety of group projects, exercises, and discussion.
Prereq: SOC 105 or ANT 135 or department permission.

SOC 334 Population. 3 hrs
Population size and composition and their impact on society; determinants and consequences of natality, mortality, and migration; the relationship between human numbers and resources and its politico-economic implications; population theories and policies of population control.
Prereq: SOC 105 or department permission.

SOC 335 The Study of Non-Primitive Societies. 3 hrs
An analysis of studies and problems anthropology has investigated in non-primitive societies. Problems of analysis in complex societies, national character, folk-urban continuum, peasants and colonialism. Not open to those with credit in ANT 335.
Prereq: ANT 135 or equivalent and sophomore standing.

SOC 336 Social and Cultural Change. 3 hrs
Survey of the theories and problems of change in developing and advanced societies. Not open to those with credit in ANT 336.
Prereq: ANT 135 or equivalent and sophomore standing.

SOC 341 Quantitative Methods of Social Research I. 3 hrs
Examination and review of research methods in behavioral sciences and the nature of empirical data, organization of univariate and bivariate data. Not open to those with credit in SOC 250 or SOC 304. Must be followed by SOC 342.
Prereq: SOC 105, high school algebra or equivalent.

SOC 342 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 SOC 250 or SOC 304.
Prereq: SOC 341.

SOC 344 Sociology of Sex Roles. 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: Sophomore standing and SOC 105.

SOC 345 Field Methods in Community Studies. 3 hrs

For students interested in doing ethnographic research within the vicinity of the University by use of anthropological field techniques. Students will select topics for investigation by participant observation and other anthropological field methods. Discussion and examination of data from a cross-cultural perspective. Not open to those with credit in ANT 345.

Prereq: Nine hours in anthropology or department permission.

SOC 375 Political Sociology. 3 hrs

The structure of political systems analyzed from an individual and social system perspective.

Prereq: Nine credit hours in sociology or political science or junior/senior standing.

SOC 377/378/379 Current Topics in Sociology. 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 as long as different topics are studied, but only twice for credit toward a major or minor in sociology.

Prereq: SOC 105.

SOC/CRM 387 Cooperative Education I. 3 hrs

Practical experience in industrial, business, or government settings to provide job skills. Credit/no credit basis.

Prereq: Twelve hours of sociology, six of which must be at the 300 level or above.

SOC 402 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: SOC 105 or PSY 101.

SOC 403 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: Three courses in sociology and junior standing.

SOC 405 Honors Seminar. 3 hrs

An undergraduate honors seminar examining selected topics in theory, research, and applied sociology.

Prereq: Senior status, a 3.0 grade point average, 12 hours of social science courses, or department permission.

SOC/CRM 412 Law and Society. 3 hrs

Law as a social and cultural product; the interrelationships between law and social institutions.

Prereq: SOC 105.

SOC 440 Sociology of Technology. 3 hrs

A study of social factors involved in the creation, innovation, distribution, evaluation, and social effects of technology.

Prereq: SOC 105.

SOC 448 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: SOC 105.

SOC 450 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: Junior standing and either SOC 105 or ANT 135.

SOC 451 Sociology of Work and Occupations. 3 hrs

Social aspects of work. Recruitment, career patterns, professionalization, sociology of the workplace and labor force.

Prereq: SOC 105.

SOC 462 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: SOC 105.

SOC 477/478/479 Current Topics in Sociology. 1/2/3 hrs

A single topic is covered each semester, selected as interest and/or problems change. Students may elect this course several times as long as different topics are studied, but only twice for credit toward a major or minor in sociology.

Prereq: SOC 105.

SOC/CRM 487 Cooperative Education II. 3 hrs

Practical experience in industrial, business, or government settings to provide job skills. Credit/no credit basis.

Prereq: SOC/CRM 387.

ANTHROPOLOGY COURSES

ANT 135 Introduction to Cultural Anthropology. 3 hrs

Man's adaptation to natural and cultural environments focusing upon primitive and non-Western societies. The basic institutions of human society such as kinship, religion, law, politics, and economics.

ANT 140 Introduction to Prehistoric Anthropology. 3 hrs

A survey of the evolution of human societies using materials from primate studies, early man, and archeological findings.

Prereq: ANT 135.

ANT 150 Introductory Archeology. 3 hrs

A general survey of the field of archeology; the methodologies and analyses employed in the study of prehistoric cultures.

Prereq: ANT 135.

ANT 200 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: Sophomore standing. ANT 135, ANT 140, and ENG 121.

ANT 205 Minority Women in the United States. 3 hrs

This course surveys the situation of 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 feminist movement. Not open to students with credit in SOC 205.

ANT 214 Racial and Cultural Minorities. 3 hrs

Racial and cultural minorities in the modern world with particular references to the black and Hispanic, and European and Oriental immigrants in the United States; racial myths, doctrines, and movements; conflict and accommodation of majority and minority peoples; proposed solutions of ethnic problems.

Prereq: SOC 105 or ANT 135.

ANT 233 Peoples and Cultures of Mexico. 3 hrs

A regional, historical, and topical survey of Mexican cultures.

Prereq: ANT 135.

- ANT 236 Peoples and Cultures of Africa.** 3 hrs
Regional, historical, and topical survey of African cultures.
Prereq: ANT 135.
- ANT 237 Indians of North America.** 3 hrs
Regional, historical, and topical survey of aboriginal North American cultures.
Prereq: ANT 135 or department permission.
- ANT 245 Culture of Japan.** 3 hrs
A historical and topical survey of Japanese culture.
Prereq: ANT 135 or department permission.
- ANT 248 Peoples and Cultures of the Pacific.** 3 hrs
A regional, historical, and topical survey of aboriginal Pacific cultures.
Prereq: ANT 135.
- ANT 277/278/279 Current Topics In Anthropology.** 1/2/3 hrs
An examination of topics in anthropology not normally covered in the curriculum. Students may elect this course several times as long as different topics are studied.
Prereq: ANT 135.
- ANT 309 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 with credit in SOC 309.
Prereq: SOC 105 or ANT 135 and PSY 101.
- ANT 329 Medical Anthropology.** 3 hrs
Ways in which various cultures define, explain, and treat physical and psychic illness. Different approaches to curing including witchcraft, sorcery, spiritual and psychic healing, and the use of hallucinogens compared with contemporary medical practices.
Prereq: ANT 135 or department permission.
- ANT 330 Anthropology of Law and Politics.** 3 hrs
Comparative study of political systems in primitive and peasant societies, local-level politics, government, and law; examined from an anthropological perspective.
Prereq: ANT 135 and sophomore standing.
- ANT 335 The Study of Non-Primitive Societies.** 3 hrs
An examination of the studies and problems that anthropology has investigated in non-primitive societies. Problems of analysis in complex societies, national character, folk-urban continuum, peasants, and colonialism. Not open to those with credit in SOC 335.
Prereq: ANT 135 or equivalent and sophomore standing.
- ANT 336 Social and Cultural Change.** 3 hrs
A survey of the theories and problems of change in developing and advanced societies. Not open to those with credit in SOC 336.
Prereq: ANT 135 or equivalent and sophomore standing.
- ANT 338 Anthropology of Religion.** 3 hrs
The anthropological study of religious belief and ritual in primitive and peasant societies.
Prereq: ANT 135 and sophomore standing.
- ANT 339 Economic Anthropology.** 3 hrs
Comparative study of the ways in which societies organize themselves for purposes of production, distribution, and exchange of goods and services. The relationship between economic activities and other aspects of culture including religion, politics, and social organization. The effects of an economic system on the individual's behavior.
Prereq: ANT 135 and sophomore standing.
- ANT 340 Language and Culture.** 3 hrs
A study of the relation of language to social behavior and modes of thought in unilingual and multilingual speech communities.
Prereq: ANT 135 or LIN 201 and sophomore standing.
- ANT 345 Field Methods in Community Studies.** 3 hrs
For students interested in doing ethnographic research within the vicinity of the University by use of anthropological field techniques. Students will select topics for investigation by participant observation and other anthropological field methods. Discussion and examination of data from a cross-cultural perspective. Not open to those with credit in SOC 345.
Prereq: Nine hours in anthropology or department permission.
- ANT 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 the course.
Prereq: ANT 135.
- ANT 360 Cultural Ecology.** 3 hrs
The comparative study of patterns and processes of societal adaptation to the physical environment and to contacts with other societies at various levels of socio-political organization.
Prereq: ANT 135.
- ANT 377/378/379 Current Topics in Anthropology.** 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 as long as different topics are studied.
Prereq: ANT 135.
- ANT 387 Cooperative Education I.** 3 hrs
Practical experience in industrial, business, or government settings that provides job skills. Credit/no credit basis.
Prereq: Twelve hours of anthropology, six of which must be at the 300 level or above.
- ANT 437 Kinship and Social Structure.** 3 hrs
The comparative study of kinship and social structure traced from primitive through complex societies.
Prereq: Three courses in anthropology and junior standing.
- ANT 439 Anthropological Theory.** 3 hrs
Study of various theoretical approaches within the field of cultural anthropology. Theoretical perspectives of a number of European and American schools discussed from analytical and historical viewpoints.
Prereq: Four courses in anthropology including ANT 135 and ANT 140.
- ANT 441 Seminar in Anthropology.** 3 hrs
An intensive study of a problem of current research interest in anthropology.
Prereq: Four courses in anthropology and department permission.
- ANT 477/478/479 Current Topics in Anthropology.** 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 as long as different topics are studied.
Prereq: ANT 135.
- ANT 487 Cooperative Education II.** 3 hrs
Practical experience in industrial, business, or government settings that provides job skills. Credit/no credit basis.
Prereq: ANT 387.

ANT 497/498/499 Individual Reading and Research in Anthropology. 1/2/3 hrs
Directed reading and research on problems within the field of anthropology.
Prereq: ANT 135 and department permission.

CRIMINOLOGY COURSES

CRM 354 Juvenile Delinquency. 3 hrs
The nature, incidence, and measurement of juvenile delinquency; theories and causation; juvenile justice philosophies and treatment methods.
Prereq: SOC 105. Not open to freshmen.

CRM 370 Corporate and White Collar Crime. 3 hrs
An examination of the definitions, laws, causes, and policy responses that shape crimes by corporations, government agencies, professionals, and others engaged in legitimate occupations.
Prereq: SOC 105.

CRM 371 Criminology. 3 hrs
The nature, incidence, and prevalence of crime. Theory of crime and delinquency causation.
Prereq: SOC 105 or junior standing.

CRM 372 Criminal Justice in Contemporary Society. 3 hrs
A critical view of the entire spectrum of criminal justice. The police, courts, and corrections studied as interrelated institutions in the process of defining criminals. Not open to freshmen.
Prereq: SOC 105 or junior standing.

CRM 377/378/379 Current Topics in Criminology. 1/2/3 hrs
A single topic is covered each semester, selected as the interest and/or problems change. Students may elect a topics course several times as long as different topics are studied, but only twice for credit toward a major or minor in criminology.
Prereq: SOC 105.

CRM/SOC 387 Cooperative Education I. 3 hrs
Practical experience in industrial, business, or government settings to provide job skills. Credit/no credit basis.
Prereq: Twelve hours of sociology, six of which must be at the 300 level or above.

CRM/SOC 412 Law and Society. 3 hrs
Law as a social and cultural product; the interrelationships between law and social institutions.
Prereq: SOC 105.

CRM 430 Sociology of 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.
Prereq: CRM 372.

CRM 431 Police in Modern Society. 3 hrs
The social and historical origin of the police; police culture, role, and career; police in the legal system; police discretion; ethical development of police; police and the community; police organization and community control.
Prereq: CRM 372.

CRM 447 Advanced Criminology. 3 hrs
An intensive analysis of selected problems in criminology; the application of criminology to policies and programs of crime prevention and control.
Prereq: CRM 371 or CRM 506, and CRM 372 or CRM 507; or department permission.

CRM 460 Criminal Law II. 3 hrs
The distinguishing characteristics of criminal law and its sources. Problems in determination of criminal liability; crimes against property; crimes against the person; the defenses to criminal charges.
Prereq: Junior standing.

CRM/SOC 487 Cooperative Education II. 3 hrs
Practical experience in industrial, business, or government settings to provide job skills. Credit/no credit basis.
Prereq: CRM/SOC 387.

CRM 488/489 Field Internship in Criminology and Criminal Justice. 3 hrs each
Students are assigned a minimum of eight hours per week to a governmental or private agency dealing with the crime problem. The agency, in agreement with the field instructor, provides supervised learning experiences appropriate to the objectives of the undergraduate program. A weekly seminar relates field experience to theory. May be repeated once for credit.
Prereq: Senior standing, CRM 371-372, and department permission. Second semester juniors may be admitted by department permission. Requests for admission by students who do not meet these requirements must be approved by the Faculty Committee on Criminology and Criminal Justice.

CRM/SOC 497/498/499 Independent Study. 1/2/3 hrs
Independent study, under the supervision of a department member, in areas in which the department does not offer a course.
Prereq: Department permission.

WOMEN'S STUDIES

Ellene Tratras Contis
 Director
 720 Pray-Harold
 487-1177

Professors: Daryl Hafter, Rachel Harley, Sally McCracken, Calvin Michael, Marie Richmond-Abbott, Ellen Schwartz, Karen Sinclair, Mary Vielhaber-Herman

Associate Professors: Barbara Brackney, Margaret Crouch, Gwen Reichbach, Claudia Wasik, Francille Wilson

Assistant Professors: Betty Barber, Elisabeth Dauemer, Deborah Figart, Christina José-Kampfner, Kate Mehuron, Alexandra Norton

Instructors: Barbara Bilgé, Bridgit Todel

The Women's Studies program offers an interdisciplinary academic 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.

Program of Study

Curriculum:

Women's Studies Minor

Advising is the responsibility of the program director.

Advising coordinator:

Ellene Tratras Contis

MINOR IN WOMEN'S STUDIES

	Sem hours
Minor in women's studies	21
1. Required courses	12
WMS 200 Introduction to Women's Studies	3
Choose three courses from the following four:	
HIS 335 History of Women in Europe	
LIT 443 Women in Literature	
PSY 242 Psychology of Women	
SOC 344 Sociology of Sex Roles	
(The course not taken above may be included as one of the restricted electives)	
2. Restricted electives	9
Choose nine credits from the following:	
BE 205 Women in Business; PHI 226 Philosophy of Women;	
ECO 328 Economics of Women; HIS 336 History of Women in the United States and Great Britain, 1800 to the Present; ANT 355 Anthropology of Women; PLS 365 Women and Politics; SFD 402 Sexism and Education; PED 405 Women in Sports; IDT 420 Women and Technology; FA 436 Women in Art	

WOMEN'S STUDIES COURSES

WMS 200 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.

WMS 279 Special Topics in Women's Studies. 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 as long as the subject matter is different, but no more than two such courses may be counted toward the minor in women's studies.

WMS 378/379 Special Topics in Women's Studies. 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 as long as the subject matter is different, but no more than two such courses may be counted toward the minor in women's studies.

WMS 387 Cooperative Education I. 3 hrs
 This course provides students with an opportunity to deal directly with issues affecting women by working with agencies and local organizations.

Prereq: 12 hours of previous coursework in women's studies.

WMS 478/479 Special Topics in Women's Studies. 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 as long as the subject matter is different, but no more than two such courses may be counted toward the minor in women's studies.

WMS 487 Cooperative Education II. 3 hrs
 This course provides students with an opportunity to deal directly with issues affecting women by working with agencies and local organizations.

Prereq: WMS 387.

WMS 497/498/499 Independent Study in Women's Studies. 1/2/3 hrs
 Advanced study on an individual basis in areas in which the program does not offer formal courses. These courses are restricted to juniors and seniors.



COLLEGE OF BUSINESS

Stewart Tubbs, Dean
Curt Vail, Acting Associate Dean
Amelia Chan, Assistant Dean
473 Gary M. Owen Building
487-4140

DEPARTMENTS

Accounting
Finance and Computer Information Systems
Management
Marketing

COLLEGE OF BUSINESS

The College of Business develops future business leaders by providing high quality, professionally accredited programs at the undergraduate and graduate levels and by offering professional development education to the business community. The college values and promotes scholarly research, applications, and an international perspective in its programs.

Professional preparation is provided for students who contemplate administrative careers in business, government agencies, and public administration. College of Business programs emphasize the combination of tools, concepts, and theory for practical application to business decisions and business problems.

The college also serves as an educational resource for business firms of regional, national, and international scope and maintains alliances that are mutually beneficial to students, faculty, and the college. Its faculty is professionally recognized for its contributions to the body of knowledge and understanding of management and business enterprise.

The Bachelor of Business Administration degree is offered to students concentrating in any one of 9 undergraduate professional programs:

1. Accounting
2. Accounting Information Systems
3. Business Computer Systems
4. Economics*
5. Finance
6. General Business
7. Management
8. Marketing
9. Production and Operations Management

**Economics is offered in cooperation with the Department of Economics, College of Arts and Sciences.*

Degree programs are described within the appropriate departments.

The Joint Bachelor of Business Administration-Bachelor of Arts degree in Language and World Business is offered in cooperation with the College of Arts and Sciences and the EMU World College.

Graduate programs lead to the Master of Business Administration and Master of Science degrees in accounting, in computer-based information systems, and in human resources 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 the American Assembly of Collegiate Schools of Business.

ADMISSION TO THE COLLEGE OF BUSINESS is open to student applicants with 40 or more semester hours completed who are enrolled in the last of the 16 required courses to qualify for admission. Students who want to advance register should return their applications to the College of Business Undergraduate Business Program Office by the deadlines listed below:

Winter semester: November 1
 Spring and summer sessions: March 1
 Fall semester: March 1

Applications for each semester must be accompanied by a progress report, tabulation of transfer credit, transcripts or grade reports in order for the applicant to be approved or registered in business courses.

Students may obtain an application for admission to EMU's College of Business from the College of Business directly:

Undergraduate Business Program Office
 College of Business
 Eastern Michigan University
 401 Owen
 Ypsilanti, Michigan 48197
 (313) 487-2344

Students must be admitted by 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.

To qualify for admission, students must have successfully completed 56 semester hours with a minimum cumulative grade point average of 2.50. In addition, the following courses (1 through 13) must be recognized as successfully completed by the University, and the business courses (9 through 13) must be completed with a minimum earned grade of "C-" in each:

1. ENG 121 English Composition
2. CTA 121/124 Fundamentals of Speech
3. A language or communication elective
4. MTH 118-119 Mathematical Analysis for Social Sciences I-II or MTH 120 Calculus I and MTH 122 Elementary Linear Algebra
5. ECO 201-202 Principles of Economics I-II
6. PLS 112/113 American Government or PLS 202 State and Local Government
7. Philosophy or religion (logic or ethics strongly recommended)
8. PSY 101/102 General Psychology
9. ACC 240-241 Principles of Accounting I-II
10. LAW 293 Legal Environment of Business
11. ORI 215 End-User Computing
12. MGT 202 Business Communications
13. ORI 265 Business Statistics I

Business courses numbered 300 and above may not be taken by business students who have not completed admission requirements. Students who fail to satisfy admission requirements will be involuntarily withdrawn from upper division business courses by the college. Refunds in effect at the date of withdrawal shall apply.

Non-business majors will be asked to complete a Student Intake Sheet to confirm their program of study and preparation. No student majoring in a program outside of the College of Business will be given more than 30 semester 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 or updated in the current Class Schedule Bulletin. Students must be of junior standing (56 or more credit hours) and of good academic standing (2.00 grade point average or better) to enroll in 300- and 400-level College of Business courses.

Second bachelor's degree students must apply to the Undergraduate Admissions office and must be advised by the coordinator of advising for second bachelor's degrees to be eligible to enroll in business courses. Second bachelor's candidates working toward a business degree must formally apply for admission to the College of Business and must meet all college admission requirements.

Special students and non-matriculated students are not eligible to register in College of Business courses. Such students should contact the Undergraduate Business Program Office for advisement.

Guest students may enroll for one semester only with approval in advance from the college. Guest student applicants should provide proof of guest status and completion of 56 semester hours,

as well as completion of appropriate prerequisites for intended coursework. An unofficial transcript from the student's parent institution is recommended and an official transcript may be required.

Advising is offered to all College of Business students in each major area. Faculty are available to discuss career opportunities and to assist students who are undecided about a major.

Undergraduate pre-business students are encouraged to contact the Undergraduate Business Program Coordinator (Room 401 Owen) to receive guidance in selecting appropriate courses to meet College of Business admission requirements.

Academic standards require that students maintain a 2.00 grade point average. Students who fail to achieve this average in any term or to maintain a cumulative 2.00 GPA will be considered to be on probation by the University. Two consecutive semesters of less than 2.00 earned or cumulative GPA may result in dismissal from the University.

To qualify for graduation, students must maintain a GPA of 2.00 in the business administration core and 2.00 in their major as well as maintaining a 2.00 overall EMU GPA.

BACCALAUREATE DEGREE CURRICULUM FOR THE BACHELOR OF BUSINESS ADMINISTRATION DEGREE

ADVISING COORDINATOR: AMELIA CHAN

The Bachelor of Business Administration degree requires that students successfully complete a minimum of 50 semester hours in economics, psychology, and mathematics and in related areas of arts, sciences, and technology within the minimum 124 hours required to qualify for a degree.

In the program of study outlined below, the number of basic studies credit hours in symbolics 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 basic studies requirements also may satisfy specific program requirements, as in the case of economics and mathematics. Both course and semester hour requirements must be met in the practical arts.

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 outside minor is needed. Please refer to University basic studies requirements for additional information.

Area	Sem hours
Symbolics and communication	14-18
One course in written composition	3
One course in speech communication	2-3
One course in one of the following areas:	3-5
a. An upper-level course in written composition.	
b. An upper-level course in speech communication.	
c. A course in foreign language composition	
Mathematics*	
Option I**	
MTH 118-119 Mathematical Analysis for Social Sciences I-II	6
or Option II***	
MTH 120 Calculus I	4
MTH 122 Elementary Linear Algebra	3
Science and technology	9-10
(Please see University basic studies requirements.)	
a. One course in physical science	3-4
b. One course in life science	3
c. One course in science or technology	3

Social science	12
a. A course in U.S. government	3
b. A course in history	3
c. ECO 201-202 Principles of Economics I-II	6
Arts and humanities	11-12
(Please see University basic studies requirements.)	
Logic or ethics is strongly recommended for philosophy or religion requirement.	

Please note that at least one approved course in cross-cultural or international studies must be completed in the process of meeting the requirements of the foregoing basic studies areas. Approved courses are designated with an asterisk (*) in the University basic studies section of catalog.

Practical arts	57-69
Business administration core	33
(All 200-level core courses must be completed prior to admission to the College of Business)	
ORI 215 End-User Computing (satisfies computer literacy requirement)	3
ORI 265 Business Statistics I	3
ACC 240-241 Principles of Accounting I-II	6
MGT 202 Business Communications	3
LAW 293 Legal Environment of Business	3
FIN 350 Principles of Finance	3
MKT 360 Principles of Marketing	3
MGT 386 Organizational Behavior and Theory	3
ORI 374 Production/Operations Management	3
MGT 490 Business Policy	3
(All 300-level core courses must be completed before enrollment in MGT 490 Business Policy.)	
Academic major	24-36
Choose one of the following: accounting, accounting information systems, business computer systems, economics, finance, general business, management, marketing, production/operations management, real estate	
Physical education and health	2
Physical education activity courses	2
(Any two military science courses may be applied)	
Electives	13-31
Students planning to continue study in a graduate school of business are urged to complete the following courses as electives:	
ECO 301 Intermediate Macroeconomic Analysis	
ECO 302 Intermediate Microeconomic Analysis	
ORI 367 Business Statistics II	
Total	124

*Students planning to complete the mathematics requirement at another four-year college or university, or at a two-year community college, must select courses that include linear algebra, differentiation, and integration.

**Students having a "B" average in high school mathematics courses through trigonometry should not elect Option I.

***Students planning to pursue graduate study in business administration are encouraged to select Option II.

THE JOINT BACHELOR OF BUSINESS ADMINISTRATION-BACHELOR OF ARTS DEGREE IN LANGUAGE AND WORLD BUSINESS

The Joint Bachelor of Business Administration-Bachelor of Arts degree in Language and World Business is a double degree for undergraduates planning to enter a career in world business or international government and public administration. The major

objective of the program is to prepare students for international careers with business and language skills, along with the knowledge needed to function effectively in the increasingly competitive world economy. The LWB joint degree provides students with both practical, on-site work experience as well as a thorough academic background in international affairs and world enterprise.

Students in the language and world business program receive two separate but integrated degrees: a Bachelor of Business Administration with a major in any one of eight professional areas and a Bachelor of Arts in language and international trade. The language and international trade major trains students in French, German, Japanese, or Spanish for business and professional situations. It also includes cultural and area studies. Students additionally may take examinations leading to certification in Business French, German or Spanish.

All LWB joint degree students take part in a cooperative education internship. Qualified students are eligible for placement in companies in locations such as Paris, Rouen, Madrid, and Stuttgart. Caracas and Tokyo are scheduled for placements also. Companies around the world that have hosted EMU interns include Mercedes-Benz, Volkswagen, Bosche, Siemens, Renault, ELF Petrochemical, Kiwi, Société Générale de Surveillance, Foreign Trade Bank of Madrid, Unesa Corporation, and others, including foreign branches of U.S. Fortune 500 companies. The goal is to place qualifying students abroad where they can use their language and business skills in an actual international professional environment. Students who do not go abroad are placed regionally and work one or two semesters for an employer in a staff support or administrative capacity.

The program is designed so the student can finish the joint degree in 154 credit hours, including all free electives. This is ordinarily a 10-semester program. The curriculum described meets the major and minor requirements for graduation. No outside minor is needed.

1. Basic Studies

Please refer to University basic studies requirements for additional information.

Area	Sem hours
Symbolics and communication	14-16
One course in written composition	
One course in speech communication	
One elective course in foreign language	
MTH 118 Mathematical Analysis for Social Sciences I or MTH 122 Elementary Linear Algebra	
MTH 119 Mathematical Analysis for Social Sciences II or MTH 120 Calculus I	
Science and technology	9-10
a. One course in physical science	
b. One course in life science	
c. One course in science or technology	
Social Science	15
GEO 110 World Regions	
One course in U.S. Government	
HIS 103 Twentieth Century Civilization or HIS 101/102 Western Civilization.	
ECO 201-202 Principles of Economics I-II	
Arts and humanities	11-12
Two intermediate foreign language courses or two advanced foreign language literature courses. See note in 2 below.	
One course in philosophy or religion.	
One course in art, dance, music or theatre arts.	
Please note that at least one approved course in cross cultural or international studies must be completed in the process of meeting the basic studies requirements. Approved courses are designated with an asterisk(*) in the University basic studies section of the catalog.	

Physical education 2
 Physical education activity courses 2
Note: Students can sometimes test out of certain basic studies courses for up to 30 hours by using the CLEP examinations. See page 11.

2. **Specialized studies in language and the social sciences language component (FRN, GER, JPN, or SPN)** **18***
 FRN/GER/JPN/SPN 343 Composition
 FRN/GER/JPN/SPN 361 Language for International Trade
 FRN/GER/JPN/SPN 446, 447 Business Language I and II
 An additional six hours in advanced literature, culture, or technical language

**Note:* Nine of these 18 hours may count toward basic studies provided they are in foreign language and advanced literature.

Language and international trade area studies **9**
 GEO/HIS 316 History and Geography of Modern Europe or GEO/HIS 317 or 326 History and Geography of Spanish America or Japan 6
 One of the following: 3
 PLS 211 Introduction to Comparative Government, PLS 212 Introduction to International Politics, PLS 341 International Law, PLS 342 International Organizations, PLS 354 Government and Politics of Canada, PLS 367 Contemporary Political Systems of Latin America, PLS 412 Comparative Legal Systems

3. **Business core and business major** **57-60**
 All 200-level core courses must be completed before admission to the College of Business. Most core courses will have an international component.

Business core	33
MGT 202 Business Communications	3
ORI 215 End-User Computing	3
(satisfies computer literacy requirement)	
ORI 265 Business Statistics I	3
ACC 240-241 Principles of Accounting I-II	6
LAW 293 Legal Environment of Business	3
FIN 350 Principles of Finance	3
ORI 374 Production/Operations Management	3
MKT 360 Principles of Marketing	3
MGT 386 Organizational Behavior and Theory	3
MGT 490 Business Policy	3

Note: Students must seek admission to the College of Business before enrolling in its upper division (300- or 400-level) business courses.

Business major	24-27***
Choose one of the following:	
Accounting	
Business Computer Systems	
Economics	
Finance	
General Business	
Management	
Marketing	
Production/Operations Management	
Real Estate	

See 4.b. below regarding restricted electives.

4. Other international courses	15-18
a. Required	12
FLA 387 Cooperative Education (Spring/Summer available)	3
FLA 499 Independent Study	3
MKT 460 International Marketing	3
ECO 370 Comparative Economic Systems or ECO 480 International Economics	3

<i>b. Choose two restricted electives from world business courses**</i>	3-6
MKT 375 International Business Transactions	3
MGT 492 Managing World Business Communication	3
MGT 495 International Management	3
FIN 370 International Business Finance	3
ORI 480 Production/Operations Management—A World Business View	3
ACC 475 International Accounting	3

****These two required courses are approved as "restricted electives" in the departments providing them. At least one course must be selected from the major and the second may be selected from any of these offerings. This may satisfy the major requirement regarding "restricted electives."**

*****Students may major in Accounting Information Systems (36-hour major). Graduation requirements will exceed 154 hours.**

5. Free electives	0-6
Total'	154

¹Some students, including transfer students, may require a slightly higher number of hours depending on level of high school language courses.

All students eligible for admission to the College of Arts and Sciences and to the College of Business are eligible for the LWB joint degree. However, a placement test is required of all students of foreign language unless they successfully completed their last course in foreign language at EMU. This placement test is also strongly advised for students whose last course in a foreign language at EMU was completed more than one year before the semester for which they are currently enrolling.

Since this professional program is especially challenging, it is suggested that students enroll at the beginning of the freshman year.

Advising is offered to all joint B.B.A.-B.A. language and world business students, both in their major language and in their business major area. Faculty are available to discuss career opportunities and to assist students who are undecided about a major. Foreign language advising is available from appropriate advising coordinators who will recommend specific courses required in each language pattern.

COLLEGE OF BUSINESS COURSES

COB 179 Special Topics. 3 hrs
Team-taught current topics related to career preparation for business and industry.

AAD 179 Academics, Affiliation, and Achievement 3 hrs
Restricted to first-time entering freshman only. This course provides students the information and skills which 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 team members and other students in the class. This class prepares students for success at EMU and beyond.

ACCOUNTING

Mohsen Sharifi
Department Head
406 Gary M. Owen Building
487-3320

Professors: S. Thomas A. Cianciolo, E.A. Devine, Chandra P. Pathak, Mohsen Sharifi

Associate Professors: George S. Clark, Wayne C. Ellis, Roger Gledhill, John W. Keros, Morrey Kramer, D. Robert Okopny, Sue Ravenscroft, Andrew Snyir, Linda Woodland, Kenneth C. Young

Assistant Professors: Amelia A. Baldwin-Morgan, Linda J. Burilovich, Susan C. Kattelus, Zafar Khan, Geraldine M. Kruse, Gary B. McCombs, David Senteney

The Department of Accounting prepares students for professional careers related to the fields of accounting and accounting information systems. Within each of these major areas, students can develop their expertise in a variety of areas including financial accounting, budgeting, managerial accounting, accounting information systems, internal auditing, governmental accounting, taxes, and auditing. Because of the need for good communication in business, students are encouraged to elect courses in English composition and speech beyond the basic requirements.

Programs of Study

Majors:

Accounting
Accounting information systems

Minors:

Accounting

Advising assistance, both academic and career, is provided by the faculty and is available in the department office Monday through Friday while school is in session, or by appointment.

Advising coordinator: Mohsen Sharifi

Graduate study leads to the Master of Science degree in accounting (M.S.A.). The M.S.A. degree program and courses are described in the Graduate Catalog.

ACCOUNTING MAJOR

Students majoring in accounting are prepared for professional careers in three major areas:

Public accounting, which leads to service as a Certified Public Accountant, primarily in the audit field. CPAs are independent professionals who provide opinions on the fairness of financial statements prepared for investors. They also render tax service and management advisory service to clients.

Industrial accounting, which leads to careers in financial accounting, budget analysis, cost accountancy, and internal auditing. The basic function of an industrial accountant is to accumulate and report financial data that help management plan and control operations.

Institutional or governmental accounting, which leads to positions in non-profit organizations and local, state, and federal governmental agencies. These professionals provide financial information about the effectiveness of operations, similar to industrial accountants, review tax returns, analyze cost reports on projects funded by government, and assist regulatory commissions in monitoring private industry and individual businesses.

Through an internship program, students with good academic records have an opportunity to work in public accounting or industry. These internships provide education, salary, and exposure to professional experience.

Upon graduation, accounting majors who wish to become Certified Public Accountants (public accounting), Certified Management Accountants (industrial or governmental accounting), or Certified Internal Auditors (industrial or governmental accounting) will meet the educational requirements and qualify to sit for national examinations that test for entrance into the above professional organizations.

To be completed are the general requirements for the Bachelor of Business Administration degree, the academic major requirements below, and sufficient electives to meet the minimum of 124 semester hours for graduation.

Area	Sem hours
Practical arts	57
Requirements (business administration core, page 179)	
Academic major in accounting	24
ACC 340-341 Intermediate Accounting I-II	6
ACC 342 Managerial Cost Accounting	3
ACC 344 Tax Accounting	3
ACC 356 Accounting Information Systems	3
ACC 445 Auditing	3
Restricted electives	6
Choose two courses from the following:	
ACC 346 Governmental Accounting, ACC 440 Advanced Accounting, ACC 442 Advanced Cost Accounting, ACC 444 Advanced Tax Accounting, ACC 447 Contemporary CPA Problems, ACC 448 EDP Auditing and Controls, ACC 450 Internal Auditing, ACC 451 Advanced Internal Auditing, ACC 475 International Accounting, ACC 479 Special Topics in Accounting, ACC 499 Directed Studies	

Note: Students planning on sitting for the CPA examination in Michigan should elect ACC 346 Governmental Accounting or ACC 440 Advanced Accounting.

ACCOUNTING INFORMATION SYSTEMS MAJOR

Accounting information systems is a four-year program designed to provide a bachelor's degree with a concentration in accounting and computer-based information processing. The program combines the coursework required for a degree in accounting with numerous computer courses.

Eastern Michigan University is one of only a few universities in the country offering this unique degree. Accounting information systems majors who obtain this degree are well prepared for careers in a dynamic and ever-changing environment, where knowledge of both accounting and computer information processing is fast becoming mandatory. Possible career choices include computer systems design, EDP auditing, computer security analysis, internal auditing, public accounting, government accounting, and managerial accounting.

To be completed are the general requirements for the Bachelor of Business Administration degree, the academic major requirements below, and sufficient electives to meet the minimum of 124 semester hours for graduation.

Area	Sem hours
Practical arts	69
Requirements (business administration core, see section under College of Business).	
Academic major in accounting information systems	36
ACC 340-341 Intermediate Accounting I-II	6
ACC 342 Managerial Cost Accounting	3
ACC 344 Tax Accounting	3
ACC 356 Accounting Information Systems	3
ACC 445 Auditing	3
ACC 448 EDP Auditing and Controls	3

ACC 456 Accounting Information Systems Implementation and Projects	3
ORI 219 File Processing and COBOL Programming	3
ORI 247 Software Design and Programming in Business	3
ORI 315 Applied Data Structures	3
ORI 380 Database Concepts	3

Restricted electives

Students may elect courses in other areas of interest

Note: Students planning on sitting for the CPA examination in Michigan should elect ACC 346 Governmental Accounting or ACC 440 Advanced Accounting.

MINOR OFFERED IN THE ACCOUNTING DEPARTMENT

ACCOUNTING

	Sem hours
Minor in accounting (for non-business majors)	21
1. Required courses	12
ACC 240-241 Principles of Accounting I-II	6
ACC 340-341 Intermediate Accounting I-II	6
2. Restricted electives	9
Choose three courses from the following:	
ACC 342 Managerial Cost Accounting, ACC 344 Tax Accounting, ACC 346 Governmental Accounting, ACC 356 Accounting Information Systems, ACC 440 Advanced Accounting, ACC 442 Advanced Cost Accounting, ACC 444 Advanced Tax Accounting, ACC 450 Internal Auditing, ACC 451 Advanced Internal Auditing, ACC 475 International Accounting	

ACCOUNTING COURSES

ACC 130 Accounting for Non-Business Majors. 3 hrs
Introduction to use of numerical data, in particular financial information generated in an organization, with special emphasis on the content and interpretation of this information in the decision-making process. *May not be substituted for ACC 240. Not open to students with credit for ACC 240 or ACC 241.*
Prereq: Any college-level algebra course.

ACC 240 Principles of Accounting I. 3 hrs
Thorough study of the accounting cycle; how accounting serves to develop useful information about economic organizations. Problems of valuation and statement presentation of selected assets and liabilities. Problems of accounting for ownership equity.

ACC 241 Principles of Accounting II. 3 hrs
Expense analysis and cost accounting: use of accounting data to achieve managerial goals; influence of taxes on business decisions. Problems that arise in interpreting accounting data.
Prereq: ACC 240.

ACC 244 Personal Tax Accounting. 2 hrs
Introduction to federal and state income and social security tax problems of individuals. Practice on preparation of individual tax returns. Credit toward a degree will not be permitted for both ACC 244 and ACC 344. (Business education majors may substitute this course for ACC 344 with permission of their department head.)
Prereq: ACC 240 or junior standing.

ACC 246 Accounting for Public Administrators. 3 hrs
Surveys the use of accounting to manage a public organization. Basic accounting principles, program budgeting, and the construction of internal control systems.

ACC 286 Cooperative Education in Accounting. 1 hr

- ACC 287 Cooperative Education in Accounting.** 3 hrs
One term of full-time or two terms of part-time employment at a business or public organization chosen for imparting a practical experience in accounting. Use on an accounting major or minor is not permitted. Graded credit/no credit. Admittance by application only.
Prereq: Department permission.
- ACC 340 Intermediate Accounting I.** 3 hrs
Review of recording and reporting procedures; accounting concepts and theories guiding the valuation and classification of current assets, plant assets, intangible assets, and current liabilities.
Prereq: ACC 241.
- ACC 341 Intermediate Accounting II.** 3 hrs
Capital stock, rights, options, and retained earnings; long term liabilities; income tax allocation; long term investments; prior period adjustments; funds flow; price level accounting; consignments; installment sales.
Prereq: ACC 340.
- ACC 342 Managerial Cost Accounting.** 3 hrs
Accounting information for use in planning objectives and controlling operations. A framework for measuring managerial performance is developed through an analytic treatment of cost behavior under dynamic conditions by employing such devices as cost-volume-profit relationships, flexible budgeting, and standards.
Prereq: ACC 241.
- ACC 344 Tax Accounting.** 3 hrs
History of the income tax; the tax legislative process; tax research; income and loss realization and recognition; capital gains and losses; exclusions; deductions; losses; exemptions; rates, personal tax returns.
Prereq: ACC 241.
- ACC 346 Governmental Accounting.** 3 hrs
Accounting philosophy for non-profit organizations; principles of fund accounting; the budget process including program budgeting; institutional (college, hospital, welfare agency) accounting; internal control; data processing.
Prereq: ACC 241.
- ACC 356 Accounting Information Systems.** 3 hrs
Concepts of a responsive information system, including principles of design, profitability and responsibility, accounting, and control. Description of typical accounting systems and procedures within the business enterprise.
Prereq: ORI 215 and ACC 342 or department permission.
- ACC 440 Advanced Accounting.** 3 hrs
Consolidation accounting; partnership organization, change, and liquidation; fiduciary accounting; introduction to governmental accounting.
Prereq: ACC 341.
- ACC 442 Advanced Cost Accounting.** 3 hrs
Cost concepts on an advanced level such as standard costs and variance analysis; responsibility accounting, direct costing, overhead allocation, breakeven; product pricing through return on investment methods; divisional income measurement; forecasting with statistical models; capital budgeting; applications of mathematics to cost accounting problems.
Prereq: ACC 342.
- ACC 444 Advanced Tax Accounting.** 3 hrs
Tax law applicable to partnerships and corporations; operation distributions, reorganization, and liquidation.
Prereq: ACC 344.
- ACC 445 Auditing.** 3 hrs
Audit standards, professional responsibility, ethics, internal control evaluation, statistical sampling, and audit of EDP systems.
Prereq: 18 semester hours of accounting, including ACC 341 and ACC 356.
- ACC 447 Contemporary CPA Problems.** 3 hrs
Analysis of current accounting problems faced by the CPA profession. Audit, legal liability, ethics, theory, and practice.
Prereq: ACC 440.
- ACC 448 EDP Auditing and Controls.** 3 hrs
A comprehensive coverage of electronic data processing (EDP) auditing from both a theoretical and pragmatic point of view with special emphasis on control features of a system and its purpose.
Prereq: ACC 356 and ACC 445.
- ACC 450 Internal Auditing.** 3 hrs
Introduction to the profession of internal auditing. Includes professional standards, techniques, scientific methods, reporting, operational auditing, and internal audit management.
Prereq: ACC 341 or permission of instructor.
- ACC 451 Advanced Internal Auditing.** 3 hrs
Continued study of the profession of internal auditing. The focus of this course will be on the advanced study of topics that were briefly discussed in the introductory course. Special emphasis will be placed on applying the concepts learned in the introductory course by performing various exercises with practical (real world) applications.
Prereq: ACC 450.
- ACC 456 Accounting Information Systems Implementation and Projects.** 3 hrs
A capstone course for the accounting information systems major designed to develop expertise in the implementation of an accounting information system.
Prereq: ACC 356 and ORI 380, or department permission.
- ACC 475 International Accounting.** 3 hrs
Introduction to accounting in an international environment. Includes the study of environmental factors, performance evaluation, financial reporting, and specific accounting and auditing problems.
Prereq: ACC 340 and ACC 342, or department permission.
- ACC 479 Special Topics in Accounting.** 3 hrs
Specialized accounting topics in relation to changes in the practice of accounting and its regulation by government agencies.
Prereq: ACC 341.
- ACC 489 Accounting Internship.** 3 hrs
Directed full-time work experience in the accounting phase of a business organization. Use on an accounting major or minor is not permitted. This course may be repeated once for additional credit. Graded credit/no credit.
Prereq: Department permission. To be used as an elective only; does not apply on a major or minor.
- ACC 491 Accounting Honors Thesis.** 1 hr
A directed studies course for accounting honors students only. An in-depth research thesis or project under the direction of an accounting faculty member is required with an oral examination or form of presentation to the faculty and other interested parties upon completion of the thesis.
Prereq: Final semester in undergraduate accounting Honors Program.

ACC 499 Directed Studies. 3 hrs
Directed study of a problem or group of problems in accounting not otherwise treated in departmental courses.
Prereq: Department permission.

INFORMATION SYSTEMS COURSES

ORI 265 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: MTH 118, MTH 119, ORI 215.

ORI 317 System Simulation. 3 hrs
Computer-based simulation techniques for business analysis and decision-making. Random number and process generators, system simulation models, and specialized computer simulation languages. Simulation of discrete time systems and the GPSS language.
Prereq: ORI 215 and ORI 265.

ORI 367 Business Statistics II. 3 hrs
A continuation of the statistical methodology developed in Business Statistics I. Topics include two sample interval estimation and hypothesis tests, inference about the population variance, and simple and multiple regressions.
Prereq: ORI 265.

ORI 465 Applied Linear Statistical Models. 3 hrs
An introduction to linear models with an emphasis on business applications. Topics include multiple linear regression models, analysis of variance and multivariate data analysis. Computer packages will be used.
Prereq: ORI 265.

FINANCE AND COMPUTER INFORMATION SYSTEMS

Asrat Tessema
Department Head
404 Gary M. Owen Building
487-1232

FINANCE UNIT

Professors: Ramesh C. Garg, Asrat Tessema
Associate Professors: Alahassane Diallo, Ronald E. Hutchins, Susan Moeller
Assistant Professors: Robert Kiss, Mahmud Rahman

ORIS UNIT

Professors: Imtiaz S. Ahmad, Badie Farah, Assad S. Khailany, Pedro Sanchez, Charles S. Saxon, Fathi Sokkar, V.M. Rao Tummala, Nesa L. Wu
Associate Professors: Sergio Antiochia, Stevan Mrdalj
Assistant Professors: Juan C. Esteva, Wafa Khorshid, Michel Mitri, Reino V. Warren

The Finance unit prepares students for professional careers related to the fields of finance. Students can develop their expertise in a variety of areas including corporate financial analysis, budgeting, banking, investments, and appraisal. Because of the need for good communication in business, students are encouraged to elect courses in English composition and speech beyond the basic requirements. Also recommended is ORI 465 Applied Linear Statistical Models.

The ORIS unit prepares students for careers in business information systems, and production and operations management.

Programs of Study

Majors:

Business computer systems
Finance
Production/operations management

Minors:

Business computer systems
Finance
Production/operations management

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.

Advising coordinator: Asrat Tessema

Graduate study leads to the Master of Business Administration with concentration in finance or the Master of Science degree in Information Systems (M.S.I.S.). These degree programs and courses are described in the Graduate Catalog.

BUSINESS COMPUTER SYSTEMS MAJOR

Business computer systems emphasizes the role and application of the computer in making management decisions. Students are prepared for careers as systems analysts, programmer analysts, and information systems and database management administrators.

To be completed are the general requirements for the Bachelor of Business Administration degree, the academic major requirements below, and sufficient electives to meet the minimum of 124 semester hours for graduation.

	Sem hours
Practical arts	60
Requirements (business administration core, see College of Business section).	

Academic major in business computer systems 30

1. **Required courses** 27
 - ORI 219 File Processing and COBOL Programming 3
 - ORI 247 Software Design and Programming in Business 3
 - ORI 315 Applied Data Structures 3
 - ORI 380 Database Concepts 3
 - ORI 417 Systems Analysis and Design 3
 - ORI 420 Business Data Communications and Computer Networks 3
 - ORI 425 Software Engineering Management 3
 - ORI 442 Information Resource Management 3
 - ORI 449 Information Systems Development and Implementation Projects 3
2. **Restricted electives** 3

Choose one course from the following:

 - ORI 317 System Simulation, ORI 413 Evaluation and Application of Computer Hardware, ORI 416 Computer Operating Systems, ORI 426 Advanced Structured COBOL Programming
 - CSC 239 Assembly and Machine Language Programming
 - IT 431 Interactive Industrial Computer Graphics

FINANCE MAJOR

The finance major is designed for students interested in planning and managing assets and the acquisition of funds for investment by corporations, non-profit organizations, governmental units, and financial institutions.

To be completed are general requirements for the Bachelor of Business Administration degree, the academic major requirements below, and sufficient electives to meet the minimum of 124 semester hours for graduation.

	Sem hours
Practical arts	57
Requirements (business administration core, p. 179)	
Academic major in finance	24
1. Required courses I	15
FIN 354 Investments	3
FIN 357 Financial Markets	3
FIN 358 Analysis of Financial Statements or ACC 340 Intermediate Accounting I	3
FIN 359 Intermediate Financial Theory	3
FIN 450 Problems in Financial Management	3
2. Required courses II	6
Choose two courses from the following:	
FIN 370 International Business Finance, FIN 451 Portfolio Management, FIN 453 Commercial Banking	
3. Restricted Electives	3
Choose one course from the following:	
FIN 479 Special Topics	
RES 310 Real Estate Finance or RES 340 Real Estate Investments or RES 479 Special Topics	
INS 351 Introduction to Risk and Insurance	
ACC 340 Intermediate Accounting I	
ECO 445 Economic Fluctuations and Forecasting	
ORI 367 Business Statistics II	

PRODUCTION/OPERATIONS MANAGEMENT MAJOR

This major equips graduates to work in various kinds and sizes of production systems as well as to pursue graduate study in several areas. Emphasized are production planning and scheduling, material procurement, inventory control, project scheduling, quality control, layout of facilities, and time and motion studies. The program responds to social, economic, and technological developments. Students are prepared for careers as production planners, materials planners, production supervisors, and industrial buyers.

To be completed are the general requirements for the Bachelor of Business Administration degree, the academic major requirements below, and sufficient electives to meet the minimum of 124 semester hours for graduation.

	Sem hours
Practical arts	57
Requirements (business administration core, page 179)	
Academic major in production/operations management 24	
1. Required courses	15
ACC 342 Managerial Cost Accounting	3
ORI 473 Production Planning and Scheduling	3
ORI 474 Design of the Production/Operations System ..3	
ORI 475 Materials Management and Inventory Control3	
ORI 476 Statistical Quality Control	3
2. Restricted electives	9
Choose three courses from the following:	
ORI 219 File Processing and COBOL Programming, ORI 317 System Simulation, MGT 384 Human Resource Management, ORI 417 Systems Analysis and Design, IT 431 Interactive Industrial Computer Graphics, IT 432 3-D Computer-Aided Design, IT 433 Advanced Computer-Aided Design, ORI 465 Applied Linear Statistical Models, MGT 484 Management-Union Relations	

MINORS OFFERED IN THE FINANCE AND COMPUTER INFORMATION SYSTEMS DEPARTMENT

BUSINESS COMPUTER SYSTEMS

	Sem hours
Minor in business computer systems (for non-business majors)	21
1. Required courses	18
ORI 215 End-User Computing	3
ORI 219 File Processing and COBOL Programming3	
ORI 247 Software Design and Programming in Business ...3	
ORI 417 Systems Analysis and Design	3
ORI 473 Production Planning and Scheduling	3
MGT 386 Organizational Behavior and Theory	3
2. Restricted electives	3
Choose one course from the following:	
ORI 315 Applied Data Structures, ORI 416 Computer Operating Systems, ORI 380 Database Concepts, ORI 420 Business Data Communications and Computer Networks, ORI 426 Advanced Structured COBOL Programming	
ACC 356 Accounting Information Systems	

FINANCE

	Sem hours
Minor in finance (for non-business majors)	21
1. Required courses	12
ACC 240-241 Principles of Accounting I-II	6
FIN 350 Principles of Finance	3
FIN 359 Intermediate Financial Theory	3
2. Restricted electives	9
Choose three courses from the following:	
FIN 354 Investments, FIN 358 Analysis of Financial Statements, FIN 450 Problems in Financial Management, FIN 451 Portfolio Management, FIN 453 Commercial Banking, RES 479 Special Topics, FIN 479 Special Topics	

PRODUCTION/OPERATIONS MANAGEMENT MINOR

	Sem hours
Minor in production/operations management (for non-business majors)	21
1. Required courses	15
ACC 342 Managerial Cost Accounting	3
ORI 374 Production/Operations Management	3
MGT 386 Organizational Behavior and Theory	3
ORI 474 Design of the Production/Operations System	3
ORI 475 Materials Management and Inventory Control	3
2. Restricted electives	6
Choose two courses from the following:	
ORI 219 File Processing and COBOL Programming	
ORI 417 Systems Analysis and Design	
ACC 356 Accounting Information Systems	
MGT 384 Human Resource Management	
PSY 351 Industrial Psychology	

FINANCE COURSES

FIN 287 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 a practical experience in finance. Use on a finance major or minor not permitted. Offered on a graded credit/no credit basis. Admittance by application only.
Prereq: ACC 240 and department permission.

FIN 350 Principles of Finance. 3 hrs
Financing and organizing business enterprises, interpreting financial statements, sources and uses of funds, financing and sale of securities, income disbursements, and dividend policies.
Prereq: ACC 241 and ORI 265.

FIN 352 Financial Management for Entrepreneurs. 3 hrs
A continuation of FIN 350, but with an emphasis on financial management for growth of the small- to medium-sized firm. Working capital management, short-term financing, equipment financing, and other topics pertinent to the growth firm.
Prereq: FIN 350.

FIN 354 Investments. 3 hrs
Development and placement of investments in business and their relationship to economic, legal, and social institutions. Bonds, stocks, security markets, security market operation, new security issues, investment policies, and U.S. government, state, and municipal obligation.
Prereq: FIN 350.

FIN 357 Financial Markets. 3 hrs
The operation and behavior of capital markets and financial intermediaries as sources of investment capital to the business firm. Liability management and investment portfolio behavior of financial market participants. Flow of funds through money and capital markets, and investment characteristics of securities traded. Term structure of yields, yield differentials, and the valuation of debt and equity securities.
Prereq: FIN 350.

FIN 358 Analysis of Financial Statements. 3 hrs
Analysis and interpretation of the financial statements and reports of various types of business and industries. Effect of price-level changes.
Prereq: FIN 350.

FIN 359 Intermediate Financial Theory. 3 hrs
Focuses on the theory of financial management and analysis of financial decisions made by financial managers. The financial

decisions include capital structure, dividend policy, lease or buy, mergers and issuance of new securities.

Prereq: FIN 350.

FIN 370 International Business Finance. 3 hrs
The course will examine the problems, techniques and policies of financial decision-making in a multinational enterprise operating in an international environment.

Prereq: FIN 350.

FIN 387 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 a practical experience in finance. Use on a finance major or minor not permitted. Offered on a graded credit/no credit basis. Admittance by application only.

Prereq: FIN 287.

FIN 450 Problems in Financial Management. 3 hrs
Deals with application of financial management theory. Emphasis is placed on problem-solving in differing economic and situational environments using various quantitative tools. Case analysis and class discussions are emphasized.

Prereq: FIN 359.

FIN 451 Portfolio Management. 3 hrs
An advanced course for professional investment managers covering economic policy and forecasting, security valuation, technical analysis, and portfolio methods and procedures.
Prereq: FIN 354 or equivalent.

FIN 453 Commercial Banking. 3 hrs
Practices, policies, and problems of commercial bank management and operation, capital adequacy, loan and investment policy, liquidity and profit maximization.
Prereq: FIN 350.

FIN 479 Special Topics. 3 hrs
These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.
Prereq: Department permission.

FIN 489 Finance Internship. 3 hrs
Directed full-time work experience in the finance phase of a business or public organization. Use on a finance major or minor not permitted. May be repeated once for additional credit. Graded credit/no credit. Admittance by application only.
Prereq: Department permission.

FIN 499 Independent Study. 3 hrs
Directed study of a problem or group of problems in finance.
Prereq: Department permission.

INSURANCE COURSES

INS 258 Personal Insurance Planning. 3 hrs
A study of the major risks of individuals and the methods of handling these risks. Topics covered include types of risks, handling risks, purposes and nature of insurance, and basic insurance principles and coverages. Primary emphasis is placed on family insurance programs: automobile, home, life, health, and retirement.
Prereq: Sophomore standing.

INS 351 Introduction to Risk and Insurance. 3 hrs
An introduction to study of pure risks, risk management, and insurance, with emphasis on the application of risk management principles and techniques of handling the pure risks of business firms and public institutions. Topics covered include nature and types of risks, risk management process, and types and uses of insurance.
Prereq: ACC 241.

INS 457 Property and Liability Insurance. 3 hrs
A study of the principles and practices of property and liability insurance. Primary emphasis is on developing an understanding of the various property and liability insurance contracts and their uses. Role of risk manager in handling personal and business risk is stressed.
Prereq: INS 351.

INS 458 Life and Health Insurance. 3 hrs
A study of the purposes, uses, and role of life insurance in our society. Major topics covered are nature and uses, legal aspects, types of policies, contract provisions, rate-making, company organization and operation, underwriting practices, and regulation.
Prereq: INS 351.

INS 479 Special Topics. 3 hrs
A study of risks, including the identification, measurement, analysis, and handling of business risks from the viewpoint of a risk manager. Cases are used extensively to provide practical applications of risk management principles and practices.
Prereq: INS 457 and INS 458.

COMPUTER INFORMATION SYSTEMS COURSES

ORI 215 End-User Computing. 3 hrs
Computers are being used more extensively by managers and professionals. This revolution is known by the name "End-User Computing" (EUC). In addition to the traditional topics of information and data processing, a wide range of applications including Decision Support Systems, Executive Information Systems, Non-clerical Office Automation, Data Communications, and Local Area Networks, are covered. These applications cover all the functional areas of businesses.
Prereq: MTH 118.

ORI 219 File Processing and COBOL Programming. 3 hrs
Notwithstanding the increase in popularity of modern languages, COBOL programming is still an important skill for all business computer users. In this class, students will learn to program in COBOL while also learning the basic algorithms for producing reports with multiple control breaks and for processing sequential and random files. All students will design, write, debug, and test COBOL programs using good design techniques and software engineering principles. Intended for ORIS Business Computer Systems majors and others.
Prereq: ORI 215.

ORI 247 Software Design and Programming in Business. 3 hrs
Business computer programmers must be able to use problem-solving techniques, appropriate algorithms, and follow the principles of software engineering to develop good computer solutions to business problems. In this class, the students will study these topics and apply them in the design, writing, debugging, and testing of several programs.
Prereq: ORI 215.

ORI 280 Introduction to Expert Systems in Business. 3 hrs
Recent developments in computer technology have had a dramatic effect on the way decision-making is done in business. The advent of small but powerful computers has made it possible to capture knowledge and distribute it throughout corporations with computerized expert systems. These expert systems can be developed without programming in the traditional sense by using expert shells. In this class, students will use expert systems shells to create several expert systems. Additional topics related to the development and use of expert systems in business will also be studied. Intended for non-ORIS majors.

ORI 300 Quantitative Analysis and Statistics for Business. 3 hrs
An elementary course for MBA students emphasizing three quantitative areas: differentiation and optimization, probability and statistics, and a matrix algebra approach to systems of linear equations.
Prereq: Two years of high school algebra or MTH 104 or equivalent.

ORI 315 Applied Data Structures. 3 hrs
Business computer programmers must have a good knowledge of basic data structures such as linked lists, trees, and networks to permit them to design appropriate computer solutions to the more difficult problems they are typically being asked to solve. In this class, the students will study these data structures and apply them in the design, writing, debugging, and testing of several programs in some suitable high-level language.
Prereq: ORI 247.

ORI 374 Production/Operations Management. 3 hrs
The major design, operation, and control problems of production/operations management in manufacturing and service organizations. Product or service design; facilities location, design and layout; productivity including job design, standards and incentive plans; materials management including forecasting, purchasing, and inventory control; production control; quality assurance and control.
Prereq: ORI 265.

ORI 375 Object-Oriented Programming and Database. 3 hrs
Students will gain an understanding of the principles of object-oriented programming and databases. Students will learn concepts and techniques of object-oriented software development, object-oriented programming principles, characteristics of object-oriented languages, fundamentals of object-oriented database management systems, steps in developing object-oriented applications, and hands-on experience designing and building object-oriented applications.
Prereq: ORI 315.

ORI 380 Database Concepts. 3 hrs
Database concepts for large-scale information systems. Logical and physical designs for data element usage; database management systems.
Prereq: ORI 315.

ORI 387 Cooperative Education in Operations Research. 3 hrs
Four months of full-time employment at a business or public organization to impart a practical experience in production/operations management disciplines. Offered on graded credit/no credit basis for general elective credit only. Admittance by application only.
Prereq: Completion of three hours in production/operations management area.

ORI 390 Management Systems. 3 hrs
Various concepts of systems theory and applications to management. The environment and boundaries of a system, organizational information flows and the firm as a system, cybernetics and communication theory, and the management of large-scale systems. Not open to ORIS majors.
Prereq: MGT 386.

ORI 410 Knowledge-Based Systems. 3 hrs
Modern knowledge-based software is being used increasingly in all business activities. Techniques such as English language database queries and expert systems have moved from the realm of research laboratories to everyday business use in the last few years. Business computer professionals of the future will be expected to be skilled in the use of a wide variety of knowledge-based software and knowledge engineering techniques. This class will study one important programming language and its applica-

tion to several knowledge-based systems. Each student will design and implement several computer programs.

Prereq: ORI 315.

ORI 413 Evaluation and Application of Computer Hardware. 3 hrs

Evaluation of computer hardware found in business computer systems. A non-technical explanation of the operation, needs, and limits of CPUs and peripherals; practical demonstrations of the hardware. CPUs, memory printers, disks, terminals, communications, and related software.

Prereq: ORI 219.

ORI 416 Computer Operating Systems. 3 hrs

Decision methods and concepts for determining the types of computer operating systems required for a particular business environment. Various operating system designs with respect to allocation and utilization of resources; the acceptance, executive, and presentation portions of the systems; large and small operating systems to be considered for the business environment.

Prereq: ORI 315.

ORI 417 Systems Analysis and Design. 3 hrs

Computer-based information systems exist everywhere in business and industry. People armed with the necessary tools are the key to both successful development and performance of these systems. The objective of this course is to introduce students to processes, principles, guidelines, tools, and techniques for systems analysis and design of information systems. The major thrust of the course is to aid the communication process that must take place between the system developers and users. This is facilitated by the use of projects as a vehicle for effectively communicating the content of this course.

Prereq: ORI 219 and ORI 265.

ORI 420 Business Data Communications and Computer Networks. 3 hrs

In an information-based society, knowledge of data communications and computer networks is very important to everyone who works with computers. This course is intended to teach students everything they need to know to be effective participants in the establishment of data communications links for their employers. This course assumes no prior data communications and computer networks knowledge. It combines technical aspects with practical business applications without resorting to a rigorous mathematical approach.

Prereq: ORI 215.

ORI 421 Pictorial Information Systems. 3 hrs

The study of Pictorial Information Systems is applicable to a variety of areas dealing with representation, storage, retrieval, manipulation, and communication of business information. Examples of the current activity in this area include documents, forms, and photographs in office information systems; pictorial databases for manufacturing information systems; image understanding support for information systems in semiconductor, aerospace, and other industries; and medical pictorial archiving and communication systems (PACS).

Prereq: ORI 315.

ORI 425 Software Engineering Management. 3 hrs

Introduction of the concept and techniques managing software growth and software life cycle, increasing software productivity reliability, correctness, and predicting software costs. Legal and ethical aspects of software and human factors are discussed.

Prereq: ORI 417.

ORI 426 Advanced Structured COBOL Programming. 3 hrs
Students work in teams developing integrated information systems in structured COBOL. Searches, reporting, subprograms,

random files, indexed sequential files, various sorting routines, debugging techniques, programming style, optimization techniques, structured and modular programming concepts, transferability and portability strategies, and documentation, including writing program specifications and users' manuals.

Prereq: ORI 219.

ORI 428 Linear Programming. 3 hrs

Theory and business applications of linear programming models. Formulation, graphical solution, simplex method, revised simplex method, duality theorem, sensitivity analysis, parametric programming, integer programming, transportation models, transshipment models, assignment models, input/output models, and zero-sum game models.

Prereq: ORI 215.

ORI 441 FORTRAN Programming Language. 1 hr

An introduction to the FORTRAN language. Variables and constants, format statements, input/output, arithmetic and logical assignment statements, dimension statements and subscripts, subprograms, and advanced IO statements. Credit can be earned only by non-business undergraduate majors or by graduate students meeting a programming language requirement.

ORI 442 Information Resource Management. 3 hrs

Most organizations use computers for operations, control and planning, and for office automation. Although computers facilitate and enhance the functioning of organizations, they do add to the responsibilities of managers. In this course, students learn how to acquire, organize, monitor, and control information resources. The course also discusses problems unique to the management of information resources.

Prereq: ORI 417.

ORI 447 Basic Assembly Language. 2 hrs

Introduction to assembly language. Data format, storage allocation, symbolic programming, macro definition, data movement and branching, arithmetic operations, editing, tables, indexing, subroutines, program linkage, and interrupts. Credit can be earned only by non-business majors or by graduate students meeting a programming language requirement.

Prereq: ORI 215 or equivalent.

ORI 449 Information Systems Development and Implementation Projects. 3 hrs

This is the capstone course. Students work in teams to develop information systems for real-life organizations. These organizations are local businesses, industries, non-profit, governmental institutions, and universities. Classes start with short lectures. The subject matter is then applied to the various projects by the teams with the help of the instructor. The objective of the discussion is to support the students in producing quality operational information systems. Examples are drawn from students' projects to facilitate discussion.

Prereq: ORI 417, ORI 420, and ORI 380.

ORI 473 Production Planning and Scheduling. 3 hrs

An in-depth quantitative and qualitative analysis of various production planning and control problems in manufacturing and service organizations. Topics include forecasting of demand, aggregate production planning, master production scheduling, production-to-order vs. production-to-stock scheduling, and large-project planning and scheduling. The role of management science and computer models in solving these problems is also reflected in the course.

Prereq: ORI 215, ORI 265, and ORI 374.

ORI 474 Design of the Production/Operations System. 3 hrs
An in-depth qualitative, quantitative, and computerized analysis of problems related to the design of manufacturing and non-

manufacturing systems. Product service design, process planning, facilities planning, job design and measurement, maintenance planning and control.

Prereq: ORI 215, ORI 265, and ORI 374.

ORI 475 Materials Management and Inventory Control. 3 hrs
Investigation of problems related to production and material management made through the use of quantitative techniques and computer-based analysis. Topics include materials management and inventory control for independent and dependent demand items, purchasing, and logistics.

Prereq: ORI 374.

ORI 476 Statistical Quality Control. 3 hrs
This course provides in-depth knowledge of statistical process control as well as acceptance sampling methods. In addition, much emphasis will be placed on non-statistical aspects of quality and productivity. Recent management tools appearing in quality control literature will be covered. Quality replacement function and organizational frameworks needed for high quality production will be discussed.

Prereq: ORI 265.

ORI 479 Special Topics. 3 hrs
Specialized studies in production/operations management and statistics.

Prereq: Department permission.

ORI 480 Production/Operations Management—A World Business View. 3 hrs

A discussion of similarities and differences in concepts and techniques used worldwide in Production/Operations Management. American, European, and Japanese systems are compared and analyzed throughout this course. Comparative topics in POM include productivity, management, product/service design, process planning and manufacturing technology, facilities planning, maintenance and quality management, production/inventory planning and control system, and planning and control of repetitive manufacturing.

ORI 487 Cooperative Education in Operations Research. 3 hrs
Four months of full-time employment at a business or public organization to impart a practical experience in production/operations management disciplines. Offered on graded credit/no credit basis for general elective credit only. Admittance by application only.

Prereq: ORI 387.

ORI 489 Internship Program. 3 hrs
Directed full-time work experience in the business computer systems units of a business organization. This course may be repeated for a maximum total of six hours.

Prereq: Major and department permission.

ORI 497/498/499 Independent Study. 1/2/3 hrs
Directed study of a problem or group of problems in production systems or management science.

Prereq: Department permission.

MANAGEMENT

Raymond E. Hill
Department Head
466 Gary M. Owen Building
487-3240

Professors: P. Nick Blanchard, Richard Camp, James H. Conley, Lorraine Hendrickson, Mary Vielhaber Hermon, Raymond E. Hill, Denise Hoyer, Gregory Huszczo, Jean McEnery, Floyd A. Patrick, Stewart L. Tubbs, Fraya Wagner, John Waltman

Associate Professors: Pradeep Chowdhry, Robert P. Crouner, Jagdish Danak, David Victor

Assistant Professors: Nicholas Beltsos, Jean Bush-Bacelis, Deborah Ettington, Jack Nightingale

Graduates from Eastern's Management Department 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's Management graduate's understand and are able to apply the behavioral sciences in planning, implementation, communication, organizational design and development, and in performance measurement to maximize organizational and employee achievement.

Programs of Study

Majors:

General business
Management

Minors:

General Business
Management

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 course program that answers a variety of career needs in both general business and management.

Advising Coordinator: Raymond E. Hill

Details on the Department's innovative Master of Science degree in human resource management/organization development (HRM/OD) are available in the Graduate Catalog.

GENERAL BUSINESS MAJOR

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 semester hours for graduation as stipulated in the catalog.

Sem hours

Practical arts	59
Requirements (business administration core, see College of Business section).	
A. Supervisory management option	24
1. Required business courses	12
MGT 360 Supervisory Theory and Practice	3
MGT 384 Human Resource Management	3
MGT 390 Introduction to Strategic Management	3
MGT 480 Management Responsibility and Ethics	3
2. Restricted electives	12

Twelve hours of restricted electives must come from at least 3 different departments in the College of Business. At least 6 hours must be at the 300 or 400 level.

MANAGEMENT MAJOR

The major in management prepares students for a variety of roles in the business world. Depending on the courses chosen, 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 semester hours for graduation as stipulated in the catalog.

	Sem hours
Practical arts	57
Requirements (business administration core, see College of Business section)	
1. <i>Required business courses</i>	12
MGT 360 Supervisory Theory and Practice	3
MGT 384 Human Resource Management	3
MGT 480 Management Responsibility and Ethics	3
MGT 486 Organizational Development.....	3
2. <i>Restricted electives</i>	12
Choose four courses from the following:	
MGT 388 Introduction to Entrepreneurship	
MGT 402 Business Report Writing or MGT 403 Managerial Communication: Theory and Application	
MGT 479 Special Topics in Management	
MGT 482 Compensation Administration	
MGT 483 Staffing Organizations	
MGT 484 Management-Union Relations	
MGT 485 Human Resource Development	
MGT 492 Managing World Business or MGT 495 International Management	
MGT 496 Human Resource Management	

MINORS OFFERED IN THE MANAGEMENT DEPARTMENT

GENERAL BUSINESS

	Sem hours
General business minor (for non-business majors)	21
1. <i>Required courses</i>	9
ACC 240-241 Principles of Accounting I-II	6
LAW 293 Legal Environment of Business	3
2. <i>Restricted electives</i>	12
Choose four courses from the following:	
FIN 350 Principles of Finance, FIN 354 Investments	
LAW 393 Law of Business Enterprises	
MGT 202 Business Communications, MGT 386 Organizational Behavior and Theory, MGT 402 Business Report Writing, MGT 403 Managerial Communication: Theory and Application, MGT 483 Staffing Organizations	
MKT 360 Principles of Marketing	
ORI 215 End-User Computing, ORI 219 File Processing and COBOL Programming or any business course approved by the Management Department	

MANAGEMENT

	Sem hours
Management minor (for non-business majors)	21
1. <i>Required courses</i>	9
ACC 240 Principles of Accounting I	3
MKT 360 Principles of Marketing	3
MGT 386 Organizational Behavior and Theory	3
2. <i>Restricted electives</i>	12
Choose four courses from the following:	
MGT 202 Business Communications, MGT 384 Human Resource Management, MGT 402 Business Report Writing, MGT 403 Managerial Communication:	

Theory and Application, MGT 480 Management Responsibility and Ethics, MGT 481 Small Business Management, MGT 482 Compensation Administration, MGT 483 Staffing Organizations, MGT 484 Management-Union Relations, MGT 485 Human Resource Development, MGT 486 Organizational Development, MGT 495 International Management, MGT 496 Human Resource Management
ORI 215 End-User Computing, ORI 374 Production/Operations Management, ORI 390 Management Systems

MANAGEMENT COURSES

MGT 202 Business Communications. 3 hrs
Study of principles, elements, and practices underlying administrative communication. The thinking and creative processes involved in problem-solving. The psychology, planning, and transmittal of business information.
Prereq: CTA 121/124 and ENG 121.

MGT 278 Special Topics. 2 hrs
These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.
Prereq: Department permission.

MGT 360 Supervisory Theory and Practice. 3 hrs
A study of basic supervision and practical techniques of leadership for those aspiring to management positions or recently appointed to first-line management. Not open to students with credit in MGT 384. Does not apply toward management major or minor.
Prereq: Junior standing.

MGT 384 Human Resource Management. 3 hrs
Industrial relations functions in business organization. Recruitment, selection, placement, training, motivation, and appraisal of personnel; the scientific approach to the solution of practical problems of industrial manpower utilization.

MGT 386 Organizational Behavior and Theory. 3 hrs
The study of behavioral problems in administration. Individual, group, intergroup, and organizational behavior under dynamic environment conditions.

MGT 387 Cooperative Education in Management. 3 hrs
Four months of full-time employment at a business or public organization in a management position chosen for imparting a practical experience in management. Use on a management major or minor not permitted. Graded credit/no credit. Admittance by application only.
Prereq: Completion of three hours in management.

MGT 388 Introduction to Entrepreneurship. 3 hrs
This course emphasizes the role of entrepreneurs in making integrated managerial and growth decisions for an enterprise from the initial start-up through various evolutionary stages of growth.

MGT 390 Introduction to Strategic Management. 3 hrs
A study of the environment in which managers operate, using cases and exercises. The development of decision making and other analytical skills.
Prereq: MGT 386 and FIN 350 (FIN 350 may be taken concurrently).

MGT 402 Business Report Writing. 3 hrs
Study of principles and practices of business report writing required of men and women in business, industry, education, and government. Concepts, their illustrations, and applications. The creative and functional aspects in understanding the problem,

gathering, and organizing data, and presenting reports for management, employees, and the public.

Prereq: MGT 202.

MGT 403 Managerial Communication: Theory and Application. 3 hrs

A theoretical framework of key managerial communication concepts; skills used to diagnose communication problems and to communicate corporate policies.

Prereq: MGT 202, MGT 386 or department permission.

MGT 479 Special Topics. 3 hrs

Selected topics from the field of management.

Prereq: MGT 386 or department permission.

MGT 480 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 leadership in interacting with these forces and reducing and resolving conflicts with them.

Prereq: Senior standing or department permission.

MGT 481 Small Business Management. 3 hrs

A study of the major concepts and fundamental principles involved in the management of a small business enterprise. The role of the small firm in the national economy; the managerial considerations and problems confronting the entrepreneur in establishing such a venture.

Prereq: Completion of all business junior-level core courses.

MGT 482 Compensation Administration. 3 hrs

Basic concepts of design and methodology for wage and salary administration in an organization. Fundamental considerations in evaluating jobs and positions. Compensation methods and wage incentive systems.

Prereq: MGT 384 and MGT 386 or department permission.

MGT 483 Staffing Organizations. 3 hrs

The staffing of organizations; skills needed in human resource planning, recruitment, job analysis, selection techniques, and evaluation.

Prereq: MGT 384.

MGT 484 Management-Union Relations. 3 hrs

Management strategy and techniques for conducting effective management-union relationships and negotiations; contract administration for both industrial and non-industrial organizations.

Prereq: MGT 384 and MGT 386 or department permission.

MGT 485 Human Resource Development. 3 hrs

Determination of training needs; development of training objectives; selection and development of resources for appropriate training experiences; implementation of training program evaluation.

Prereq: MGT 384 or department permission.

MGT 486 Organizational Development. 3 hrs

A practical approach to organizational renewal, or the strategies used to effect change in organizations operating under dynamic conditions, including the role of the change agent.

Prereq: MGT 386 or department permission.

MGT 487 Cooperative Education In Management. 3 hrs

Four months of full-time employment at a business or public organization in a management position chosen for imparting a practical experience in management. Use on a management major or minor not permitted. Graded credit/no credit. Admittance by application only.

Prereq: MGT 387.

MGT 488 Small Business Management Field Study. 3 hrs

Detailed study of an actual small business, analyzing the operation and making recommendations. A comprehensive written report is required, with one copy going to the owner of the business. Graded credit/no credit.

Prereq: Department permission.

MGT 489 Management Internship. 3 hrs

Approved on-the-job experience of students in the management internship program supplemented by seminars as appropriate. Open only to students formally enrolled in the program and taken during their terms of supervised work experience. May be repeated for a maximum of six semester hours, but may be counted for elective credits only (not as part of the 50-hour business major). Graded credit/no credit.

Prereq: Department permission.

MGT 490 Business Policy. 3 hrs

Integration and analytical application of fundamental areas of business to case problems. Policy issues in the identification and resolution of problem situations.

Prereq: Senior standing in business administration or department permission (senior standing implies completion of the College of Business core).

MGT 492 Managing World Business Communication. 3 hrs

This course focuses on such issues as global management in a cultural context, breaking down international business barriers, motivation in a global context, management of culture shock, international conflict management, management and cultural synergy, and business communication practice and traditions in specific national settings.

Prereq: MGT 202 or department permission.

MGT 495 International Management. 3 hrs

Comparisons of management concepts, processes, and practices in various countries with their different educational, sociological, legal-political, and cultural constraints. The evolution of management and the transfer of managerial philosophy and practices to other countries.

Prereq: MGT 386 and senior standing or department permission.

MGT 496 Human Resource Management. 3 hrs

A practical application of personnel management techniques to actual current business issues; specially designed workshop-type sessions for prospective managers, supervisors, and personnel specialists.

Prereq: MGT 384 or permission of the department head.

MGT 497/498/499 Independent Study. 1/2/3 hrs

Directed study of a problem in management not otherwise treated in department courses.

Prereq: Senior standing and department permission.

MARKETING

H. Robert Dodge
Department Head
469 Gary M. Owen Building
487-3323

Professors: Joseph L. Braden, H. Robert Dodge, Hugh B. McSurely, Colin F. Neuhaus, Roger A. Peterson, Gary M. Victor
Associate Professors: Albert W. Belskus, Thomas E. Buzas, Sam D. Fullerton, G. Russell Merz, Matthew H. Sauber, C. Wayne Weeks
Assistant Professors: Daryl L. Barton, Sandra J. Defebaugh, Elizabeth A. Edwards, Steven Otteson, Harash Sachdev, Joel S. Welber

The marketing curriculum prepares students for careers in sales, advertising, product management, marketing management, marketing research, retailing, international business, and logistics.

Programs of Study

Major:

Marketing

Minors:

Marketing

Real Estate

Concentrations:

Advertising and sales promotion

International business

Marketing research

Purchasing and materials management

Retailing

Sales and sales management

Advising is provided by the faculty and is available during scheduled office hours, or by appointment.

Advising Coordinator: H. Robert Dodge

Graduate study leads to the Master of Business Administration (M.B.A.) degree. The M.B.A. degree program and courses are described in the Graduate Catalog.

MARKETING MAJOR

The marketing major offers career concentrations in advertising and sales promotion, international business, marketing research, purchasing and materials management, retailing and sales, and sales management. Students are encouraged to complete one of the specified concentrations, or they may elect any nine-hour combination of marketing electives.

To be completed are the general requirements for the Bachelor of Business Administration degree, the academic major requirements below, and sufficient electives to meet the minimum of 124 semester hours for graduation.

	Sem hours
Practical arts	57
Requirements (business administration core, see College of Business section).	
Academic major in marketing	24
1. Required courses	15
MKT 261 Contemporary Selling	3
MKT 365 Buyer Behavior	3
MKT 368 Marketing Strategy	3
MKT 470 Marketing Research	3
MKT 475 Marketing Planning and Management	3
2. Restricted electives	9
Choose one of the following suggested concentrations or any nine-hour combination of marketing electives:	

The **advertising and sales promotion concentration** prepares students for positions leading to careers as account executives, sales promotion managers, and advertising managers.

MKT 369 Advertising	3
MKT 474 Promotional Strategy	3
Any additional marketing elective	3

The **international business concentration** prepares students for a variety of positions in organizations conducting business in foreign environments. Course work describes international trade, foreign exchange, comparative advantage, and marketing opportunity assessment. Course work in a foreign language is suggested.

MKT 375 International Business Transactions	3
MKT 460 International Marketing	3
Any additional marketing elective	3

The **marketing research concentration** prepares students for a variety of research positions such as research analyst and director of marketing research. Topics such as problem definition, research design, data collection and analysis, and recommendations based on research are stressed.

ORI 367 Business Statistics II or ORI 465 Applied Linear Statistical Models	3
ECO 445 Economic Fluctuations and Forecasting	3
MKT 499 Independent Study	3

The **purchasing and materials management concentration** prepares students for careers as purchasing managers, directors of purchasing, distribution managers, traffic managers, and directors of materials management. Areas of study include assessing business markets, vendor analysis, economics of purchasing, and materials planning systems.

MKT 364 Logistics and Materials Management	3
MKT 374 Business to Business Marketing	3
MKT 464 Purchasing Management	3

The **distribution concentration** prepares students for careers as retail buyers, merchandising managers, and store managers. Course work covers subjects such as retailing as an institution, site selection, product assortment, merchandising, retail advertising, and inventory control.

MKT 363 Retailing	3
MKT 369 Advertising	3
MGT 384 Human Resource Management	3

The **sales and sales management concentration** prepares students for such careers as salesman, district sales manager, and national sales manager.

MKT 374 Business to Business Marketing	3
MKT 461 Sales Management	3
Any additional marketing elective	3

Students who do not choose one of the above concentrations may take any three marketing electives and will be classed as having chosen the marketing management concentration.

MINORS OFFERED IN THE MARKETING DEPARTMENT

MARKETING

Students who are not majors in the College of Business may elect to minor in marketing.

	Sem hours
Minor in marketing (for non-business majors)	21
1. Required courses	9
ACC 240 Principles of Accounting I	3

- MKT 360 Principles of Marketing 3
 MGT 386 Organizational Behavior and Theory 3
 2. Restricted electives 12
 Choose 12 credits from marketing courses.

REAL ESTATE

	Sem hours
Minor in real estate (for non-business majors)	21
1. Required courses	12
ACC 240 Principles of Accounting I	3
RES 210 Real Estate Principles and Practices	3
RES 310 Real Estate Finance	3
RES 340 Real Estate Investments	3
2. Restricted electives	9
FIN 350 Principles of Finance	
RES 320 Real Estate Appraisal, RES 420 Real Estate Marketing, RES 430 Real Estate Property Management, RES 450 Property Development and Management	

MARKETING COURSES

- MKT 261 Contemporary Selling.** 3 hrs
 The basic principles of personal selling applicable to any product and/or service; professional attitudes and performance.
- MKT 287 Cooperative Education in Marketing.** 3 hrs
 Four months of full-time employment at a business or public organization in a marketing position. General elective credit only. Graded credit/no credit.
- MKT 360 Principles of Marketing.** 3 hrs
 Marketplace exchanges; the relationship between marketing activities of the organization and the consumer.
- MKT 363 Retailing.** 3 hrs
 The practices of retail store management. Store location, layout, organization, buying systems, sales promotion activities, customer services, and store operating expenses.
Prereq: MKT 360.
- MKT 364 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.
Prereq: MKT 360.
- MKT 365 Buyer Behavior.** 3 hrs
 Concepts and research related to consumer and industrial buyer behavior. Sociological and psychological aspects of consumer and industrial buyer behavior, product adoption and diffusion, and purchasing decision-making.
Prereq: MKT 360 and PSY 101.
- MKT 368 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: MKT 360 and ACC 240.
- MKT 369 Advertising.** 3 hrs
 Advertising as a communications tool in marketing management. The role of advertising in the marketing mix; advertising and the process of communication; influence of buyer behavior on the character of promotional efforts; planning creative strategy; effective execution of promotional programs; measuring the results of promotional efforts.
Prereq: MKT 360.

- MKT 374 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: MKT 360.

- MKT 375 International Business Transactions.** 3 hrs
 How goods and services are moved internationally. Transportation concepts and systems, the shipping scene, various documents needed to expedite the international movement of goods.

- MKT 387 Cooperative Education in Marketing.** 3 hrs
 Four months of full-time employment at a business or public organization in a marketing position. General elective credit only. Graded credit/no credit.
Prereq: Three hours of marketing.

- MKT 460 International Marketing.** 3 hrs
 International marketing and its role in the multinational corporation. Appraising international market opportunities; product, price, promotion, and distribution policies; foreign marketing environments.
Prereq: MKT 360.

- MKT 461 Sales Management.** 3 hrs
 Planning, organizing, directing, and controlling the sales force. Recruiting, selecting, training, evaluating, compensating, and supervising.
Prereq: MKT 261 and MKT 360.

- MKT 464 Purchasing Management.** 3 hrs
 Planning, organizing, directing, and controlling the purchasing function. Purchasing systems, forms, and procedures; selecting sources of supply; inventory control; transportation; legal aspects of purchasing; purchasing research, planning, and budgeting.
Prereq: MKT 360 and FIN 350.

- MKT 470 Marketing Research.** 3 hrs
 Skills and attitudes required to specify and utilize market and buyer information in defining marketing problems and making marketing decisions. Applied marketing research problems.
Prereq: MKT 360 and ORI 265.

- MKT 473 Marketing and Product Innovation.** 3 hrs
 Marketing and product successes and failures, environmental influences, market/product plans, and the new product planning process. Development of a project starting with product idea and continuing through offering a new product/service.
Prereq: MKT 360.

- MKT 474 Promotional Strategy.** 3 hrs
 Problems of advertising and promotion including appropriate use of research in advertising decision-making. Development of advertising campaigns, determining advertising effectiveness, client-agency relationships and societal impact of advertising.
Prereq: MKT 369.

- MKT 475 Marketing Planning and Management.** 3 hrs
 Integration of concepts from previous marketing courses and planning the marketing program.
Prereq: MKT 368 and marketing major with senior standing or department permission.

- MKT 478/479 Special Topics in Marketing.** 2/3 hrs
 Selected marketing topics.
Prereq: Department permission.

MKT 487 Cooperative Education in Marketing. 3 hrs
Four months of full-time employment at a business or public organization in a marketing position. General elective credit only. Graded credit/no credit.
Prereq: MKT 387.

MKT 489 Internship Program. 3 hrs
Approved marketing projects with business or non-profit organizations.
Prereq: Marketing major and department permission.

MKT 499 Independent Study. 3 hrs
Directed study of a specific problem area under the direction of a faculty member.
Prereq: Senior standing and department permission.

LAW COURSES

LAW 293 Legal Environment of Business. 3 hrs
The judicial system and legal procedure, crimes and torts, contractual arrangements, sales of goods, and other transactions under the Uniform Commercial Code.

LAW 295 Legal Research. 3 hrs
The performance of research on several actual legal problems.
Prereq: One law course.

LAW 393 Law of Business Enterprises. 3 hrs
The law of forms of business enterprise and negotiable instruments. Agency, partnerships, corporations, and negotiable instruments.
Prereq: LAW 293 or department permission.

LAW 403 Employment Law. 3 hrs
The legal framework within which business (or public) managers must make employment and labor relations decisions; includes laws relative to labor relations, discrimination, affirmative action, occupational health and safety, wage-hour, wrongful discharge, workers compensation, etc.
Prereq: LAW 293.

LAW 435 Law and Marketing. 3 hrs
The influence of law on decision-making in marketing; antitrust and consumer protection issues.
Prereq: MKT 360 and LAW 293.

LAW 455 Real Estate Law. 3 hrs
Legal principles involved in real estate. Evidence of title, deeds, financing, legal position of brokers, leases, zoning, real estate taxes.
Prereq: LAW 293 or RES 210.

LAW 479 Special Topics In Business Law. 3 hrs
Selected business law issues and topics.
Prereq: LAW 293.

LAW 499 Independent Study. 3 hrs
Directed study of a problem in business law not otherwise treated in department courses.
Prereq: Senior standing and department permission.

REAL ESTATE COURSES

RES 210 Real Estate Principles and Practices. 3 hrs
Survey of real estate marketing, valuation, financing, contracts, closings, investing, land descriptions, rights and interests, fair housing, taxes, leases, forms of ownership, land use and planning, and careers in real estate.

RES 279 Special Topics. 3 hrs
Specialized real estate topics in relation to changes in regulations by government agencies.
Prereq: RES 210.

RES 310 Real Estate Finance. 3 hrs
Real estate financing techniques, legal nature, alternative mortgage instruments, main sources of real estate credit, loan underwriting procedures, the integration of financing techniques to maximize investment goals, and analytical procedures.
Prereq: RES 210 and FIN 350 or department permission.

RES 320 Real Estate Appraisal. 3 hrs
Issues in real estate investment analysis, market research, forecasting cash flows, income tax considerations, measurement of investment performance, risk analysis and control, and real estate securities.
Prereq: FIN 350 or department permission.

RES 340 Real Estate Investments. 3 hrs
Issues in real estate investment analysis, market research, forecasting cash flows, income tax considerations, measurement of investment performance, risk analysis and control, and real estate securities.
Prereq: FIN 350 or department permission.

RES 379 Special Topics. 3 hrs
Case analysis of issues in real estate.
Prereq: RES 210.

RES 387 Cooperative Education in Real Estate. 3 hrs
Four months of full-time employment at a business or public organization in a real estate position chosen for imparting a practical experience in real estate. Use on a real estate major or minor not permitted. Offered on a graded credit/no credit basis. Admittance by application only.
Prereq: Completion of six hours in real estate.

RES 420 Real Estate Marketing. 3 hrs
Development of marketing skills, communication, motivation, dealing with objections, sales process, presentations, advertising, qualifying, product knowledge, negotiating, sales organization, and technical aspects of selling.
Prereq: RES 210 or department permission.

RES 430 Real Estate Property Management. 3 hrs
Managing residential, commercial and industrial rental properties including houses, apartments, offices, stores, shopping centers, farm properties, and special purpose properties. Merchandising space, tenant selection, tenant relations, maintenance, owner relations, and open housing laws.
Prereq: RES 210 or department permission.

RES 450 Property Development and Management. 3 hrs
Market analysis and planning for land developments for various types of uses: residential, campus, civic centers, resorts, mobile home parks, offices, professional office parks, housing for the elderly, urban renewal, shopping centers.
Prereq: RES 310 or department permission.

RES 479 Special Topics. 3 hrs
Emerging topics in the field of real estate.
Prereq: RES 210.

RES 487 Cooperative Education in Real Estate. 3 hrs
Four months of full-time employment at a business or public organization in a real estate position chosen for imparting a practical experience in real estate. Use on a real estate major or minor not permitted. Offered on a graded credit/no credit basis. Admittance by application only.
Prereq: RES 387.

RES 499 Directed Studies in Real Estate. 3 hrs
Directed study of a problem or group of problems in real estate.
Prereq: Department permission.



COLLEGE OF EDUCATION

Jerry Robbins, Dean
Robbie Johnson, Associate Dean
Donna Schmitt, Acting Associate Dean
117 Boone Hall
487-1414

DEPARTMENTS

Health, Physical Education, Recreation, and Dance
Leadership and Counseling
Special Education
Teacher Education

HEALTH, PHYSICAL EDUCATION, RECREATION, AND DANCE

Patric L. Cavanaugh
Department Head
235 Warner Physical Education Building
487-0090

Professors: John R. Adams, Patric L. Cavanaugh, Marvin J. Johnson, Michael J. Paciorek, Erik J. Pedersen, John E. Sheard, Roger L. Williams, Robert J. Willoughby, Charles X. Witten, Winifred Witten, Myrna A. Yeakle

Associate Professors: Gary C. Banks, Geraldine K. Barnes, Douglas W. Briggs, Jean S. Cione, Jean E. Folkerth, Robbie A. Johnson, Michael H. Jones, Steve W. Moyer, Jerry Ricciardo, Ronald J. Saunders, Matilda Y. Sayegh, Claudia B. Wasik

Assistant Professors: Eddie Bedford, Jennifer Beller, Russell L. Bush, Allan P. Freund, Joann McNamara, Gloria D. Neve, Ronald E. Oestrike, Terry Rupert, Joan H. Sheard, Ronald M. Venis, Ariel Weymouth-Payne

Instructors: Linda Hemmelgam, Sharon Pendleton, Suzanne Geldys-Zelnik

All University students take courses in the Department of Health, Physical Education, Recreation, and Dance as part of their undergraduate degree requirements. Physical education activity courses enhance students' personal development, health-related fitness, and their use of leisure. All students seeking admission to a professional major program must make application in room 235 of the Warner physical education building. Upon acceptance into a program, declared major students are assigned a faculty adviser.

In addition, the department provides career education in the fields of dance, health, physical education, recreation/park management, therapeutic recreation, and sports medicine.

Three physical education facilities are available to accommodate accelerating student use. Warner Physical Education Building, dedicated in 1964, houses the majority of areas used by the department to instruct students in their career preparation. The facility includes three gymnasiums, a dance studio, a combative room, a gymnastics room, sports medicine lab, and six classrooms.

Adjacent and attached to Warner are Bowen Field House and the Olds Student Recreation Center, where classes are taught in new facilities such as the indoor track, racquetball/paddleball courts, and 50-meter swimming pool. Also available for class use are 17 tennis courts and bowling lanes on campus and water sports facilities nearby.

The department is affiliated with the American and Michigan Association of Health, Physical Education, Recreation, and Dance; the National and Michigan Recreation and Park Associations; and the National Athletic Trainers Association. It also sponsors the student professional organizations Eta Sigma Gamma (health) and Delta Psi Kappa (physical education).

Degree: Bachelor of Science

Programs of Study

Majors:

Dance
Physical education for K-12 education
Recreation and park management
Sports medicine
Therapeutic recreation

Minors:

Athletic coaching
Dance

Health education
Health education for elementary, secondary, K-12, special education-elementary, and special education-secondary
Physical education for secondary, K-12, and special education-secondary
Physical education for special education-elementary and special education-secondary
Recreation and park management

The list of officially assigned advisees is posted in Room 235 of Warner Physical Education Building.

It is recommended that students seek out their adviser as soon as possible to establish a course of study leading to the degree sought.

Advising Coordinators:

Faculty in each of the professional programs are assigned advising responsibilities for those who declare their majors in one of the four disciplines. Coordinators are:

Majors:

Dance: Ariel Weymouth-Payne
Teachers of physical education: Michael Paciorek
Recreation and park management: Jean Folkerth
Therapeutic recreation: Jean Folkerth
Sports Medicine: John E. Sheard

Minors:

Coaching: Terry Rupert
Dance: Ariel Weymouth-Payne
Health: John E. Sheard
Physical education: Michael Paciorek
Physical education minor for special education: Michael Paciorek
Recreation and park management: Jean Folkerth

Fieldwork is a criteria 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. For descriptions of graduate courses and programs, consult the Graduate Catalog.

DANCE CURRICULUM

The dance curriculum is uniquely designed, offering students of dance a choice of five career-track options. This curriculum leads to a Bachelor of Science degree. The five tracks are: (1) pre-dance therapy, (2) dance and related arts, (3) studio management, (4) dance movement specialist, and (5) performance. Students are not required to choose a minor, with the exception of (3) 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. An application at 223 Warner Physical Education Building
2. An application into the dance program at 108 Warner
3. A technical assessment and audition into the program
4. A course of study planned with a dance adviser based on track recommendations.

All students must meet the basic studies requirements and the other courses specified in each area below.

Suitable adjustments can be made in consultation with the dance faculty adviser. Some of the track required courses can be used to fulfill basic studies requirements.

Dance majors are strongly urged to enroll in a technique class every semester while attending Eastern Michigan University. Ballet or modern technique classes may be repeated for no-credit.

	Sem hours
Major in dance	67-72
DAN 107 Rhythmic Analysis and Dance Accompaniment ...	3
DAN 208-209 Classical Ballet Technique III-IV	6
DAN 210-211 Modern Dance Technique III-IV	6
DAN 245 Elements of Dance Composition	4
DAN 255 Dance Production	3
DAN 350 History of Dance	3
DAN 354 Methods and Materials in Teaching of Dance	3
DAN 450 Advanced Dance Composition	4
DAN 455 Seminar in Dance	2
PEP 320, 422, 423 Dance Workshop	4

Track requirements

Track one

EDP 325 Life Span Human Growth and Development ..	4
PED 200 Anatomy and Physiology	5
PED 204 Kinesiology (Mechanics of Movement)	2
PED 209 Bio-Fitness	3
PSY 101/102 General Psychology	3/4
PSY 309 Social Psychology	3
PSY 360 Abnormal Psychology	3
PSY 361 Psychotherapy	3
REC 250 Fieldwork	1
PEP 231 Service Teaching	1
<i>Choose one:</i>	3
PSY 321 Child Psychology, PSY 322 Psychology of Adolescence, PSY 323 Psychology of Human Aging	3
<i>Choose one:</i>	3
PSY 362 The Psychology of Stress and Relaxation, PSY 365 Behavior Modification	3

Electives

PEP 334 Adapted Physical Education, REC 200 Introduction to Therapeutic Recreation, MUS 103 Introduction to Music Therapy, CTA 326 Developmental Drama/Theatre with the Handicapped	12-17
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Basic Studies

Dance Core

Track Requirements

Total

Track two

CTA 150 Introduction to Theatre	3
CTA 450 History of the Theatre to 1642	3
CTA 451 History of the Theatre: 1642 to the Present	3
FA 101 Introduction to Art	3
FA 107-108 Art History Survey I-II	3
PED 200 Anatomy and Physiology	5
PED 204 Kinesiology (Mechanics of Movement)	2
PHI 310 Aesthetics	3

Electives

Basic Studies

Dance Core

Track Requirements

Total

Track three

CTA 102 Voice Development	1
CTA 158 Fundamentals of Acting	3
CTA 254 Stage Makeup	1
CTA 457 Tryouts and Auditions	1
CTA 461 Musical Theatre Acting	2
MUS 232 Voice Class	1
PED 200 Anatomy and Physiology	5
PED 204 Kinesiology (Mechanics of Movement)	2
PEG 155 Jazz I	1

PEG 159 Tap Dancing

PEG 255 Jazz II

PEG 320-321 Dance Workshop

Electives

Basic Studies

Dance Core

Track Requirements

Total

Track four

DAN 456 Creative Dance for Children

PED 200 Anatomy and Physiology

PED 204 Kinesiology (Mechanics of Movement)

PEG 102 Aerobic Dance

PEG 103 Couple, Square, and Ballroom Dancing

PEG 159 Tap Dancing

PEG 277 Special Topics: Intermediate Aerobics

PEG 331, 333 Service Teaching

Electives

Basic Studies

Dance Core

Track Requirements

Business or management minor

Total

Track five

DAN 456 Creative Dance for Children

HEC 202 Human Nutrition

HED 210 Standard American Red Cross First Aid

PED 200 Anatomy and Physiology

PED 204 Kinesiology (Mechanics of Movement)

PED 209 Bio-Fitness

PED 281 Motor Development

PED 310 Physiology of Human Performance

Electives

Basic Studies

Dance Core

Track Requirements

Total

PHYSICAL EDUCATION MAJOR

K-12 TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for reconunendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in physical education, certification code "MB," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #44, "Physical Education." See page 342.

RECREATION AND PARK MANAGEMENT CURRICULUM

The recreation and park management curriculum leads to a Bachelor of Science degree and is designed to prepare students for a broad range of professional career options, including municipal and regional recreation, state and federal park agencies, college intramurals and student unions, commercial and private recreation, outdoor adventure programs, industrial recreation, armed forces recreation, resorts, and tourism. The major is a non-teaching major. A minor in recreation and park management is offered to majors in other fields.

The curriculum is multi-disciplinary, including course work in management and the social sciences, with a required core of recreation leadership, programming, administration and management courses. Students are advised in selecting electives from recreation/park and related subject areas that will further prepare them for careers in their chosen area of interest.

This curriculum consists of a minimum of 50-52 credit hours of basic studies, a minimum of 56 credit hours of courses in the recreation and park management major, 17-19 credit hours of electives, and 250 hours of volunteer and/or paid recreation experience before taking a full-time 15 week practicum. The practicum and fieldwork cannot be completed at the same site.

Area	Sem hours
Symbolics and communication (five courses)	14-15
ENG 121 English Composition	3
ENG 326 Research Writing	3
CTA 121/124 Fundamentals of Speech	3-4
MTH 109 Functional Mathematics II	3
CSC 136 Computers for the Non-Specialist	3
Science and technology (three courses)	11-12
CHM 105 Survey of Chemistry	5
PSY 101/102 General Psychology	3-4
IT 240 Science, Technology, and People	3
Social science (four courses)	12
PLS 112 American Government	3
A course in history	3
Two course sequence in any of the following: Anthropology, Economics, or Geography	6
Arts and humanities (four courses)	12
A literature course	3
A second literature course	3
Philosophy or religion course	3
CTA 222 Drama and Play in Human Experience	3
*Cross-cultural or international studies course	3
(*May be taken in social science or arts and humanities areas.)	

No outside minor is required, but is strongly recommended.

Recreation and park management major 43

1. Required courses

REC 100 Introduction to Recreation and Leisure (F, W) ...	3
REC 200 Introduction to Therapeutic Recreation (F, 20-hours fieldwork)	3
REC 250 Fieldwork (F, W, 60 hours fieldwork)	1
REC 260 Recreation Leadership (F)	3
REC 271 Park Maintenance (F, odd years)	3
REC 310 Leisure and the Older Adult (W)	3
REC 320 Leisure Education (F)	3
REC 360 Recreation Program Planning (W)	3
REC 365 Professional Preparation (W)	1
REC 390 Outdoor Recreation (F)	3
REC 450 Park Planning and Design (W, Lab)	3
REC 460 Park and Recreation Administration (F)	3
REC 465 Park and Recreation Management (W)	3
REC 489 Recreation Practicum (F, W, SP/SU)	8

2. Restricted electives

REC 250/251/252/253 Fieldwork	1
REC 210 Camping for Special Populations	2
REC 280 Camping	2
REC 330 Therapeutic Recreation: Substance Abuse (W, even years)	3
REC 477/478/479 Special Topics	1-3
REC/PED 481 Adapted Aquatics	2
MUS 224 Recreational Music	2
IE 152 Arts and Crafts	3
PED 421 Legal Aspects of Sport, Physical Education, and Recreation	2
BIO 224 Principles of Conservation	4
BIO 232 Nature Interpretation	3
GEO 112 Introduction to Travel and Tourism	3
GES 114 National Parks and Monuments	3
GEO 212 Geography of Travel and Tourism	3
GEO 343 Geography of Sport	3
GEO 344 Recreation Geography	3
GEO 345 Geography of Resorts	3

CTA 352 Communication in Negotiation	3
CTA 372 Assertive Communication	3

3. Activity courses

Required:

Swimming (any level)	1
<i>Select three of the following:</i>	
PEG 101 Weight Control and Fitness	2
PEG 102 Aerobic Dance	1
PEG 103 Couple, Square, and Ballroom Dancing	1
PEG 126 Conditioning Activities	1
PEG 142 Racquetball and Paddleball	1
PEG 144 Trap and Skeet Shooting	1
PEG 145 Cross Country Skiing	1
PEG 146 Beginning Snow Skiing	1
PEG 147 Archery	1
PEG 148 Tennis	1
PEG 149 Badminton	1
PEG 150 Golf	1
PEG 151 Bowling	1

Basic studies	49-51
Recreation major	43
Recreation electives	9
Activities	4
General electives	17-19
Total	124

CURRICULUM FOR SPORTS MEDICINE

Sports medicine is a comparatively new field of study that correlates sports, medicine, the sciences and other health related areas into a professional curriculum. It is identified under different approaches and titles: athletic medicine, cardiovascular rehabilitation, exercise physiology, biomechanics and other similar names. Essentially, sports medicine means an understanding of the health and physical implications of human beings engaged in physical activity.

The curriculum leads to a Bachelor of Science degree in sports medicine. The course of study consists of a minimum of 50 semester hours in basic studies, a minimum of 54-57 semester hours in sports medicine related courses and 17-20 hours of free electives. Students must participate in a variety of practicum experiences prior to completing a full-time internship in the senior year. No outside minor is needed.

Students electing this curriculum may choose one of two areas of specialization: exercise science or athletic training.

All students entering the sports medicine program are listed as "intents" and cannot be considered for candidacy until the following criteria are met:

1. Declare major intent with the Academic Advising Center and the Department.
2. Overall grade point average at Eastern Michigan University of 2.75 (transfer grade point average evaluated separately).
3. Completion of 60 hours of the program.
4. Grades of "C" or above in each of the following: BIO 105 Biology and the Human Species, CHM 120 Fundamentals of Organic and Biochemistry, PHY 221 Mechanics, Sound, and Heat, PED 200 Anatomy and Physiology, ZOO 318 Laboratory in Human Anatomy.
5. Three letters of recommendation, two professional and one personal.
6. Biographical sketch.

When an "intent" has successfully achieved the above, he or she will be notified of the date and time for a personal interview with the Sports Medicine Committee.

Area	Sem hours
Symbolics and communication	8-9
Requirements 1 and 2 (box, page 26)	
Science and technology (three courses)	12
BIO 105 Biology and the Human Species	4
CHM 120 Fundamentals of Organic and Biochemistry ...	4
PHY 221 Mechanics, Sound, and Heat	4
Social science	9
Requirements 1, 2, and 3 (box, page 28)	
Arts and humanities	15
Requirements 1, 2, 3, and 4 (box, page 29)	9
Sports medicine—Athletic training option	57
ATH 119 Orientation to Sports Medicine	1
ATH 219 Introduction to Athletic Training	3
ATH 220 Remedial Exercises and Therapeutic Modalities	3
ATH 225 Practicum I	2
ATH 315 Psychology of Coaching	2
ATH 320 Recognition and Evaluation of Athletic Injury ...	3
ATH 378 Special Topics: Practicum II	2
ATH 390 Pre-Internship	2
ATH 419 Medical and Administrative Aspects of Athletic Training	2
ATH 490 Internship—Athletic Training	8
HEC 202 Human Nutrition	3
HED 310 Advanced First Aid and Emergency Care	3
HED 390 Drug Use and Abuse	3
PED 200 Anatomy and Physiology	5
PED 204 Kinesiology (Mechanics of Movement)	2
PED 209 Bio-Fitness	2
PED 300 Physiology of Exercise	3
PED 310 Physiology of Human Performance	2
PED 421 Legal Aspects of Sport, Physical Education, and Recreation	2
ZOO 318 Laboratory in Human Anatomy	2
Physical education activity courses	2
Sports medicine—Exercise science option	54
ATH 315 Psychology of Coaching	2
HEC 202 Human Nutrition	3
HED 310 Advanced First Aid and Emergency Care	3
HED 390 Drug Use and Abuse	3
HED 420 Health and Aging	3
NUR 270 Pharmacology	2
PED 119 Orientation to Sports Medicine	1
PED 200 Anatomy and Physiology	5
PED 204 Kinesiology (Mechanics of Movement)	2
PED 209 Bio-Fitness	2
PED 300 Physiology of Exercise	3
PED 310 Physiology of Human Performance	2
PED 410 Laboratory Techniques in Human Performance Analysis	3
PED 421 Legal Aspects of Sport, Physical Education, and Recreation	2
PED 425 Sports Medicine Practicum—Exercise Science	2
PED 430 Basic Principles of Electrocardiography	2
PED 480 Internship—Exercise Science	8
ZOO 318 Laboratory in Human Anatomy	2
Physical education activity courses	4
(swimming, jogging, conditioning activities, aerobic dance, cycling, weight training)	
Free electives	18-20
Total	124

THERAPEUTIC RECREATION CURRICULUM

The therapeutic recreation curriculum leads to a Bachelor of Science degree in therapeutic recreation. A person graduating from this program may apply for national certification as a Certified Therapeutic Recreation Specialist.

This curriculum consists of a minimum of 50-52 credit hours of basic studies, a minimum of 68 credit hours of courses in the therapeutic recreation major, 4-6 credit hours of electives, and 250 hours of volunteer and/or paid recreation experience before taking a full-time 15 week, 600 hour practicum. The practicum and fieldwork cannot be completed at the same site.

Students who have been accepted by the University through the Admissions Office must apply for a provisional admission to the therapeutic recreation curriculum through the therapeutic recreation coordinator.

Criteria for therapeutic recreation provisional status:

1. Application for program admission
2. Autobiographical sketch
3. Statement of professional goals

Criteria for therapeutic recreation candidate status:

1. Completed application for therapeutic recreation status.
2. A minimum of 30 credit hours at EMU, including REC 100, 200, and 250.
3. A minimum grade point average of 2.50 overall and 2.75 in all major courses.
4. Completion of a minimum of 60 hours of verified volunteer and/or paid therapeutic recreation experience with special populations.
5. Completion of a minimum of 30 hours of verified volunteer and/or paid recreation experience with normal populations.
6. Letters of recommendation from two recreation practitioners in the field under whom the applicant has completed volunteer and/or paid work.
7. A transfer student must have completed at least 30 credit hours, 15 of which must be at EMU and include three courses from the required therapeutic recreation program.

Area	Sem hours
Symbolics and communication	14-15
ENG 121 English Composition	3
ENG 326 Research Writing	3
CTA 121/124 Fundamentals of Speech	3-4
MTH 109 Functional Mathematics II	3
CSC 136 Computers for the Non-Specialist	3
Science and technology	11-12
CHM 105 Survey of Chemistry	5
PSY 101/102 General Psychology	3-4
BIO 105 Biology and the Human Species	4
Social science (four courses)	12
PLS 112 American Government	3
A course in history	3
SOC 105 Introductory Sociology	3
Cross cultural or international studies	3
Arts and humanities (four courses)	12
A literature course	3
A second literature course	3
Philosophy or religion course	3
CTA 222 Drama and Play in Human Experience	3

No outside minor is required, but is strongly recommended.

Therapeutic Recreation major

1. Required courses	58
REC 100 Introduction to Recreation and Leisure (F, W) ...	3
REC 180 Activity Analysis and Adaption (W)	2
REC 200 Introduction to Therapeutic Recreation (F)	3
REC 250 Fieldwork (F, W, 60 hours fieldwork)	1
REC 260 Recreation Leadership (F)	3
REC 300 Therapeutic Recreation for Special Populations (W-even years, 30 hours fieldwork)	3
REC 310 Leisure and the Older Adult (W)	3

REC 320 Leisure Education	3
REC 340 Techniques in Therapeutic Recreation (W-even years, 30 hours fieldwork).....	3
REC 360 Recreation Program Planning (W)	3
REC 365 Professional Preparation (W)	1
REC 400 Therapeutic Recreation Processes and Services (F)	3
REC 449 Therapeutic Recreation Practicum (F, W, SP/SU)	8
REC 460 Park and Recreation Administration (F)	3
REC 465 Park and Recreation Management (W)	3
PED 200 Anatomy and Physiology (F, W, Sp).....	5
EDP 325 Life Span Human Growth and Development ..	4
PSY 365 Behavior Modification	3
AHP 200 Medical Terminology	1
REC 250/251/252/253 Fieldwork (F, W).....	1
REC 210 Camping for Special Populations (W).....	2
REC 390 Outdoor Recreation (F)	3
REC 330 Therapeutic Recreation: Substance Abuse (W-even years)	3
REC/PED 481 Adapted Aquatics	2
REC 477/478/479 Special Topics	1-3
IE 152 Arts and Crafts.....	3
PED 204 Kinesiology (Mechanics of Movement)	2
PED 334 Adapted Physical Education	2
PED 384 Physical Education for the Visually and Hearing Impaired	1
PED 385 Special Olympics	3
PED 386 Physical Education for the Mentally Impaired	1
PED 421 Legal Aspects of Sport, Physical Education, and Recreation	3
SGN 251 Education of Exceptional Children	2
CTA 226 Non-Verbal Communication	3
CTA 326 Developmental Drama/Theatre with the Handicapped	2
MUS 103 Introduction to Music Therapy	2
MUS 224 Recreational Music	2
Activity courses	4
<i>Required</i>	
Swimming (any level)	1
<i>Select three of the following:</i>	
PEG 102 Aerobic Dance	1
PEG 103 Couple, Square, and Ballroom Dancing	1
PEG 147 Archery	1
PEG 148 Tennis	1
PEG 149 Badminton	1
PEG 150 Golf	1
PEG 151 Bowling	1
PEG 158 Folk Dancing	1
Basic studies	50-52
Therapeutic recreation major	58
Therapeutic recreation electives	6
Therapeutic recreation activities	4
Electives	4-6
Total	124

**MINORS OFFERED IN THE HEALTH,
PHYSICAL EDUCATION, RECREATION,
AND DANCE DEPARTMENT**

COACHING

Designed for students intending to pursue coaching as a full- or part-time activity. The minor is not to be considered a teaching minor for prospective teachers.

Minor in coaching **20**

1. Required courses	11
PED 200 Anatomy and Physiology	5
PED 204 Kinesiology (Mechanics of Movement)	2
PED 312 Athletic Training and Physiotherapy	2
PED 316 Foundations of Coaching	2
2. Restricted electives	9
<i>Group A</i>	2-3
PED 300 Physiology of Exercise or PED 310 Physiology of Human Performance	
<i>Group B</i>	2
ATH 315 Psychology of Coaching or PED 305 Practical Concepts of Conditioning	
<i>Group C</i>	4-5
Select four or five credits from the following:	
ATH 261 Techniques of Officiating I	2
ATH 262 Techniques of Officiating II	2
ATH 263 Theory of Football	2
ATH 265 Theory of Baseball	2
ATH 267 Theory of Basketball	2
ATH 269 Theory of Track and Field	2
ATH 513 Coaching Women's Gymnastics	2
ATH 514 Judging Women's Gymnastics	2
PEP 316 Coaching and Judging Women's Gymnastics ...	2
PEP 415 Judging and Coaching Men's Gymnastics	1
PEP 233 Service Teaching	1
PEP 331 Service Teaching	1
PED 421 Legal Aspects of Sport, Physical Education, and Recreation	2

DANCE

Students planning admission to the dance minor must complete the following:

1. An application at 108 Warner Physical Education Building;
2. A technical assessment in modern dance and ballet;
3. A course of study planned with a dance adviser.

Minor in dance **Sem hours 24-30**

1. Theory courses	14-16
DAN 107 Rhythmic Analysis and Dance Accompaniment	3
DAN 245 Elements of Dance Composition	3
DAN 255 Dance Production	3
DAN 350 History of Dance.....	3
DAN 450 Advanced Dance Composition or DAN 455 Seminar in Dance	2-4
2. Studio courses	10-14
Two levels of Modern Dance Technique I-IV	4-6
Two levels of Classical Ballet Technique I-IV	4-6
Two levels of Jazz I-IV	2
3. Electives	5
To be chosen from other dance studio courses	

HEALTH

**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 health, certification code "MA." The certification test covering this field is #43, "Health." See page 343.

HEALTH

While designed to provide preparation for teaching health in schools, the 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.

	Sem hours
Minor in health	25
1. Required courses	17
HED 210 Standard American Red Cross First Aid	2
HED 299 AIDS	1
HED 302 From Host to Host: The Communicable Diseases	1
HED 320 Health Education in the Elementary Grades ...	2
HED 350 Scientific Foundations in Health	3
HED 360 Concepts in School Sex Education	2
HED 380 Psychosocial Concepts of Health	2
HED 390 Drug Use and Abuse	3
HED 399 Teaching about AIDS	1
2. Restricted electives	8
Choose eight hours in consultation with advising coordinator	

PHYSICAL EDUCATION

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 certification test covering this field is #44, "Physical Education." See page 343.

PHYSICAL EDUCATION MINOR FOR SPECIAL EDUCATION MAJORS

SPECIAL EDUCATION-ELEMENTARY AND SPECIAL EDUCATION-SECONDARY TEACHER CERTIFICATION (AVAILABLE ONLY TO SPECIAL EDUCATION MAJORS)

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 certification test covering this field is #44, "Physical Education." See page 343.

RECREATION AND PARK MANAGEMENT

	Sem hours
Minor in recreation and park management	20
1. Required courses	15
REC 100 Introduction to Recreation and Leisure	3
REC 250 Field Work	1
REC 260 Recreation Leadership	3
REC 360 Recreation Program Planning	3
REC 451 Park Maintenance and Management	2
REC 460 Park and Recreation Administration	3
2. Electives	5
REC 280 Camping, REC 250/251/252/253 Field Work, REC 300 Therapeutic Recreation for Special Popula- tions, REC 310 Leisure and the Older Adult, REC 390 Outdoor Recreation, REC 400 Therapeutic Rec- reation Processes and Services, REC 477/478/479 Special Topics, REC/PED 481 Adapted Aquatics	
IE 152 Arts and Crafts	
BIO 224 Principles of Conservation	
GES 114 National Parks and Monuments, GEO 215 Intro- duction to Urban and Regional Planning	
PLS 431 Theories of Public Organization	
ACC 246 Accounting for Public Administrators	
CTA 352 Communication Negotiation, CTA 372 Asser- tive Communication	

ACTIVITY COURSES FOR GENERAL STUDENTS

The physical education activity requirement is explained on page 31 in this catalog. Additional information may be obtained in

the department office in Room 235 Warner Physical Education Building.

Students are required to wear apparel appropriate to safe and efficient participation in the particular course activity. Students are also required to pay a locker and towel fee. This fee is payable at the Cashier's Office, Pierce Hall.

100 LEVEL—BEGINNING COURSES

These courses are designed for students who have limited or no experience in the particular activity. Instruction and participation include basic skills, rules and strategies. Although all courses are open to both men and women, certain courses include content that is prescribed by the course title, for example PEG 119 Women's Gymnastics and PEG 122 Men's Gymnastics I.

	Sem hours
PEG 101 Weight Control and Fitness	2
PEG 102 Aerobic Dance	1
PEG 103 Couple, Square, and Ballroom Dancing	1
PEG 108 Basketball	1
PEG 109 Jishukan Jujitsu	1
PEG 111 Volleyball	1
PEG 117 Synchronized Swimming	1
PEG 119 Women's Gymnastics	1
PEG 120 Modern Rhythmic Gymnastics	1
PEG 121 Orienteering	1
PEG 122 Men's Gymnastics I	1
PEG 126 Conditioning Activities	1
PEG 128 Judo	1
PEG 130 Assault and Rape Prevention	1
PEG 135 Softball	1
PEG 140 Marching Band	1
PEG 141 Adapted Activities	1
PEG 142 Racquetball and Paddleball	1
PEG 143 Fencing	1
PEG 144 Trap and Skeet Shooting	1
PEG 145 Cross Country Skiing	1
PEG 146 Beginning Snow Skiing	1
PEG 147 Archery	1
PEG 148 Tennis	1
PEG 149 Badminton	1
PEG 150 Golf	1
PEG 151 Bowling	1
PEG 152 Sailing	1
PEG 153 Swimming	1
PEG 155 Jazz I	1
PEG 156 Canoeing	1
PEG 158 Folk Dancing	1
PEG 159 Tap Dancing	1
PEG 160 Ballet	1
PEG 161 Modern Dance	1

200 LEVEL—INTERMEDIATE AND ADVANCED COURSES

These courses assume basic ability and knowledge in the particular activity. Students who elect courses should have successfully completed the beginning course or have had equivalent instruction and/or experience. All courses are open to both men and women except those advanced courses governed by University eligibility rules and regulations.

	Sem hours
Intermediate	
PEG 208 Basketball	1
PEG 209 Intermediate Jishukan Jujitsu	1
PEG 211 Volleyball	1
PEG 219 Intermediate Apparatus	1
PEG 221 Cycling	1
PEG 222 Men's Gymnastics II	1
PEG 224 Jogging	1

PEG 225 Intermediate Golf	1
PEG 226 Weight Training	1
PEG 228 Intermediate Badminton	1
PEG 243 Intermediate Fencing	1
PEG 244 Recreational Shooting and Hunting Safety	1
PEG 248 Intermediate Tennis	1
PEG 253 Intermediate Swimming	1
PEG 254 Diving Techniques and Competitive Swimming	1
PEG 255 Jazz II	1
PEG 258 Intermediate Folk Dancing	1
PEG 260 Intermediate Ballet	1
PEG 261 Intermediate Modern Dance	1
PEG 277/278 Special Topics	1/2
PEG 316 Intermediate Tumbling and Floor Exercise—Women	1
PEG 333 American Red Cross Lifeguard Training	2

ADVANCED

PEG 220 Varsity Rifle Team	1
PEG 229 Varsity Soccer	1
PEG 230 Varsity Cross Country	1
PEG 231 Varsity Football	1
PEG 232 Varsity Basketball	1
PEG 233 Varsity Swimming	1
PEG 234 Varsity Gymnastics	1
PEG 235 Varsity Wrestling	1
PEG 236 Varsity Track	1
PEG 237 Varsity Baseball	1
PEG 238 Varsity Golf	1
PEG 239 Varsity Tennis	1
PEG 240 Varsity Volleyball	1
PEG 241 Varsity Field Hockey	1
PEG 242 Varsity Softball	1
PEG 245 Precision Drill Team	1
PEG 309 Jishukan Jujitsu—Sankyu Brown Belt	1
PEG 321 Backpacking	1
PEG 324 Long Distance Running	1
PEG 348 Basic Scuba Diving	2
PEG 353 American Red Cross Lifeguard Training	2
PEG 453 Water Safety Instructor—ARC	2
PEG 477 Special Topics	1

ATHLETIC COURSES

- ATH 119 Orientation to Sports Medicine.** 1 hr
A class for students interested in sports medicine. An introductory course to orient students to the specialized major areas of athletic training and exercise science.
- ATH 219 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. *Prereq: ATH 119.*
- ATH 220 Remedial Exercises and Therapeutic Modalities.** 3 hrs
A study of the principles of applications, physiological effects, indications and contraindications of all commonly used therapeutic modalities and therapeutic exercise methods used in athletic training. *Prereq: ATH 219.*
- ATH 225 Practicum I.** 2 hrs
A supervised educational experience in athletic training under the supervision of a certified athletic trainer. *Prereq: ATH 219 and department permission.*
- ATH 250 Techniques of Officiating Volleyball.** 1 hr
The proper techniques and mechanics of officiating volleyball taught through class presentations and practical experiences. Rules interpretation and application, positioning, scoring, verbal and hand signals and the responsibilities of an official. Students may become registered volleyball officials with the Michigan High School Athletic Association.

ATH 251 Techniques of Officiating Basketball. 1 hr
The proper techniques and mechanics of officiating basketball taught through class presentations and practical experience. Floor positions, signals, interpretation and application of rules, officials' duties and the psychology of officiating. For students interested in pursuing job opportunities in officiating basketball, as well as coaches and teachers. Lecture and laboratory sessions.

ATH 252 Techniques of Officiating Softball. 1 hr
Proper mechanics and techniques of officiating softball. Rules interpretation and application, positioning, scoring, verbal and hand signals, and the duties of an official. Students may also become registered softball officials with the Michigan High School Athletic Association. Lecture and laboratory sessions.

ATH 261 Techniques of Officiating I. 2 hrs
An elective course offered to men and women students interested in pursuing officiating as an avocation or as an integral part of a coaching background. The course covers football and men's and women's basketball. Registration with the Michigan High School Athletic Association will be available.

ATH 262 Techniques of Officiating II. 2 hrs
An elective course offered to men and women students who are interested in pursuing officiating as an avocation. The course would also be valuable to those students who are interested in coaching as the coach-official relationship is a valuable tool in one's coaching background. The sports covered are: track and field, baseball, and softball. There will be a practical phase as well as a lecture phase of instruction.

ATH 263 Theory of Football. 2 hrs
Lecture course covering the basic fundamentals and styles of offensive and defensive football.

ATH 265 Theory of Baseball. 2 hrs
The fundamental skills and strategy of baseball for the prospective teacher and coach.

ATH 267 Theory of Basketball. 2 hrs
Lecture course covering the basic fundamentals and styles of offensive and defensive basketball.

ATH 268 Theory of Coaching Swimming. 2 hrs
ATH 268 is 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.

ATH 269 Theory of Track and Field. 2 hrs
The fundamental techniques for coaching and administering programs of track and field for the prospective teacher and coach.

ATH 315 Psychology of Coaching. 2 hrs
Practical guidelines to help the prospective coach more effectively apply behavioral science principles to performance aspects of sport.

ATH 317 Theory of Coaching Individual Sports for Women. 2 hrs
Coordinates, correlates and supplements skills and information already conveyed in badminton, golf, tennis and archery activity classes. Place of individual sports in the school intramural and interschool programs, lesson plans, unit plans, techniques and strategies of advanced play, organization of a large class, evaluation of current literature pertinent to each activity.

ATH 318 Theory of Coaching and Teaching Women's Team Sports. 2 hrs
Coordinates, correlates and supplements skills and coaching techniques introduced in activity courses. Field sports, volleyball and basketball. *Prereq: PEG 135, PEP 152.*

ATH 320 Recognition and Evaluation of Athletic Injury. 3 hrs
A study of the principles, procedures and techniques that are commonly utilized in the recognition and assessment process of athletic injury. Emphasis is on the student taking patient history, conducting the physical examination, and the primary care features of athletic injury.

Prereq: ATH 225 and PED 300.

ATH 390 Pre-Internship. 2 hrs

This course is organized and conducted to include a supervised clinical experience that allow the advanced student to assist in the skills, procedures and management of athletic injury and health care.

Prereq: Candidacy and department permission.

ATH 419 Medical and Administrative Aspects of Athletic Training. 2 hrs

To expose a candidate student to the various medical specialties that an athletic trainer is likely to utilize as medical support staff in the athletic health care setting. The organizational and administrative concepts are also featured that are necessary to the smooth delivery of an athletic health care system. The course is primarily lecture, but practical sessions are included where appropriate.

Prereq: ATH 320.

ATH 477/478/479 Special Topics. 1/2/3 hrs

Offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

Prereq: Candidacy and department permission.

ATH 490 Internship—Athletic Training. 8 hrs

The course is clinical experience to be conducted at 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 typically be expected to increase his/her skills and knowledges in the key task areas of athletic training.

Prereq: Candidacy and department permission.

DANCE COURSES

DAN 106 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.

DAN 107 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.

DAN 108 Classical Ballet Technique I. 2 hrs

Theory and technique of beginning classical ballet.

Prereq: Dance major/minor, DAN 107 or equivalent, and/or permission.

DAN 109 Classical Ballet Technique II. 2 hrs

A continuation of the theory and technique of beginning classical ballet.

Prereq: Dance major/minor, DAN 108 or equivalent, and/or permission.

DAN 110 Modern Dance I. 2 hrs

The course is designed as an introduction to the technique of modern dance. The course will include beginning-level skills, modern dance terminology, and the history and combinations of variety of modern dance techniques.

DAN 111 Modern Dance II. 2 hrs

A continuation of the theory and technique of DAN 110.

Prereq: DAN 110.

DAN 208 Classical Ballet Technique III. 3 hrs

Theory and technique of intermediate classical ballet.

Prereq: Dance major/minor, DAN 109 or equivalent, and/or permission.

DAN 209 Classical Ballet Technique IV. 3 hrs

A continuation of the theory and technique of advanced and intermediate classical ballet.

Prereq: Dance major/minor, DAN 208 or equivalent, and/or permission.

DAN 210 Modern Dance Technique III 3 hrs

A continuation of DAN 111.

Prereq: DAN 111.

DAN 211 Modern Dance Technique IV 3 hrs

A continuation of DAN 210.

Prereq: DAN 210.

DAN 245 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.

Prereq: DAN 110.

DAN 255 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, costuming and stage make-up. Laboratory projects coordinated with dance productions.

DAN 350 History of Dance. 3 hrs

A lecture and reference course covering the history, philosophy and theory of dance from primitive man to modern man, including the social and educational implications of dance today.

DAN 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.

DAN 450 Advanced Dance Composition. 4 hrs

An extension of the principles explored in DAN 245 with emphasis on structural development and experiences in the use of thematic materials, selected dance idioms, multi-media resources and group choreography. A choreographic work will be required of students.

Prereq: DAN 107 and DAN 211.

DAN 455 Seminar In Dance. 2 hrs

Current literature and dance research, trends in dance education and developments in contemporary concert dance. Lecture-discussion.

Prereq: DAN 350, DAN 450, or department permission.

DAN 456 Creative Dance for Children. 2 hrs

Goals, concepts, materials and experiences to teach children's creative dance.

DAN 477/478/479 Special Topics. 1/2/3 hrs

Courses offered on an experimental basis for purposes of meeting special needs, interests and/or innovations.

DAN 497/498/499 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 selected 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.

HEALTH COURSES

HED 120 Healthful Living. 3 hrs
Develops in students the responsibility for guiding and evaluating their own health. Acquisition of attitudes, habits, skills, and ideas favorable to efficient and healthful living. Material and information concerning mental, physical, and social well-being. Group discussion, lectures, instructional aids.

HED 210 Standard American Red Cross First Aid. 2 hrs
For all students interested in accident prevention and in the development of the knowledge and skills essential for the immediate care of the suddenly ill or injured. Readings, lectures, and practical work. Certificates for Standard First Aid and for Cardiopulmonary Resuscitation are awarded upon successful completion of the requirements for each.

HED 277/278/279 Special Topics. 1/2/3 hrs
Offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

HED 299 AIDS. 1 hr
A course for the general student to examine the phenomena of AIDS and the AIDS epidemic as they apply to individuals and as they impact on society.

HED 301 Drinking, Drunkenness, and Alcoholism. 1 hr
Alcoholic beverages, effects of alcohol on the human body, drinking patterns, alcoholism, alcoholism and the family, and treatment and rehabilitation of the alcoholic. A lecture-discussion course intended to meet the personal needs of students and/or the professional needs of students who may deal with alcohol-related problems.

HED 302 From Host to Host: The Communicable Diseases. 1 hr
Various types of communicable diseases—childhood and young adulthood, skin, upper respiratory, gastrointestinal, and sexually transmitted—their causes, modes of transmission, signs and symptoms, treatment, complications, and means of control. Lectures, discussions, readings, and audio-visual materials.

HED 310 Advanced First Aid and Emergency Care. 3 hrs
Designed for the sports medicine major. At the completion of this course, the student should have developed the functional first aid capabilities required of police officers, firefighters, emergency squad members, ambulance attendants, and others who, as part of their daily routines, may be required to provide the initial emergency care necessary to sustain life and to maintain life support until the victims of accidents or sudden illness are cared for by qualified medical personnel.

Prereq: HED 210 or current Red Cross certification in First Aid.

HED 320 Health Education in the Elementary Grades. 2 hrs
For students preparing to teach primary and intermediate grades. Health observation of school children, survey of environmental conditions and other methods of determining the health needs of the child. The application of educational principles in health instruction. Evaluation of the newer courses in health education.

HED 330 Health Work in the Schools. 2 hrs
Scientific facts and current issues, practices and trends in school health programs at the secondary level. Methods and materials of health instruction.

Prereq: Sophomore standing.

HED 350 Scientific Foundations in Health. 3 hrs
Basic instruction in the physiological and anatomical concepts related to the health of the human organism. Laboratory work included.

HED 360 Concepts in School Sex Education. 2 hrs
The concepts of sex education as they apply to the school setting. A study of the biological, sociological, and psychological foundations of sex education and the methods and materials for use in presenting sex education in schools.

HED 380 Psychosocial Concepts of Health. 2 hrs
Mental and social factors as they affect the health of the human being. An exploration of all health concepts and correlation of the mental and social phenomena with the physiological principles presented in HED 350.

HED 390 Drug Use and Abuse. 3 hrs
Alcohol and other drug use and abuse. Historical perspectives of current problems, pharmacology of drugs commonly used and abused, physiological and psychosocial factors related to abuse, drug problems of special populations, alcohol and other drug abuse prevention, treatment and rehabilitation, drugs and the law.

HED 399 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.

Prereq: One course in AIDS or department permission.

HED 402 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.

Prereq: Sophomore standing.

HED 410 Drug Overdose Aid. 2 hrs
Outlined by the American Red Cross. Lectures, textbook and practical application of first aid skills and overdose aid skills to give immediate, temporary help in cases of accidents involving drugs. Listening, feedback, and communication skills; limited field experience or its equivalent. Certification in Multi-Media First Aid, Cardiopulmonary Resuscitation, and Overdose Aid is awarded upon successful completion of the course.

HED 420 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.

Prereq: Sophomore standing.

HED 430 Community Health Resources. 2 hrs
Community health programs and resources as they apply to the school health program.

Prereq: HED 320.

HED 477/478/479 Special Topics. 1/2/3 hrs
Offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

PHYSICAL EDUCATION COURSES

PED 119 Orientation to Sports Medicine. 1 hr
A class for students interested in sports medicine. An introductory course to orient students to the specialized major areas of athletic training and exercise science.

PED 150 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.

- PED 151 Methods of Teaching Team Sports I.** 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.
- PED 152 Methods of Teaching Team Sports II.** 1 hr
A required class for physical education majors/minors who are preparing to teach in elementary and secondary schools. Instruction will focus on performance, analysis, methods of teaching and evaluation of skills utilized in soccer, team handball, and non-traditional activities.
- PED 153 Methods of Teaching Conditioning Activities.** 1 hr
A required class for physical education majors/minors who are preparing to teach in elementary and secondary schools. Instruction will focus on performance, analysis, methods of teaching, and evaluating conditioning activities to increase physical fitness.
- PED 200 Anatomy and Physiology.** 5 hrs
A textbook course, supplemented by lectures and demonstrations, on the structure and functions of the bones, joints, and muscles and the organs of digestion, respiration, and excretion.
- PED 204 Kinesiology (Mechanics of Movement).** 2 hrs
A textbook course in the mechanism of bodily movements. The separate movements of the upper limbs, lower limbs, and trunk; those of the body as a whole as it is used in gymnastics, games and sports, and the various occupations of life.
Prereq: PED 200.
- PED 209 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.
- PED 210 Lifetime Wellness and Fitness.** 3 hrs
This lecture-laboratory course is designed to assist students in exploring five components of wellness and applying component concepts into their lifestyles through experiential learning.
Prereq: Honors student.
- PED 240 History and Philosophy of Physical Education.** 2 hrs
A lecture and reference course covering the history and philosophy of physical education and play and how they have influenced the social structure of the various countries and their educational implications.
- PED 250 Methods of Teaching Aquatics.** 2 hrs
A required 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, lifesaving strokes, side stroke, and elementary backstroke are studied to prepare students to teach swimming in physical education classes.
- PED 251 Methods of Teaching Gymnastics.** 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 gymnastics skills will be presented.
- PED 257 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.
- PED 277/278 Special Topics.** 1/2 hrs
Offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.
- PED 281 Motor Development.** 3 hrs
A study of the continuous process of motor development. Observation and analysis of locomotor, non-locomotor, and manipulative patterns; planning and directing movement experiences appropriate for the preschool and elementary school child. Supervised laboratory experience provided.
- PED 282 Perceptual-Motor Training.** 1 hr
Planning and effecting gross motor activity programs for students with neurological dysfunction. Assessment procedures and activity sequences. Supervised field experiences required.
- PED 300 Physiology 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.
Prereq: PED 200.
- PED 304 Microcomputer Applications in HPER&D.** 2 hrs
The course provides a basic overview of how the microcomputer can be integrated into the physical education, recreation, health, dance, and sports medicine programs. Through the use of lecture/demonstrations and hands-on activities, participants use and evaluate a variety of software applicable to school and non school settings.
- PED 305 Practical Concepts of Conditioning.** 2 hrs
A practical experience in applying the concepts and theories of conditioning to in-class situations as well as coaching. Programs such as interval training will be designed and experienced by the student for use in a particular situation.
- PED 310 Physiology of Human Performance.** 2 hrs
Environmental physiology (heat stress, altitude, and underwater physiology) as it relates to physical education; exercise metabolism as it relates to training techniques for endurance, strength, speed, weight control, and physical fitness; physiological and structural sex differences as they relate to physical education; special aids to performance.
- PED 312 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 massaging, bandaging, taping, and therapeutic measures as applied in athletic activities and injuries.
Prereq: PED 200.
- PED 316 Foundations of Coaching.** 2 hrs
Practical and scientific information necessary for the implementation of a successful coaching program.
- PED 334 Adapted Physical Education.** 2 hrs
A lecture and participation course covering the philosophy and goals of adapted physical education, the relationship of adapted 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.
- PED 350 Methods of Teaching Rhythmic Activities.** 1 hr
A required class for physical education majors who are preparing to teach in elementary and secondary schools. Instruction will focus on the teaching, performance, analysis, and evaluation of fundamental rhythmic and dance skills.

PED 351 Methods of Teaching Fundamental Movement and Movement Education. 1 hr

A required class for physical education majors who are preparing to teach in elementary and secondary schools. Instruction will focus on the teaching, performance, analysis, and evaluation of fundamental movement skills.

Prereq: PED 281.

PED 352 Methods of Teaching Elementary Physical Education. 2 hrs

A required course for physical education majors who are preparing to teach and direct physical education experiences for elementary school children. The course focuses on theory and practical experience in physical education in the elementary school. It presents a variety of activities and teaching styles needed to meet the needs of children in the elementary school years.

Prereq: PED 351.

PED 367 Methods and Materials 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.

PED 384 Physical Education for the Visually and Hearing Impaired. 1 hr

Planning and effecting physical education programs for visually and hearing impaired students. Adaptations, teaching strategies, and activity sequences. Supervised field experiences required.

Prereq: PED 281 or PED 334.

PED 385 Special Olympics. 3 hrs

Planning and effecting Special Olympics participation for mentally impaired students. Task analysis, organization, instructional techniques, and program content. Supervised field experiences required.

Prereq: PED 386 and either PED 281 or PED 334.

PED 386 Physical Education for the Mentally Impaired. 1 hr

Planning and effecting physical education programs for trainable and severely mentally impaired students. Assessment procedures, teaching strategies, and activity sequences. Supervised field experiences required.

Prereq: PED 281 or PED 334.

PED 388 Assessment In Adapted Physical Education. 1 hr

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. Field-work required.

Prereq: PED 334.

PED 389 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 E members of the USOC and Committee on Sports for the Disabled, classification of athletes for competition, role of the National Governing Bodies in promoting sports, and ways people with disabilities can access sports and non-competitive opportunities.

PED 405 Women in Sports. 3 hrs

Patterns, problems, and conditions associated with women's sports involvement in selected world cultures; the sportswoman in American society.

PED 410 Laboratory Techniques In Human Performance Analysis. 3 hrs

Measurement of human performance, including body composition, somatology, resting oxygen consumption, carbon dioxide

production, respiration exchange ratio, caloric expenditure, maximum oxygen consumption, anaerobic metabolism, prediction of maximum aerobic capacity, graded exercise testing.

Prereq: PED 300 and PED 310.

PED 421 Legal Aspects of Sport, Physical Education, and Recreation. 2 hrs

Individual rights, due process, selected legal concepts and principles, liability, safe environments, risk management, contracts, insurance, and other selected topics.

Prereq: Senior standing.

PED 425 Sports Medicine Practicum—Exercise Science. 2 hrs

Experience in measurement and establishing exercise programs based upon those measurements for the young, healthy adult. Students will spend approximately 120 hours for two credit hours.

Prereq: PED 209, PED 300, PED 310, PED 410, sports medicine candidate.

PED 430 Basic Principles of Electrocardiography. 2 hrs

A two-hour undergraduate course on the basics of electrocardiography. The student will learn the basic concepts of conduction, rate, rhythm, axis determination, hypertrophy infraction, and the effects of drug therapy.

Prereq: PED 200 and ZOO 318.

PED 440 Tests and Measurements In Physical Education. 2 hrs

The discriminating selection, administration, interpretation, and use of standardized tests and measurements in physical education. Entry into College of Education required.

PED 441 Organization and Administration of Physical Education. 3 hrs

Principles and objectives in physical education in the light of the needs, interests, and characteristics of public school students. Principles of organization and administration of programs in departments, classes, clubs, intramurals, athletics, and leadership. Functional construction of gymnasiums, swimming pools, athletic fields, and various facilities.

Prereq: Junior or senior standing.

PED 477/478/479 Special Topics. 1/2/3 hrs

Offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

PED 480 Internship—Exercise Science. 8 hrs

A directed full semester field experience in a department-approved agency or institution under the direction of certified personnel to work with adult fitness and/or cardiac rehabilitation.

Prereq: Candidacy and department permission.

PED/REC 481 Adapted Aquatics. 2 hrs

Aquatic instructional techniques in working with special populations including physically disabled, developmentally disabled, and the aging. Lectures, films, swimming skills, adaptations of swimming skills, and 20 hours of field work experience. Students with current WSI who meet course requirements will receive Adapted Aquatics Instructor certification. Students with no WSI but who meet course requirements will receive Adapted Aquatics Aide certification.

PED 490 Field Experience in Adapted Physical Education. 4 hrs

Required course for "teachers of physical education for handicapped individuals; approval." A directed 15-week field experience in teaching physical education to handicapped persons in a school setting.

Prereq: Department permission.

PED 495 Senior Seminar. 2 hrs

A synthesis of educational theories presented in the undergraduate physical education program and the student teaching experience.

PED 496 Youth Sports Program. 2 hrs
Development of professional leadership skills for the expanding non-school community sports programs.

PED 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 selected 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.

PHYSICAL EDUCATION MAJOR COURSES

PEP 110 Fundamentals of Movement	1
PEP 123 Wrestling	1
PEP 129 Aquatics	1
PEP 139 Flag Football and Speed-away	1
PEP 123 Wrestling	1
PEP 152 Track and Field for Women	1
PEP 177/178/179 Special Topics	1/2/3
PEP 216 Teaching Women's Gymnastics	1
PEP 224 Folk Dance Methods	1
PEP 231 Service Teaching	1
PEP 233 Service Teaching	1
PEP 239 Soccer	1
PEP 277/278/279 Special Topics	1/2/3
PEP 300 Introduction to Elementary Physical Education	1
PEP 301 Early Elementary Physical Education	1
PEP 302 Later Elementary Physical Education	1
PEP 315 Teaching Gymnastics	1
PEP 316 Coaching and Judging Women's Gymnastics	2
PEP 320 Dance Workshop	1
PEP 321 Dance Workshop	1
PEP 331 Service Teaching	1
PEP 333 Service Teaching	1
PEP 377/378/379 Special Topics	1/2/3
PEP 415 Judging and Coaching Men's Gymnastics	1
PEP 422 Dance Workshop	1
PEP 423 Dance Workshop	1
PEP 477/478/479 Special Topics	1/2/3

RECREATION AND PARK MANAGEMENT AND THERAPEUTIC RECREATION COURSES

REC 100 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.

REC 165 Leisure Lifestyles. 3 hrs
An introduction to leisure lifestyles as related to oneself and how leisure behavior relates to an individual's work, education, economy, 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.

REC 180 Activity Analysis and Adaption. 2 hrs
Develops the skills necessary to analyze activities to find inherent characteristics that contribute to program objectives for special populations. Components of activity analysis (physical, cognitive, affective, and social/interactional skills) are studied in detail. Lecture, discussion, and experiential learning.

REC 200 Introduction to Therapeutic Recreation. 3 hrs
An overview of therapeutic recreation relative to physically disabled, mentally impaired, emotionally impaired, socially deviant, the aged, and chemically dependent within clinical, outpatient, and community settings. Lecture, discussion, film, readings, and 20 hours of field work experience.

REC 210 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.
Prereq: REC 200 or SGN 251.

REC 250/251/252/253 Field Work in Recreation/Therapeutic Recreation. 1 hr each
An introductory course in field work. Students select a site for recreation leadership within a community or clinical setting. Students spend 60 hours on-site and participate in five classroom meetings.

REC 260 Recreation Leadership. 3 hrs
Methods and techniques of group and individual leadership skills at three levels: direct face-to-face leadership, supervision, and management. An overview of conceptual and theoretical components of the leadership process; practical application of various leadership methods and procedures in a cross section of leisure service settings. Lectures, discussion, and experiential learning.

REC 271 Park Maintenance. 3 hrs
Principles, practices, and techniques of maintenance and management of outdoor recreation areas and facilities. Resource maintenance and management; maintenance and depreciation of equipment; personnel practices in maintenance; safety practices, legal issues; and public relations. Lecture, speakers, park visitations, and projects.
Prereq: REC 100 or department permission.

REC 280 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, tents. Safety reviewed for meal preparation, use of tools, and toxic plants and animals. Lecture, demonstrations, and student participation in a weekend camping trip.

REC 300 Therapeutic Recreation for Special Populations. 3 hrs
Leadership, assessment, adaption, and programming techniques to meet the leisure needs of special populations in today's society. Task analysis, facilitation techniques, leisure counseling, programming, and adaptation of specific activities. Lecture, experiential participation, and 30 hours of community field work.
Prereq: REC 200 or REC 260.

REC 310 Leisure and the Older Adult. 3 hrs
Interdisciplinary approach for working with older persons through physical activities, socialization, drama, music, dance, fitness, and facilitation techniques. Aspects of aging, concepts of leadership and individualized programming are studied and then experienced through activities at senior centers and long-term care facilities. Lecture, group assignments, and experiential participation.

REC 320 Leisure Education. 3 hrs
Concepts and techniques of leisure education for use with all populations. Leisure awareness, social interaction skills, leisure activity skills, and leisure resources. Educates the student as a provider of leisure services. Lecture, speakers, readings, and participation.

REC 330 Therapeutic Recreation: Substance Abuse. 3 hrs
The use of leisure and recreation in the prevention and/or rehabilitation of chemical dependency. Skill development in areas of leisure education, group dynamics, facilitation techniques, communication, values clarification, decision-making, games and sports, new games, socialization and outdoor/nature techniques, and family leisure education. Lectures, discussions, and experiential learning.
Prereq: REC 200.

REC 340 Techniques in Therapeutic Recreation. 3 hrs
Introduction to specific techniques used in therapeutic recreation, including counseling theory, psychotherapies, medical terminology, and transfers and lifts. Lecture, speakers, assessments, and 30 hours of fieldwork.
Prereq: REC 200.

REC 360 Recreation Program Planning. 3 hrs
Learning to plan and deliver leisure experiences to an individual or group of individuals. Use of systematic way of identifying, developing, implementing, evaluating, and revising programs to meet people's leisure needs and interests. Plan individual programs. Lecture, speakers, projects.
Prereq: REC 260.

REC 365 Professional Preparation. 1 hr
Involves self-appraisal as a recreation professional; professional ethics; writing practicum and career goals; developing a chronological and functional résumé; writing letter of inquiry and cover letter; information on job placement within recreation services; NRPA registration/certification; applying for graduate school; and the job interview process. Lecture, self-appraisal, formal videotaped interview with a recreation professional.

REC 390 Outdoor Recreation. 3 hrs
History of outdoor recreation and outdoor recreation management. A systems view of outdoor recreation resources; federal, state, and local agencies that provide outdoor recreation opportunities; their history and management philosophies and problems. Tools utilized by managers of outdoor recreation resources to provide opportunities for recreation. Lecture, speakers, projects.

REC 400 Therapeutic Recreation Processes and Services. 3 hrs
The philosophical and theoretical premises on which program design is developed; sequential development components of program design, implementation and evaluation; specific management concerns that are crucial to the effective operation and evaluation of systems-designed therapeutic recreation programs. Lectures, study of ongoing programs, and assessment through role-playing.
Prereq: REC 200, REC 300, REC 340; or department permission.

REC 449 Therapeutic Recreation Practicum. 8 hrs
A full-time, 15-week, 600-hour experience in an approved hospital, outpatient, or community setting under direction of a certified therapeutic recreation specialist and University supervisor. Leadership, supervisory, and administrative experience of a practical nature.
Prereq: Candidate status for a minimum of one semester prior to application for practicum; completion of 90 percent of all academic courses including REC 100, REC 200, REC 250, REC 260, REC 300, REC 340, REC 360, REC 400, REC 460, and REC; completion of 250 hours of fieldwork; grade point average of 2.50 overall and 2.75 in all major classes.

REC 450 Park Planning and Design. 3 hrs
Overview of history of park planning and design; scope of park planning, types of park plans; planning processes, systems, and site-level planning; work program design; use of consultants; sources for planning; recreation standards; analysis of supply and

demand for recreation and open space; site analysis; use area relationships; and site plan development and interpretation. Lab: maps and aerial photos, drawing and perspective; computer drawing; site analysis and design. Lecture, projects, field trips.
Prereq: REC 100.

REC 451 Park Maintenance and Management. 2 hrs
Principles, practices, and problems involved in the maintenance and management operation of recreation/park areas and facilities including the management process, legal issues, management analyses, and specific management techniques and procedures. Lectures, discussions, guest speakers, audio-visual, field visitations, written and oral reports.

REC 460 Park and Recreation Administration. 3 hrs
Influence of organizational thought as related to park and recreation agencies. Organizational structures of park and recreation agencies, budgeting, management by objectives, public and private financial sources, volunteerism, marketing of park and recreation resources, pricing services and products, and administrative responsibility and ethics. Lectures, speakers, projects.
Prereq: REC 100, REC 260, REC 360, or permission.

REC 465 Park and Recreation Management. 3 hrs
Use of systems approach to agency management; nature of a problem and problem-solving model; use of public input in management decision-making; role of research in managing recreation services; personnel management practices; and basic legal issues. Lecture, speakers, projects.
Prereq: REC 100, REC 260, REC 360, or permission.

REC 477/478/479 Special Topics. 1/2/3 hrs
Offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

REC/PED 481 Adapted Aquatics. 2 hrs
Aquatic instructional techniques in working 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.

REC 489 Recreation Practicum. 8 hrs
A full time, 15 week, 600-hour experience in a leisure services setting under a qualified recreation/leisure specialist and University supervisor.
Prereq: Completion of 90 percent of all academic courses including REC 100, REC 200, REC 250, REC 260, REC 360, REC 460, and REC 465; completion of 250 hours of field work. Overall grade point average of 2.5 and GPA of 2.75 in recreation and park management required and elective courses.

REC 497/498/499 Directed Study. 1/2/3 hrs
An opportunity for directed study in areas not covered in other course offerings, or greater in-depth of study in areas of continued interest for the student. Students will be assigned to selected 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.

LEADERSHIP AND COUNSELING

Martha W. Tack
Department Head
13 Boone Hall
487-0255/487-3270

Professors: Irene M. Ametrano, Helen E. R. Ditzhazy, John G. Pappas, Donna M. Schmitt, Martha W. Tack, Louis C. Thayer, John W. Waidley

Associate Professors: William M. Hetrick, William J. Price
Assistant Professors: James E. Berry, Yvonne L. Calloway, Jane S. Goodman, Alison J. Harmon, Christine E. Phelps, Sue A. Stickel, Jaclyn R. Tracy

GRADUATE-LEVEL STUDY

Students who wish to enter the educational leadership program or the guidance and counseling program are reminded that these are graduate-level programs. The undergraduate courses in these areas provide an introduction to the organization of American education, help students explore career opportunities, or provide an opportunity for the students to learn about basic counseling concepts and processes. Qualified senior students may enroll in G&C 500 and other selected 500-level graduate courses for undergraduate or graduate credit in guidance and counseling, with permission of the instructors; undergraduate students may not enroll in educational leadership courses. Rules governing graduate study and complete descriptions of all graduate courses and programs are in the Graduate Catalog.

The educational leadership program offers graduate work leading to the master's, specialist, and doctoral degrees in educational leadership, as well as many other leadership positions in education, e.g., adult education, business management, vocational education, community education, personnel, public relations, community college.

The guidance and counseling program is concerned with the professional preparation of elementary and secondary school counselors, student personnel workers in higher education, and counselors and personnel workers in non-education settings, e.g., employment counselors, vocational rehabilitation counselors, community agency personnel, business/industry personnel. This program provides course work leading to completion of the master's and specialist degrees.

Advising coordinators:

Educational leadership: William M. Hetrick
Guidance and counseling: John W. Waidley

EDUCATIONAL LEADERSHIP COURSES

EDL 402 Organization of American Education. 3 hrs
A study of the organization and control of education in America to determine its purposes, structural characteristics and efficiency, and the various educational roles.
Prereq: One professional education class or department permission.

EDL 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/or innovations.

GUIDANCE AND COUNSELING COURSES

G&C 100 Career Exploration and Decision-Making. 3 hrs
Self-exploration (values, interests, goals) as it relates to careers and the world of work. Presentation in an experimental format of

career exploration and personal decision-making strategies and processes. Investigation of career planning and resources (people and materials).

G&C 450 An Introduction: 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.*

G&C 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/or innovations.

SPECIAL EDUCATION

Kathleen S. Quinn
 Department Head
 223 Rackham Building
 487-3300

Professors: Henry L. Gottwald, Marylyn E. Lake, Nora Martin, Sandra McClennen, Gary B. Navarre, James R. Palasek, Dale L. Rice

Associate Professors: George J. Barach, Michael Beebe, Joe E. Coyner, Dorothea French, Lawrence F. Geffen, Ronald Hoodin, Robert Kreger, Gayle L. Nash, Kathleen S. Quinn, Ralph R. Rupp, Marvin L. Skore, Margaret Smith

Assistant Professors: Roberta Anderson, Lawrence M. Bemish, Marjorie K. Chamberlain, Carole Gorenflo, Nancy L. Halmhuber, Angela Massenberg, Lynne A. Rocklage, Kenneth Schatz, Lech Wisniewski

The Department of Special Education is among the oldest and most prestigious preparation programs for teachers of the handicapped in the nation. It is the largest special education program in Michigan and among the most extensive in the country because of its numerous course offerings, experienced faculty, location, and affiliations with schools, clinics, institutions, agencies, and hospitals in the metropolitan area that surrounds the University.

The department provides courses that prepare students to educate individuals with special needs and where necessary to meet the basic requirements for the State Provisional Elementary and Secondary Certificate in Teaching.

In addition, the department has unique facilities on campus:

1. A speech and hearing clinic, which provides a complete range of clinical training opportunities for majors in speech pathology as well as observation opportunities for students in other programs of study. Clinical outpatient services are available to college students and to children and adults from the surrounding areas.

Clinical speech and language evaluations and therapy and complete audiological services are offered, including diagnostic audiology, hearing aid evaluation and selection, aural rehabilitation, pre-nursery evaluation and training, and parent counseling. As part of their preparation, majors in speech and language impaired and hearing impaired may be directly involved in the delivery of these services under staff supervision.

2. A parent-infant management program for the hearing impaired, which provides guidance for parents of hearing impaired children and enables them to help their child develop auditory/speech/language skills during their formative years.

Parents/caregivers are expected to work in the clinical setting with their infant/toddler and discuss problems concerning their child. University students also have the opportunity to observe and participate in skill development.

3. **CENTER FOR ADAPTIVE TECHNOLOGY EDUCATION (CATE)** The Center for Adaptive Technology Education is a new program and facility in the Department of Special Education, Rackham Building. The CATE program focuses on the use of adaptive and assistive technology to support and facilitate the activities and pursuits of persons with disabilities. CATE has three broad missions that directly relate to the University's commitment to teaching, service and research. The teaching mission of CATE is reflected in preservice and inservice educational programs. CATE's

service mission focuses on providing services to EMU students, staff and faculty with disabilities, as well as providing adaptive technology evaluation and training services to persons with disabilities in the local community. CATE also is involved in research and development activities that focus on the design and development of innovative software and hardware, as well as unique adaptations to existing technology.

Students not majoring in special education may enroll in a planned program consisting of a sequence of special education courses to meet personal and professional goals. Designed primarily for those majoring in physical education or recreation, industrial education, and music education, the program provides background on handicapping conditions but will not offer sufficient specialized work to meet endorsement requirements to teach impaired children. The sequence of courses is to be planned in advance and have the written approval of the head of the Department of Special Education.

Degrees: Bachelor of Science and Bachelor of Arts.

Programs of Study

Majors:

Emotionally impaired
 Hearing impaired
 Mentally impaired
 Physically and otherwise health impaired
 Speech and language impaired*
 Visually impaired

*The speech and language impaired program is a five-year course of study to conform with professional and state guidelines and culminates in a master's degree.

Minors:

Students must complete one subject area minor of 20 hours or a group minor of 24 hours. The minor must be in a teaching subject appropriate to and approved for the level of teaching certificate for which the student is qualifying. Elementary certificate candidates may complete an approved planned program in lieu of a minor when circumstances warrant.

Advising

Students are assigned a faculty adviser from the program area he/she elects as a major. The adviser will monitor the student's progress throughout his/her professional preparation however, it is the student's responsibility to schedule advising appointments each semester prior to or during the university registration period. Faculty advisers post office hours and other times students may schedule appointments. Advisers can inform students of special area requirements and procedures. For example, students in the speech and language impaired and the hearing impaired program areas must have their registration forms signed and stamped by their advisers prior to registration.

Faculty advisers

Emotionally impaired: Joe Coyner, Robert Kreger, Dale Rice, Marvin Skore, Margaret Smith
 Hearing impaired: Dorothea French, Gayle Nash
 Mentally impaired: Marylyn Lake, Nora Martin, Sandra McClennen
 Physically and otherwise health impaired: Roberta Anderson
 Speech and language impaired: Marjorie Chamberlain, Ronald Hoodin, Angela Massenberg, James Palasek
 Visually impaired: George Barach, Lawrence Geffen
 Undeclared majors, transfers and foreign students: Roberta Anderson, Lynne Rocklage

ADMISSION

Admission requirements to the University, the College of Education and the Department of Special Education must be met by students intending to major in this department. However, students may indicate their intention to major in special education upon entrance to the University. Formal application for admission to any of the department's programs of study will be considered only when supported by a letter of recommendation from a faculty member in the Department of Special Education and following acceptance into the College of Education Program area faculty will determine admission.

ADMISSION CRITERIA

1. Completion of 56 semester hours of college credit and with an EMU grade point average of 2.50 or better.
2. Completion of SGN 251 Education of Exceptional Children and the introductory course in the major area of study with a grade of "C" or better (except SLI. See below.) These introductory courses are:
 - a. Emotionally impaired: SEI 301 Emotionally Impaired Children and Adolescents.
 - b. Hearing impaired: (see statement under section titled Academic Majors).
 - c. Mentally impaired: SMI 350 Introduction to Mental Retardation.
 - d. Physically and otherwise health impaired: SPI 310 Developmental Sciences for Teachers of the Physically and Health Impaired.
 - e. Speech and language impaired: SLI 334 Applied Phonetics, SLI 335 Communication Disorders, SLI 316 Speech Science and SLI 337 Language Acquisition with "B" or better.
 - f. Visually impaired: Demonstrate proficiency in typing.
3. Successful completion of the required College of Education basic skills test.
4. Submission of a formal application for admission* to the Department of Special Education supported by a letter of recommendation from a faculty member in the Department of Special Education.

**The hearing impaired and speech and language impaired programs of study have additional requirements for formal admission listed under each program's academic major requirements.*

Criteria for continuance in a program of study in the Department of Special Education is dependent upon:

1. Maintenance of a 2.50 cumulative grade point average.
2. Maintenance of a 2.50 cumulative grade point average in major courses in program of study (3.0 in speech and language impaired).
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.

Students who do not meet all of the above criteria will be identified by the department as special help students. Students so identified will be required to confer with their adviser to jointly develop a written plan for correction of any deficiency. Opportunity for correction of the deficiency usually will not be extended beyond two semesters of full-time enrollment. Students who do not correct their deficiencies to the satisfaction of the program area faculty within the prescribed time limits will be subject to termination from that program of study.

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 them of any extenuating circumstances that may aid them in arriving at a fair and equitable decision. The faculty decision will be final and will be transmitted to the student in 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.

Field work in both regular and special education is required. Pre-student teaching experiences are required of all candidates pursuing a teaching certificate. (See Pre-Student Teaching, page 282.) Majors should consult with their advisers 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 in either elementary or secondary (regular) education is required for all programs of study in special education except speech and language impaired (see SLI program description). Successful completion of any program of study leads to either an elementary or secondary special education endorsement except in the area of speech and language impaired. The speech and language impaired program is a 5-year M.A. degree program in which K-12 endorsement is granted.

Each of the programs of study in the Department of 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 of 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 advisers in speech and language impairment.

National 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 advisers in this area.

Graduate study leads to the master's degree in special education and the specialist's degree in school psychology and special education. The M.A. and specialist's degrees are described in the Graduate Catalog.

EMOTIONALLY IMPAIRED ELEMENTARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in emotionally impaired, certification code "SE," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #59, "Emotionally Impaired." See page 345.

EMOTIONALLY IMPAIRED SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in emotionally impaired, certification code "SE," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #59, "Emotionally Impaired," and the minor area. See page 346.

HEARING IMPAIRED ELEMENTARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in hearing impaired, certification code "SL," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #62, "Hearing Impaired." See page 347.

All students are considered provisional majors until such time as they successfully complete SHI 391 and pass a language proficiency examination. The basic philosophy of the program is oral communication; however, students are exposed to manual communication during their course of study.

HEARING IMPAIRED SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in hearing impaired, certification code "SL," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #62, "Hearing Impaired," and the minor area. See page 348.

All students are considered provisional majors until such time as they successfully complete SHI 391 and pass a language proficiency examination. The basic philosophy of the program is oral communication; however, students are exposed to manual communication during their course of study.

MENTALLY IMPAIRED ELEMENTARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in mentally impaired, certification code "SA," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #56, "Mentally Impaired." See page 349.

MENTALLY IMPAIRED SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in mentally impaired, certification code "SA," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #56, "Mentally Impaired," and the minor area. See page 350.

PHYSICALLY AND OTHERWISE HEALTH IMPAIRED ELEMENTARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in physically impaired, certification code "SC," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #58, "Physically and Otherwise Health Impaired." See page 351.

PHYSICALLY AND OTHERWISE HEALTH IMPAIRED SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in physically impaired, certification code "SC," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #58, "Physically and Otherwise Health Impaired," and the minor area. See page 352.

SPEECH AND LANGUAGE IMPAIRED ALL GRADE LEVELS TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for either the Michigan Department of Education Elementary Provisional Certificate endorsed in speech/language impaired, certification code "SB" or the Michigan Department of Education Secondary Provisional Certificate endorsed in speech/language impaired, certification code "SB." For elementary, the certification tests covering this field are #83, "Elementary Education," and #57, "Speech and Language Impaired." For secondary, the certification tests covering this field are #57, "Speech and Language Impaired," and the minor area. See page 353.

The program in speech and language impaired is a five and one-half to six-year course of study culminating in a master's degree that conforms to the requirements of the American Speech-Language-Hearing Association. Students may elect a teacher training or non-teacher training track, although only the teacher training track is shown here.

The non-teacher training track is satisfied by completing all requirements given in the teacher training track (p. 353), with the exceptions of (a) those courses listed under the "Professional Studies" section and (b) those courses in the "Specialty Studies" section that are numbered 500 and above. Additional electives must be taken to complete 124 hours. Upon completion of the non-teacher training track, the student will be eligible for the Bachelor of Science degree without recommendation for certification.

Upon completion of a minimum of 124 semester hours reflecting all requirements in Basic Studies and undergraduate major and minor sequences, the student will be granted the Bachelor of Science degree without certification. For those students electing the teacher training track, certification is recommended upon completion of the master's degree. Graduate level courses are those numbered 500 and above.

Students may elect elementary or secondary certification. The endorsement is K-12 regardless of the certification level selected.

VISUALLY IMPAIRED ELEMENTARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in visually impaired, certification code "SK," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #83, "Elementary Education," and #61, "Visually Impaired."

VISUALLY IMPAIRED SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in visually impaired, certification code "SK," and, depending on the minor selected, an additional endorsement. The certification tests covering this field are #61, "Visually Impaired," and the minor area.

EMOTIONALLY IMPAIRED

SEI 240 Introductory Clinical Experiences in Emotional Impairment. 3 hrs

Students will be provided with an opportunity to work with impaired students in an effort to help them understand these youngsters, and evaluate their own qualifications for working with this type of youngster. Evaluations of the student's performance will be obtained from a supervising person. Majors in the area of emotional impairment will complete 150 clock hours of experience with youngsters prior to student teaching with emotionally impaired students. Twenty-five (25) of these hours will be completed during this course. An overview and hours introduction to the field of teaching emotionally impaired children and youth including theory, service delivery systems, and classroom practices will also be presented.

SEI 301 Emotionally Impaired Children and Adolescents. 4 hrs
This course provides an explanation of conceptual models which explain disturbed behavior of children and adolescents. Definitive diagnostic categories will also be explained in context of their use in a variety of educational settings by teachers of emotionally impaired children and adolescents.
Prereq: PSY 360; SEI 240; SGN 251 is advised. Not open to students on academic probation.

SEI 401 Programming, Methods, and Curriculum for the Elementary Emotionally Impaired Child. 4 hrs

Teaching methods, techniques, and materials for educating elementary age emotionally impaired children will be presented. In addition, types of programs serving elementary age disturbed youngsters as well as the Individualized Education Program, federal, and state rules governing the programs will be discussed. For elementary majors only.
Prereq: SEI 301 and SGN 461; admission to the teacher education program.

SEI 449 Seminar: Current Topics in Emotional Impairment. 2 hrs

An examination and discussion of issues and topics of current concern and pertinent to working with emotionally impaired children and adolescents.
Prereq: SEI 401 or SEI 488; admission to the teacher education program.

SEI 488 Programming, Methods, and Curriculum for Secondary Emotionally Impaired Youth. 4 hrs

Teaching methods, techniques, and materials for educating secondary age emotionally impaired youth. Types of programs serving adolescent age disturbed youth as well as the Individualized Education Program, federal, and state rules governing the programs will be discussed. For secondary majors only.
Prereq: SEI 301 and SGN 461; admission to the teacher education program.

LEARNING DISABLED

SLD 468 Education of Children with Learning Disabilities. 2 hrs
A study of educational and psychological problems of children with neurological and perceptual defects. Theories as they relate to the central nervous system, teaching techniques, classroom management, case studies, research, and teacher-child and parent relationships.
Prereq: SGN 251; admission to the teacher education program; senior standing.

SPEECH AND LANGUAGE IMPAIRED

SLI 316 Speech Science. 5 hrs
Anatomy and physiology of normal speech production, consideration of speech as motor behavior and as an acoustical phenomenon. Physiological and acoustical investigations of speech and voice, physiological and acoustic measurement of speech.
Coreq: SLI 337 and SLI 341.

SLI 334 Applied Phonetics. 3 hrs
Introduction to the physiological and acoustic characteristics of speech. Classification and production of English speech sounds. Phonemic transcription, including some analysis of deviant speech. Lab experiences weekly. Intended primarily for speech correction majors. No students on academic probation.
Coreq: SLI 335.

SLI 335 Communication Disorders. 3 hrs
A study of the major communication disorders as deviations from normal physical and social behavior. Etiology and symptomatology.
Coreq: SLI 334.

SLI 337 Language Acquisition. 3 hrs
The development of speech, language, and hearing from birth. The interrelationship between cognitive development and language acquisition and usage. Developmental processes and milestones in phonology, morphology, syntax, and semantics as a basis for understanding the effects of speech, language, and hearing problems of the individual.
Coreq: SLI 316 and SLI 341.

SLI 340 Management of Phonological Disorders. 3 hrs
Diagnosis and treatment of functional articulation problems, including the articulation deficits associated with the cleft palate, cerebral palsy, and hearing impairments.
Prereq: SLI 335 and SLI 334. Coreq: SLI 342.

SLI 341 Directed Observation in Speech Pathology. 1 hr
Observation and evaluation of the methods and materials used in treating speech and hearing disorders. Opportunity for supervised clinical practice.
SLI majors must take this course concurrently with SLI 337 and SLI 316.

SLI 342 Management of Language Disorders. 3 hrs
Diagnosis and treatment of language disorders that result from developmental lag, physical anomalies, and cultural differences. Focuses on preschool, elementary, and secondary school-aged individuals.
Prereq: SLI 334, SLI 337, SLI 316, and SLI 335.

SLI 343 Clinical Practice in Speech Pathology I. 2 hrs
A minimum of 60 clock hours of supervised clinical experience with children and adults in individual and group settings. Functional articulation, voice disorders and rhythm problems.
Prereq: SLI 340, SLI 342, department permission.

SLI 344 Clinical Practice in Speech Pathology II. 2 hrs
A minimum of 60 clock hours of supervised clinical experience with speech disorders associated with organic impairment. Problems of children and adults with cerebral palsy, cleft palate, hearing losses, mental impairments, and language.
Prereq: SLI 343 and department permission.

SLI 452 Voice. 3 hrs
A study of the etiology, diagnosis, and treatment of functional and organic voice disorders, including defects of loudness, pitch, and quality.
Prereq: SLI 343.

SLI 454 Stuttering. 3 hrs
Causation, symptomatology, and remedial procedures of stuttering; specific therapy procedures in the clinic, the school, and the home.
Prereq: SLI 343.

GENERAL SPECIAL EDUCATION COURSES

SGN 251 Education of Exceptional Children. 3 hrs
An introductory survey course providing the historical, philosophical, and organizational factors leading to the enactment of federal and state laws, rules, and regulations governing special education. Characteristics, educational considerations, and implications of all areas of exceptionality including the gifted, learning disabled, mentally, emotionally, speech and language, hearing, visually, physically, and health impaired are addressed.

SGN 271 Language Development and Speech Disorders in Special Populations. 2 hrs
Understanding the dynamics of language development and usage from birth through the school years. The effects of disability on language development and processes. Lecture and observation. Required of all special education majors except speech and language impaired and hearing impaired who must take SLI 337 Language Acquisition.

SGN 300 Exceptional Children in the Regular Classroom. 1 hr
Characteristics of the exceptional learner including impairments of hearing, vision, speech, intelligence, behavior, and physical abilities. Considerations and implications of the educational, social, and psychological experience for the exceptional learner in the regular classroom. Not open to Special Education majors.

SGN 390 Measurement and Diagnosis in Special Education. 3 hrs
This course is required for all students majoring in special education. Students will learn about a wide variety of standardized and criterion-referenced tests and about their role in assessing intellectual capacity, academic achievement, socio-emotional skills, adaptive behavior, and auditory and visual limitations of students with handicaps. The course will be taught in a lecture format. Students will look at and become familiar with a wide variety of commonly used tests. Cultural reactions, test bias, and limitations will be explored.
Prereq: SGN 251; admission to the teacher education program.

SGN 395 Special Needs Persons: School, Family, and Community Interaction. 3 hrs
Designed to provide students with knowledge of the reciprocal influences of special needs persons, birth through 26 years of age, their families, and community institutions: legal, medical, social welfare, and educational. Students will develop skills required to

identify problem areas for the special needs person and their families when interfacing with community institutions and to plan and implement effective intervention for positive growth.
Prereq: SGN 251; admission to the teacher education program.

SGN 461 Classroom Management and Intervention Strategies for Handicapped Students. 3 hrs
An understanding of selected approaches to effective classroom management for special education students in varied settings will be developed. Behavioral theories will provide the foundation for building effective strategies and approaches for classroom management. The roles and responsibilities of students, parents, teachers, and other school personnel will be identified.
Prereq: SGN 251; admission to the teacher education program.

SGN 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/or innovations.

SGN 481 Adaptive Technology in Special Education. 2 hrs
This course is intended to assist the student in identifying and implementing adaptive technology in the special education curriculum. The course explores the latest technology available in adapting computers and other devices to assist the special child. Major areas of interest include voice input/output, switching devices, alternative keyboards for the computer, (touch pads, membranes), adaptive devices for the visually impaired (braille and voice output), and other alternative devices. Students are encouraged to look at a broad range of uses for each technological instrument rather than isolate a given advancement for the use of a designated or single disability.
Prereq: SGN 251; a computer course; admission to the teacher education program.

SGN 485 Methods and Curriculum: Adolescents and Young Adults with Special Needs. 2 hrs
This course is intended for all students seeking a secondary special education endorsement and interested in working with adolescents or young adults with cognitive, sensory, or physical limitations. Students will develop knowledge and awareness about secondary and postsecondary special education programs, curriculum, and services that address the intellectual, social, emotional, physical, and vocational needs of this population.
Prereq: Admission to the teacher education program.

SGN 486 Recitation and Field Experience with Adolescents and Young Adults: Mentally Impaired, Physically Impaired, Hearing Impaired, or Visually Impaired. 2 hrs
Adaptation and application of curriculum and methods appropriate to the student's field of study (major). Students will complete a field experience at the secondary level in the area of disability for which he/she is to be endorsed.
Prereq: Admission to the teacher education program.

SGN 491 Seminar for Teachers of Special Education. 2 hrs
This course provides a transition from the academic environment to the professional setting. Competencies and issues necessary for teacher preparation and pertinent to the student's internship are presented. Topics for discussion include: a review of the history, nature, and structure of the Michigan Public School system and the delivery of total services to all students including the special education child; state and federal law including due process, data privacy requirements, teacher tenure, and professional liability; professional ethics, organizations, unions, and the influences on education; supervision of and interaction with teaching aids, paraprofessionals, volunteers, and other school personnel including the regular classroom teacher. Concurrent with special student teaching.
Prereq: Admission to the teacher education program.

HEARING IMPAIRED

- SHI 228 Education of the Hearing Impaired.** 3 hrs
Designed to cover the history of the education of the hearing impaired, and to provide an overview of educational programming, psychological adjustment, parent counseling, communication methods, and various philosophical approaches to the education of the hearing impaired.
Pre- or coreq: SGN 251
- SHI 375 Fundamentals of Sign Communication.** 2 hrs
A study of the rationale for manual communication systems with the hearing impaired involving the combined use of manual alphabet and language of signs. Developing fluency in manual communication skills will be a part of the course.
- SHI 376 Total Communication Practicum with Hearing Impaired.** 1 hr
Thirty clock hours (one semester hour) of supervised observation and work with hearing impaired students. Experience is designed to permit the student and the University to examine the individual's qualification for working with the hearing impaired in a total communication setting.
Prereq: SHI 375 and SLI 337.
- SHI 387 Introductory Practicum with the Deaf I.** 1 hr
Thirty clock hours of supervised observation and work with hearing impaired students. Experience is designed to permit the student and the University to examine the individual's qualifications for teaching the hearing impaired.
Prereq: SHI 228; admission to the teacher education program.
- SHI 391 Language for the Hearing Impaired.** 3 hrs
Language development of prelinguistically deaf children. Survey of various methods of teaching language, including natural and structured approaches.
Prereq: SHI 228; admission to the teacher education program.
- SHI 392 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: Admission to the teacher education program.
- SHI 394 Auditory Training and Speechreading.** 3 hrs
A study of the avenues of receptive language available to the hearing impaired; the development of auditory learning, auditory training, and the training of speechreading—includes the understanding of group and individual hearing aids.
Prereq: SHI 392 and SLI 337; admission to the teacher education program.
- SHI 436 Speech for the Hearing Impaired.** 3 hrs
Speech development and correction in hearing impaired persons. Analysis of speech as a psycho-acoustic-motor skill, analysis of methods of developing speech and of achieving intelligible, connected speech.
Prereq: SHI 394 and SLI 337; admission to the teacher education program.
- SHI 437 Adapted Curriculum for the Hearing Impaired.** 3 hrs
Principles and methods of teaching academic subjects to the hearing impaired. Classroom procedures and materials especially designed for the hearing impaired, as well as the adaptation of regular curriculum and materials will be presented.
Prereq: SHI 391 and SHI 387; admission to the teacher education program.

SHI 487 Speech Practicum with the Hearing Impaired. 2 hrs
Sixty (60) clock hours of supervised observation and speech work with hearing-impaired persons.

Prereq: SHI 436; admission to the teacher education program.

MENTALLY IMPAIRED

- SMI 240 Preclinical: Mentally Impaired.** 3 hrs
The purposes of the preclinical experiences in the area of the mentally impaired are twofold. First, it provides the student with opportunities to observe a variety of programs and work with children or youth displaying a variety of types and/or degrees of learning, emotional, and physical difficulties. (For a more detailed description of this component, please review the Handbook for Majors in the Mentally Impaired.) Secondly, students will meet together to discuss observations, insights, and concerns related to their experiences. Educational programs for students with mental retardation will be discussed and site visits will be made.
- SMI 350 Introduction to Mental Retardation.** 3 hrs
This lecture course introduces students to the field of mental retardation: its history, terminology, causes, health, medical, and sensori-neural components. The range of philosophies influencing educational practices and life management programs are also discussed.
Prereq: SGN 251, PSY 101.
- SMI 427 Educating the Elementary Student with Mild Retardation.** 2 hrs
The development of programs, materials, and instructional techniques appropriate to the needs of the educable mentally retarded child from birth to age 12.
Prereq: SMI 350; admission to the teacher education program.
- SMI 429 Curriculum Design and Education Programs for Students with Mild Retardation.** 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 formal 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: SMI 350; admission to the teacher education program.
- SMI 483 Education of Students with Moderate or Severe Retardation.** 4 hrs
This course focuses on philosophy, curriculum, assessment, teaching methods, and classroom management techniques for students identified as TMI, SMI, or SXI. A three-hour-per-week field placement in one of the above classrooms is an integral part of the course.
Prereq: SGN 461; SGN 481; admission to the teacher education program.
- PHYSICALLY OR OTHERWISE HEALTH IMPAIRED**
- SPI 240 Preclinical Experiences—POHI.** 3 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 of the physically and health impaired and be exposed to the ancillary services found in most POHI delivery models.

SPI 310 Developmental Sciences for Teachers of the Physically and Health Impaired. 4 hrs

A study of developmental human anatomy and physiology with emphasis upon the impact of the nervous system and its integration, function, and control of the other body systems and their functions. The relationship of normal development to disability is explored and infused throughout the course. Laboratory periods are required where students can investigate the principles covered in lecture using anatomical models and specimens.
Prereq: SGN 251; SPI 240.

SPI 360 Pathology of Physical and Health Impairments. 3 hrs
A comprehensive study of orthopedic, neurologic, health, and other handicapping conditions common to children and youth comprising the population found in educational settings serviced by the POHI teacher. Medical terminology and procedures are also introduced. Laboratory assignments are included in this course.
Prereq: Admission to the teacher education program.

SPI 412 Ancillary Services and Health Procedures for Teachers of Physically Impaired. 2 hrs

Information concerning the individual disciplines that provide ancillary services to physically and health impaired students. Skills involving the use of adaptive equipment, manipulation of orthotics, and implementation of health intervention and maintenance procedures will be learned. A field placement is also required.
Prereq: Admission to the teacher education program.

SPI 414 Educational Strategies for Teachers of the Physically Impaired. 4 hrs

This course encompasses information and develops skills needed to develop, implement, and evaluate curriculum and methods for the preschool and elementary physically otherwise health impaired student. All aspects of cognitive, affective, and psychomotor education are explored. Emphasis is placed upon individualized instruction and programming, adaptations and modification of instructional methods and materials, remediation, communication, problem-solving, decision-making, personal adjustment, prevocational education, and leisure activities. A directed classroom laboratory is required.
Prereq: SPI 412; RDG 314; SLD 468; admission to the teacher education program.

VISUALLY IMPAIRED

SVI 365 Braille. 3 hrs
Developing proficiency in reading and writing error-free braille and the reading of music braille.
Pre or coreq: SGN 251.

SVI 366 The Eye and Vision—Anatomy and Physiology. 2 hrs
Anatomy, physiology, and pathology of the organs of vision, refractive errors, and principles of correction. Educational implications of visual handicaps in children rather than strictly medical achievements. Interpretation of medical reports to parents, students, and other teachers.

SVI 368 Mobility Training for the Visually Impaired. 2 hrs
Sensory training, study, and development of cane techniques as they apply to mobility for the blind. Introduction to leader dog program. Practicum included. Offered on the junior, senior, and graduate level.
Prereq: Junior level.

SVI 369 Community Considerations for the Visually Impaired. 3 hrs

The lifestyle and needs of persons with visual impairments; appropriate considerations the community must take for all levels of physical, emotional, and vocational development. Field trips and classroom experiences, acquaintance with a wide variety of service-oriented facilities for the visually impaired.
Prereq: SGN 251.

SVI 464 Methods of Teaching the Blind. 3 hrs

A study of the various methods used in educating and assessing blind children. The adaptation of these methods to the teaching of school subjects to blind students. Further emphasis on Nemeth Code, Cranmer abacus and other teaching materials and devices.
Prereq: SGN 251; admission to the teacher education program.

SVI 465 Braille II: Nemeth Code. 3 hrs

Transcription skills with Nemeth Code.
Prereq: SVI 365; admission to the teacher education program.

SVI 467 Education of Children with Impaired Vision. 2 hrs

Organization and administration of various plans for educating partially seeing children. Adaptation of the various teaching methods and materials to partially seeing children. A comparison of various vision testing methods and devices. Visits to classes for visually impaired children.
Prereq: SGN 251; admission to the teacher education program.

SVI 469 Electronic Communication for the Visually Impaired. 3 hrs

This course is designed to expose the student to a variety of tools available for use by visually impaired persons. The tools or devices covered include those designed to provide assistance in travel, reading, braille, low vision (such as the Optacon, Kurzweil Reading Machine, Versabrailler, Stereo Toner, and Computer Braille Programs). Proficiency of five words per minute on the Optacon is expected.
Prereq: Admission to the teacher education program.

TEACHER EDUCATION

James D. Riley
Department Head
234 Boone Hall
487-3260

Professors: Leah D. Adams, Irene A. Allen, Mary G. Bigler, John Blair, Bert I. Greene, Thomas M. Gwaltney, Louise F. Jernigan, Wallace D. LaBenne, Judith McKee, Marvin Pasch, Jeanne Pietig, Quirico S. Samonte, Kishor N. Wahi, Jerome A. Weiser, Warren S. Williams, Judy Williston

Associate Professors: Anne K. Bednar, William Brozo, Barbara Diamond, Trevor Gardner, Sarah Huyvaert, Martha Kinney, Edward Lederman, Michael Martin, Sarah Martin, Rebecca Martusewicz, Maureen McCormack, Margaret Moore, Karen Paciorek, Patricia Pokay, Valerie Polakow, Robert S. Robinson, Georgea Sparks-Langer, Alane Starko

Assistant Professors: Kathleen Jeakle Beauvais, Jan Collins-Eaglin, Jane Gordon, Sylvia Jones, Christina Jose-Kampfner, Olga G. Nelson

The Department of Teacher Education provides undergraduate courses in orientation to the University, psychological and social foundations of education, methods, reading, and educational media, among others. These courses, along with courses in other University departments, comprise the programs for preparing elementary, secondary, and K-12 teachers.

Curricula

The Department provides coordination of and a portion of the coursework for programs for persons seeking to become elementary teachers, elementary teachers with early childhood endorsement, secondary teachers, and teachers of K-12 subjects.

Prospective elementary teachers

The program of studies and other information for prospective elementary teachers is found on pp. 359-361. Each program includes a major and a minor (or three minors). Many majors and minors are offered through colleges other than the College of Education.

However, the Teacher Education department administers these majors for prospective elementary teachers: Arts Group; Elementary Science Group; Social Science Group Major for Elementary Education; Interdisciplinary Major in Children's Literature and Drama/Theatre for the Young; and Group Major in Literature, Language, Communication, and Theatre Arts.

The Teacher Education department administers these minors for prospective elementary teachers: Arts Group; Early Childhood Education; Elementary Science Group; French Language; German Language; Social Science Group (Elementary); and Spanish Language.

Prospective elementary teachers with early childhood endorsement

The program of studies and other information for prospective elementary teachers with early childhood endorsement is found on pp. 357-359. See also information for prospective elementary teachers above.

Prospective secondary and K-12 teachers

The program of studies and other information for prospective secondary and K-12 teachers is found on p. 284.

Advising

Advising Coordinator for Elementary Certification: Olga Nelson

Advising is required for all students so that each can pursue both personal and professional goals in a timely and satisfying manner.

Elementary education and early childhood education students are normally required to attend group advising sessions before being assigned an adviser. Students should visit the Teacher Education office in 234 Boone to pick up a copy of the group advising schedule as part of the advising process pursuant to the declaration of intent. Before the end of the first semester, students should be assigned an adviser as part of the group advising sessions.

Graduate study leads to the master's degree in early childhood education, elementary education, middle school/junior high and secondary school teaching, K-12 education, reading, social foundations, and educational psychology (development and personality, research and measurement, or educational technology concentrations). For descriptions of graduate courses and programs, consult the Graduate Catalog.

MAJORS ADMINISTERED BY THE DEPARTMENT

ARTS GROUP MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in fine arts, certification code "OX." The certification test covering this field is #53, "Fine Arts." See page 361.

ELEMENTARY SCIENCE GROUP MAJOR

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 "DX." The certification test covering this field is #16, "Science." See page 362.

GROUP MAJOR IN LITERATURE, LANGUAGE, COMMUNICATION, AND THEATRE ARTS

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in language arts, certification code "BX." The certification test covering this field is #01, "Language Arts." See page 363.

INTERDISCIPLINARY MAJOR IN CHILDREN'S LITERATURE AND DRAMA/ THEATRE FOR THE YOUNG

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in language arts, certification code "BX." The certification test covering this field is #01, "Language Arts." See page 362.

SOCIAL SCIENCE GROUP MAJOR FOR ELEMENTARY EDUCATION

ELEMENTARY TEACHER CERTIFICATION

Note: Recommendation for endorsement in social science (certification code "CX") requires a group major of 36 hours from economics, geography, history, political science, psychology, sociology, anthropology, cultural studies, government, and behavioral studies. The certification test covering social sciences is #06, "Social Sciences." See page 364.

MINORS ADMINISTERED BY THE DEPARTMENT

ARTS GROUP

ELEMENTARY AND SPECIAL EDUCATION-
ELEMENTARY TEACHER CERTIFICATION (NOT
AVAILABLE WITH ART MAJOR OR WITH MUSIC MAJOR)

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in fine arts, certification code "OX." The certification test covering this field is #53, "Fine Arts." 13 hours for elementary program, not counting hours in Basic Studies and professional studies. See page 364.

EARLY CHILDHOOD EDUCATION

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 early childhood, certification code "ZA." The certification test covering this field is #82, "Early Childhood." See page 365.

ELEMENTARY SCIENCE GROUP

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 science, certification code "DX." The certification test covering this field is #16, "Science." See page 365.

FRENCH LANGUAGE

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 French, certification code "FA." The certification test covering this field is #23, "French." See page 366.

GERMAN LANGUAGE

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 German, certification code "FB." The certification test covering this field is #24, "German." See page 366.

SOCIAL SCIENCE GROUP (ELEMENTARY)

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 social science, certification code "CX." The certification test covering this field is #06, "Social Sciences." See page 364.

SPANISH LANGUAGE

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 Spanish, certification code "FF." The certification test covering this field is #28, "Spanish." See page 366.

CURRICULUM COURSES

CUR 178 Special Topics in Curriculum. 2 hrs
Courses that can be offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

CUR 214 The Developing Child. 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, with emphasis on the child from two to five years. Impact of the family resources, attitudes, and values on young children. Concurrent registration in CUR 215 required.

Prereq: Sophomore standing.

CUR 215 Child Development Lab: Preschool Child. 1 hr
Observation of child growth and development; participation with children 2 1/2 to 5 years of age. Concurrent registration in CUR 214 required.

CUR 302 Methods of Integrating Curriculum and Resources in Early Childhood. 3 hrs

To help students design and implement developmentally appropriate curricula and programs for children pre-kindergarten 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.

Prereq: EDP 200, MTH 108, CUR 214, and CUR 215. Taken concurrently with CUR 373. Admission to the teacher education program.

CUR 304 Curriculum 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 practicum experience in public schools in addition to the regularly scheduled hours.

Prereq: Admission to the teacher education program prior to registration.

CUR 305 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 practicum experience in public schools in addition to the regularly scheduled hours.

Prereq: Admission to the teacher education program prior to registration.

CUR 314 The Developing Infant. 3 hrs

The home as a center for the nurture and development of infants and toddlers (conception to 2 1/2 years) with particular emphasis on the dynamics of the parent-child relationship. Concurrent registration in CUR 315 required.

Prereq: CUR 214 or department permission.

CUR 315 Child Development Lab: Infancy. 1 hr

Observation of infant growth and development; participation with children under 2 1/2 years. Taken concurrently with CUR 314.

CUR 372 Methods and Resources in Child Development**Centers.** 4 hrs

Curriculum and program planning for guiding groups of young children; planning for the secondary pupil or the paraprofessional to work with preschool children. Concurrent registration in CUR 373 required.

Prereq: CUR 214 and CUR 314.

CUR 373 Child Development Lab: Methods and Resources.

1 hr

Planning and carrying out learning activities with young children. To be taken concurrently with CUR 372.

CUR 401 Issues and Practices in Early Childhood Education.

2 hrs

This culminating course in the early childhood minor deals with the current issues of concern to the beginning teacher. A supplement to student teaching at the pre-kindergarten level, the course furthers the development of knowledge of pre-primary education and the operation of child care programs. (Taken concurrently with EDU 496).

CUR 407 Administration and Supervision in Child Development Centers.

3 hrs

The administrator's role in child development/child care programs. Applications of philosophy and management skills to preschool programs. Supervision, safety, licensing, and other regulations.

Prereq: CUR 214 and department permission.

CUR 413 Experiences with Children.

5 hrs

Supervised participation with young children in home and group settings. Selection, presentation, and evaluation of learning experiences for young children. Emphasis on interpreting these experiences to secondary pupils.

Prereq: CUR 302 and CUR 373.

CUR 422 Seminar in Child Development.

2 hrs

Critical analysis of selected readings and research in child development, with interpretations for implementation in child development centers.

Prereq: CUR 214.

CUR 478/479 Special Topics in Curriculum.

2/3 hrs

Courses that can be offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

CUR 486/488/489 Internship in Teacher Education.

1/2/3 hrs

CUR 487 Cooperative Education in Teacher Education.

3 hrs

CUR 490/491 Special Work (Honors Courses).

1/2 hrs

Additional experiences for exceptionally promising students who are seeking certification. Work based on problem or research interest with written and/or oral report.

Prereq: Senior standing, 3.5 average, permission of department head.

CUR 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 COURSES**EDM 101 Use of Books and Libraries.**

2 hrs

Practical instruction in the use of the library's tools and materials. Given on demand.

EDM 345 Media for the Classroom Teacher.

1 hr

A methods course in which students will produce instructional materials in their teaching area and demonstrate the use of these

materials in the classroom environment. The selection, utilization, and evaluation of teaching materials. Various types of media production and utilization equipment.

Prereq: Admission to the teacher education program.

EDM 402 General Reference.

3 hrs

The selection, critical examination, evaluation, and use of general reference materials, and the techniques of reference service.

EDM 478 Special Topics in Educational Media.

2 hrs

Courses that can be offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

EDM 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 PSYCHOLOGY COURSES**EDP 106 Introduction to University Studies.**

3 hrs

Orientation to the role and function of the university; career orientation; improvement of study skills; university services and diagnostic testing and counseling. Credit awarded and normal tuition charges apply.

Prereq: Special permission of the Academic Advising Center.

EDP 200 Human Development and Learning—Early Childhood.

5 hrs

Individual human development, birth through maturity, with emphasis on the early years. Observational skills in recording children's behavior, learning theories as they relate to differing curriculum models and experiences with children on a one-to-one basis or with small groups in a pre-planned activity. For early childhood education majors.

Prereq: PSY 101/102.

EDP 206 Mental Hygiene.

2 hrs

A study of the facts, conditions, techniques, and policies that further mental health and prevent mental illness. Skills and knowledge pertaining to effective interpersonal relationships and current concepts and approaches to mental health. Not open to freshmen.

Prereq: PSY 101/102.

EDP 318 Uses of Play in the Helping Professions.

3 hrs

An overview of approaches to play and its uses. Applications will be made to the fields of early childhood and elementary education, special education, physical education and recreation, occupational therapy, nursing, and child care. Students will conduct observations and interviews on play and experiment with a variety of play materials and media with children.

EDP 322 Human Development and Learning.

4 hrs

The psychological study of childhood from birth through adolescence with a focus on intellectual and psycho-social behavior and the role of parents and teachers in fostering learning and development.

Prereq: PSY 101/102.

EDP 325 Life Span Human Growth and Development.

4 hrs

An exploration of the biological, cognitive, social, and affective domains of human growth and development from the prenatal period until death; the relationship of growth and development to behavior through the life span.

Prereq: PSY 101/102.

EDP 340 Introduction to Assessment and Evaluation.

3 hrs

Basic principles in evaluation and assessment. Students will construct and interpret tests and alternative assessments; critique

standardized tests; assess social, affective, and behavioral factors; use computer applications; and examine assessment issues.

Prereq: Admission to the teacher education program.

EDP 341 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.

Prereq: EDP 200 or EDP 322; CUR 214; and admission to the teacher education program.

EDP 402 Learning in the Later Years. 3 hrs
Introduction to the nature of age-related changes and differences among age groups found in the teaching-learning process. Learning in later years, including processes, strategies, and variables associated with the older learner.

Prereq: PSY 101 or equivalent.

EDP 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 and/or innovations.

EDP 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 TECHNOLOGY COURSES

EDT 300 Introduction to Computer Applications in Education. 1 hr

An introductory course in educational technology with an emphasis on the emergence of technology in schools. Technology and its applications in schools past, present, and future. How to operate a microcomputer and run commercially prepared educational software. Instructional applications of microcomputers, programming languages, communications, and educational information. Basic concepts concerned with information processing, systems design, and artificial intelligence.

Prereq: None. Although the emphasis is educational applications of computers, the course has appeal for any student interested in an introduction to the operation and uses of the microcomputer. Required for all students pursuing a teacher education curriculum.

READING COURSES

RDG 311 Teaching Reading in the Secondary School. 3 hrs
The developmental sequence for reading skills at the junior and senior high school levels and methods for teaching the sequence, including teaching programs for both the normal and retarded reader. Providing reading instruction within the context of the various areas. Required for all students who seek certification to teach in secondary schools.

Prereq: Admission to the teacher education program.

RDG 314 Teaching Reading in the Elementary School. 6 hrs
The developmental aspects of reading and language arts programs from pre-school through elementary school. Theoretical and research knowledge pertinent to child growth and development and fundamental skills appropriate for the teaching of reading and language arts. Field-based experiences. Required for all students who seek certification to teach in elementary schools.

Prereq: Admission to the teacher education program.

SOCIAL FOUNDATIONS COURSES

SFD 328 Social Aspects of Teaching. 3 hrs
Systematic study of the school as a major institution in American society and of the bearing of educational social science and philosophy on social interaction in the classroom.

Prereq: Admission to the teacher education program.

SFD 403 Endangered Children. 3 hrs
Multi-disciplinary analysis of the conditions of children and youth; a consideration of the rights of children and examination of such phenomena as the myths about adolescents, drop-outs, and run-aways; infanticide, homicide, and suicide among the young; the abuse and exploitation of children; the political meaning of the economic deprivation of youth.

SFD 402 Sexism and Education. 3 hrs
How sexist attitudes and behaviors affect and are affected by school policies and practices; educational aims, staff relations, teaching styles, decision-making, treatment of pupils, instructional materials, anti-sexist programs.

SFD 403 Endangered Children. 3 hrs
Multi-disciplinary analysis of the conditions of children and youth; a consideration of the rights of children and examination of such phenomena as myths about adolescents; drop-outs and runaways; infanticide, homicide, and suicide among the young; the abuse and exploitation of children; the political meaning of the economic deprivation of youth.

SFD 478/479 Special Topics. 2/3 hrs
Courses that can be offered on an experimental basis for one semester for purposes of meeting special needs and/or innovations.

SFD 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.

OTHER COURSES

AAD 179 Academics, Affiliation, and Achievement 3 hrs
Restricted to first-time entering freshman only. This course provides students the information and skills which 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 team members and other students in the class. This class prepares students for success at EMU and beyond.



COLLEGE OF HEALTH AND HUMAN SERVICES

Elizabeth King, Dean
Kathy Randles, Assistant to the Dean
212 King Hall
487-0077

DEPARTMENTS

Associated Health Professions
Human, Environmental, and Consumer Resources
Nursing Education
Social Work

COLLEGE OF HEALTH AND HUMAN SERVICES

The College of Health and Human Services is composed of applied fields and strives for an organizational environment in which linkages with other programs and colleges is desired and encouraged. It also takes a leadership role in providing a close working relationship between the University and the community.

Professional education is based in the academic disciplines and generates a graduate with flexibility and breadth who can adapt to a rapidly changing world. The several curricula and programs of the college require a mastery of knowledge and problem-solving processes that are basic to human growth, development, and healthy functioning. The college aims to prepare professionals who are equipped to provide health and human services to individuals and/or families in a variety of settings including businesses, homes, schools, hospitals, community, and social agencies. Characterized by a concern for the quality of human life at all stages of development, health and human services are directed toward realizing the potential of the total person throughout the life cycle.

Established in January 1975, the College of Health and Human Services is comprised of the departments of Associated Health Professions; Human, Environmental, and Consumer Resources; Nursing Education; and Social Work. It also offers minors in gerontology, clothing and textiles, nutrition, occupational foods, and social work.

The increased emphasis on health-related and other service professions during the past decade has placed added responsibility for expansion, additions, or revisions of programs to provide career opportunities and to meet student interest in these professions. The college brings together both recent and long-established programs that utilize traditionally strong, quality studies in the basic sciences, both natural and behavioral, and then applies and extends these studies through professional theory and laboratory courses and through field experiences and clinical affiliations.

The College of Health and Human Services and its programs are involved with a wide variety of accrediting agencies that govern the academic standards of most of the curricula and determine the requirements for entry into those professions, as indicated in the descriptions of the programs.

Clinical Affiliations

Following is a representative list of agencies with which the College of Health and Human Services is affiliated:

Allen Park Veterans Administration Hospital, Allen Park
 Alzheimer's Association, Southfield
 Ann Arbor Veterans Administration Medical Center, Ann Arbor
 Annapolis Hospital, Wayne
 Battle Creek Public Schools, Battle Creek
 Beaumont Hospital, Royal Oak
 Beyer Memorial Hospital, Ypsilanti
 Bixby Hospital, Adrian
 Borgess Hospital, Kalamazoo
 Robert B. Brigham Hospital, Boston, MA
 Brighton Hospital, Brighton
 Business/Education Alliance, Detroit
 Catherine McAuley Health Center Interior Design Office, Ann Arbor
 Chelsea Community Hospital, Chelsea
 Children's Hospital, Detroit
 Cincinnati General Hospital, Cincinnati, OH
 Citizen's for Better Care, Traverse City
 Complete Home Health Care Services, Southfield
 Cooperative Extension Service, Ann Arbor
 Cottage Hospital, Grosse Pointe Farms
 Karen deKoning Design, Ann Arbor
 Detroit Area Agency on Aging
 Detroit Memorial Hospital, Detroit
 Detroit Orthopedic Clinic, Detroit
 Detroit Psychiatric Institute, Detroit
 Easter Seal Society of Wayne County, Inkster
 W.A. Foote Hospital, Jackson
 Henry Ford Home Health Care
 Henry Ford Hospital, Detroit
 Henry Ford Hospital, Fairlane
 Flint Osteopathic Hospital, Flint
 Garden City Hospital, Garden City
 Glacier Hills Nursing Center, Ann Arbor
 Gorman's, Southfield
 Heritage Hospital, Taylor
 University of Indiana Medical Center, Indianapolis, IN
 Institute of Living, Hartford, CT
 Institute of Rehabilitation Medicine, New York, NY
 Jacobson's, Jackson
 JC Penney Company, Southfield
 Jewish Home for the Aged, Detroit
 Klenczar Linda Korbesoja, ASID, Ypsilanti
 Lafayette Clinic, Detroit
 Life Skills Center, Howell
 The Linen Center, St. Louis, MO
 Livingston County Health Department, Howell
 Livonia Public Schools, Livonia
 Macomb County Health Department
 McLaren Hospital, Flint
 Metropolitan West Health Maintenance Organization, Westland
 Michigan Retailers Association, Lansing
 Monroe County Health Department
 Muskegon Public Schools, Muskegon
 Normal Street House, Ypsilanti
 North Carolina Memorial Hospital, Chapel Hill, NC
 Oakwood Hospital, Dearborn
 The Ohio State University Hospitals, Columbus, OH
 Oakdale Developmental Center, Lapeer
 Oakland County Health Department, Pontiac
 Pontiac General Hospital, Pontiac
 Port Huron Hospital, Port Huron
 Providence Hospital, Southfield
 Rehabilitation Institute, Inc., Detroit
 Rehabilitation Institute of Chicago, Chicago, IL
 Roth Young Personnel Service, Southfield
 Rush-Presbyterian-St. Luke's Medical Center, Chicago, IL
 Safehouse Shelter for Battered Women, Ann Arbor
 Saginaw Public Schools, Saginaw
 Saline Community Hospital, Saline
 SOS Community Crisis Center, Ypsilanti
 St. John's Hospital, Detroit
 St. Joseph Hospital, Flint
 St. Joseph Mercy Hospital, Ann Arbor
 St. Mary's Hospital, Livonia
 Sinai Hospital of Detroit, Detroit
 Southwest Detroit Hospital, Detroit
 State of Michigan Department of Public Health
 Synod House, Ypsilanti
 Therapeutic Day Clinic, Inkster
 Tri County Home Health Care, Southfield
 University of Michigan Hospitals, Ann Arbor
 University of Michigan Facility Design Department, Ann Arbor
 Washtenaw County Community Mental Health Program, Ann Arbor
 Washtenaw County League for Planned Parenthood, Ann Arbor
 Wayne-Westland Schools
 Whitmore Lake Convalescent Center, Whitmore Lake
 Willow Run Community Schools, Ypsilanti

Winkelman's, Detroit
Wyandotte General Hospital, Wyandotte
Ypsilanti Public Schools, Ypsilanti

COLLEGE OF HEALTH AND HUMAN SERVICES COURSES

AAD 179 Academics, Affiliation, and Achievement 3 hrs
Restricted to first-time entering freshman only. This course provides students the information and skills which 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 team members and other students in the class. This class prepares students for success at EMU and beyond.

HHS 178 Special Topics. 2 hrs
This course focuses on the multiple career options within the health care delivery system. Issues related to career selection, education, costs, and manpower needs are explored. Concepts related to all health careers are also examined: health and illness; beliefs and values; people; the health care delivery system and communication in health care. This is an introductory course for all freshman and sophomore majors in the College of Health and Human Services.

HHS 226 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 languages. This course will include applications of computer technology to direct services for clients as well as the use of computers to manage work.

HHS 477/478 Special Topics. 1/2 hrs
These courses deal with subject matter not provided in other department offerings. Students may elect such a course several times as long as different topics are studied.
Prereq: Department permission.

ASSOCIATED HEALTH PROFESSIONS

Stephen A. Sonstein
Department Head
328 King Hall
487-0460

The Department of Associated Health Professions offers programs that lead to the baccalaureate degree in clinical laboratory sciences, health administration, and occupational therapy. The department also offers a minor in Health Administration and a certificate program in phlebotomy. In addition, the department offers several interdisciplinary courses relating to the health services and the health care specialties.

INTERDISCIPLINARY COURSES

AHP 196 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. Educational requirements, career opportunities, and clinical experience requirements will be highlighted.

AHP 200 Medical Terminology. 1 hr
A detailed study of medical terminology, through which students will achieve a working medical vocabulary. Anatomical terms, terminology relating to diseases and disease processes will be presented. This course is designed for students entering a health related educational program, and is a prerequisite for admission to the Occupational Therapy program.

AHP 208 Ethical Dimensions in Health Care Delivery. 2 hrs
This course presents information which students interested in the health professions may use to identify ethical situations and to resolve dilemmas they may face in their professional lives.

AHP 305 Data Analysis for the Health Sciences. 3 hrs
Introduction to the application of statistical methods to a range of practice and research problems in the allied health sciences.
Prereq: College algebra.

AHP 401 Legal Issues in Health Care. 3 hrs
This is a survey of the laws that govern the health care system. Litigation, malpractice, contract, regulatory, health care personnel, and the use of human subjects in medical research are among the topics discussed.

CLINICAL LABORATORY SCIENCES PROGRAM

Jeanne M. Clerc
Program Coordinator
328 King Hall

Professor: Clifford Renk
Associate Professor: Jeanne M. Clerc
Assistant Professor: Gary Hammerberg

Degree: Bachelor of Science

Programs of Study

Curriculum:

Clinical laboratory sciences
(Clinical certification track, professional track, cytotechnology/
histotechnology track, phlebotomy certification)

The clinical laboratory sciences program offers three tracks, the clinical certification track, the professional track, and cytotechnology/histotechnology track, each leading to the Bachelor of Science degree. A two-course sequence leading to the granting of a certificate of competence in phlebotomy (blood drawing) is also available. The tracks are designed to prepare graduates for employment in hospitals, physician's offices, private laboratories, public health agencies, pharmaceutical companies, and academic or industrial research. The professional track is the preferred course of studies for students considering graduate school or advanced studies in the clinical sciences. The professional track also can be used as preparation for careers in medicine, dentistry, and veterinary science.

Advising is available by faculty through the clinical laboratory sciences program. To assess progress, students should meet with their adviser each semester in which they are enrolled in classes.

Advising Coordinators:

Students are assigned to a faculty adviser upon declaring clinical laboratory sciences as a major.

CLINICAL LABORATORY SCIENCES

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:** This option consists of seven semesters of coursework in basic studies, basic sciences, and clinical sciences and includes 22 weeks of rotation through an accredited clinical laboratory. These clinical laboratories include the University of Michigan, Ann Arbor; Veteran's Administration Hospital, Ann Arbor; and Heritage Hospital, Taylor, Mich. This program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences through the Council of Allied Health Education of the American Medical Association.
2. **Professional track:** This option consists of eight semesters of coursework in the basic studies, basic and advanced sciences, and clinical sciences. Included will be a strongly recommended cooperative education experience in industry or academia. Graduates will be prepared for careers in pharmaceutical, clinical diagnostics or other health care industries. Additionally, graduates will be eligible for entry into a master's or doctoral level program in the basic or clinical sciences. Students also would be eligible for one-year hospital rotations and subsequent certification as a registered medical technologist.

The major in clinical laboratory sciences follows an interdisciplinary format comprised of courses in clinical laboratory sciences, biology, chemistry, physics, and mathematics. A 20 semester hour minor in chemistry is inherent in this program. Thus, the major and minor requirements of the University are fulfilled.

All students must complete the courses in each of the four areas of basic studies. At least 30 semester hours of the academic program must be completed at Eastern Michigan University. Students should be aware of the 60 and 75 hour rule regarding transfer of community college credit.

Continuation in the clinical laboratory sciences program is based upon the following:

- a. A minimum EMU cumulative grade point average of 2.0 must be maintained. However, a cumulative GPA of less than 2.5 mandates warning students of their ineligibility for acceptance into the clinical track.

- b. No grade below "C-" in any mathematics or science course.
- 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 Certifying Agency for Clinical Laboratory Personnel.

CLINICAL TRACK REQUIREMENTS

Students must first be accepted to Eastern Michigan University before they can be considered by 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 "intent." Application for full admission to the clinical track program should be made during the fall semester of the senior year.

Application packets can be obtained from the Department of Associated Health Professions office. Completed applications must be in the office by October 10 in order to be considered for acceptance for the winter semester.

Selection criteria include overall EMU GPA, letters of recommendation, overall science GPA, 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 grade point average of 2.5 on a 4.0 scale with no grade below "C-" in any science, mathematics, or preprofessional course. The prerequisite courses may be taken at this university, any four-year college/university, or at a community college.
2. A minimum science GPA of 2.5.
3. Completion of at least 60 semester hours of university credit, including 45 semester 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 B.S. degree in clinical laboratory sciences (professional track) at Eastern Michigan University and filing a reapplication to the clinical track program.
2. Completion of all required coursework for the B.S. degree in clinical laboratory sciences and application to an approved hospital-based school of medical technology. The faculty advisers will assist students in the application process. Students are selected for internship placement through a state-wide 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 (internship programs) affiliated with the University are:

Damon Clinical Laboratories, Detroit
Garden City Osteopathic, Garden City
Pontiac General Hospital, Pontiac
St. John Hospital, Detroit
St. Joseph Hospital, Flint
W.A. Foote Hospital, Jackson

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 coursework. 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.

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.

Area	Sem hours
Symbolics and communication (Five courses)	14-17
Science and technology	7-10
Biology courses	12-16
BIO 105 Biology and the Human Species (or waiver) ...	4
MIC 329 General Microbiology	5
BIO 301 Genetics	3
BOT 446 Medical Mycology (professional track only)	4
Chemistry courses	16-20
CHM 119 Fundamentals of Chemistry (if no high school chemistry)	4
CHM 121-124 General Chemistry I-II with labs	8
CHM 270-271 Organic Chemistry with lab	5
CHM 351 Introductory Biochemistry	3
Mathematics and computer science courses	9
MTH 105 College Algebra (or waiver)	3
MTH 270 Elementary Statistics	3
CSC 136 Computers for the Non-Specialist or CSC 137 Introduction to FORTRAN Programming	3
Clinical laboratory sciences courses	53-56
CLS 101 Introduction to Clinical Laboratory Sciences	1
CLS 200 Clinical Laboratory Techniques	2
CLS 307 Introduction to Hematology	3
CLS 310 Urinalysis and Body Fluids	2
CLS 335 Clinical Immunology	4
CLS 401 Laboratory Management/Education/Quality Assurance	4
CLS 402 Applications of Clinical Chemistry to Pathophysiology	3
CLS 407 Advanced Hematology	3
CLS 432 Clinical Microbiology	4
CLS 434 Advanced Immunohematology	3
*CLS 450 Hematology/Coagulation Practicum	5
*CLS 452 Clinical Immunology/Immunohematology Practicum	5
*CLS 454 Clinical Chemistry Practicum	5
*CLS 455 Clinical Chemistry Laboratory	2

*CLS 456 Clinical Microbiology Practicum	5
*CLS 457 Clinical Methods Practicum	1
*CLS 459 Clinical Mycology Practicum	1
Electives (professional track only)	3
*Required for clinical track only.	
Social science: (four courses)	8-12
Arts and humanities: (four courses)	8-12
Physical education and health	2
Physical education activity courses	2
(Any two courses in military science may be applied.)	
Total: minimum hours required for graduation	124

CYTOTECHNOLOGY/HISTOTECHNOLOGY TRACK

Specialization in cytotechnology

Program Directors: Susan Dingler, Ross Lavoie

A cytotechnologist is a trained laboratory professional who detects cell disease by light microscopic examination of cell samples from all areas of human blood.

Students may be accepted into the cytotechnology program after completing the required science, mathematics, and clinical laboratory science courses. University general education requirements also must be met. The senior year consists of a 12 month internship at Henry Ford or Harper-Grace School of Cytotechnology. The program includes an integrated presentation of didactic material, microscopic study, specimen preparation, clinical observation, cytogenetics, laboratory management, and a research project.

Specialization in histotechnology

Program Director: Peggy Wenk

Histotechnologists perform a variety of diagnostic and research procedures in the anatomic sciences. Basic histologic techniques involve 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, immunofluorescence microscopy, autoradiography, cytogenetics, 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.

CYTOTECHNOLOGY/HISTOTECHNOLOGY CURRICULA

Area	Sem hours
Symbolics and communication (same as clinical/professional track)	14-17
Science and technology	7-10
Biology courses	12-16
BIO 105 Biology and the Human Species (or waiver)	4
MIC 329 General Microbiology	5
BIO 301 Genetics	3
BIO 415 Basic Histological Techniques	1
ZOO 404 Mammalian Histology	3
Chemistry courses	19-23
CHM 119 Fundamentals of Chemistry (if no high school chemistry)	4
CHM 121-124 General Chemistry I-II with labs	8
CHM 270-271 Organic Chemistry with lab	5
CHM 351 Introductory Biochemistry	3
CHM 453 Biochemistry Laboratory	2
Mathematics and computer science courses	9
MTH 105 College Algebra (or waiver)	3
MTH 270 Elementary Statistics	3

CSC 136 Computers for the Non-Specialist or CSC 137 Introduction to FORTRAN Programming	3
Clinical laboratory sciences courses	42
CLS 101 Introduction to Clinical Laboratory Sciences ..	1
CLS 200 Clinical Laboratory Techniques	2
CLS 307 Introduction to Hematology	3
CLS 335 Clinical Immunology	4
CLS 432 Clinical Microbiology	4
CLS 405-406 Cytotechnology Internship or CLS 416-419 Histotechnology Internship	28
Social science	8-12
Same as clinical/professional track	
Art and humanities	8-12
Same as clinical/professional track	
Total: minimum hours required for graduation:	124

CLINICAL LABORATORY SCIENCE PHLEBOTOMY PROGRAM

The clinical laboratory science program, in conjunction with Ann Arbor area hospitals, has established a phlebotomy training program. This program consists of two courses, both two credits each. The program can be completed in two semesters. This allows the students the opportunity to become employed as health care professionals at good paying jobs while they continue their education.

Upon successful completion of both CLS 201 and CLS 202, students will be given certificates of completion from the CLS program. Students are also eligible to take a certification examination given by the American Society of Phlebotomy Technicians.

CLINICAL LABORATORY SCIENCES COURSES

CLS 101 Introduction to Clinical Laboratory Sciences. 1 hr
An overview of the profession highlighting the various areas of clinical laboratory sciences: medical technology, phlebotomy, cytology, histology, cytogenetics, and tissue typing. The course provides information on employment opportunities including wage and salary benefits, legal issues, and certification in the profession. The course also highlights the benefits of a clinical laboratory science degree for individuals contemplating advanced degrees in medicine or graduate school.

CLS 200 Clinical Laboratory Techniques. 2 hrs
Basic skills necessary to function in a clinical laboratory; i.e., phlebotomy, use of the microscope, specimen collection and preparation, pipetting, and lab safety.

CLS 201 Phlebotomy Techniques. 2 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.

CLS 202 Clinical Phlebotomy Practicum. 2 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 forty hours of training at an affiliated institution. Graded on a credit/no credit basis.
Prereq: Permission of instructor and CLS 201.

CLS 307 Introduction to Hematology. 3 hrs
The study of the formed elements of the blood, their precursors, and some of their products. Lecture and laboratory. Covers the

theory and principles of routine medical laboratory hematology techniques. Not open to those with credit in BIO 307.

Prereq: CLS 200 or permission of instructor.

CLS 310 Urinalysis and Body Fluids. 2 hrs
Lecture and laboratory covering urine and body fluid analysis. Specimen collection and handling, physical examination, chemical testing, and microscopic evaluation.

Prereq: CHM 270-271 or permission of instructor.

CLS 335 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: CLS 200, MIC 329; or permission of instructor.

CLS 387 Cooperative Education in Clinical Laboratory Services. 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 alternated with full-time attendance at the University. Offered on a graded or credit/no credit basis.

Prereq: MIC 329; CHM 270, 271; permission of program director.

CLS 401 Laboratory Management/Education/Quality Assurance. 4 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: MTH 270 or equivalent.

CLS 402 Applications of Clinical Chemistry to Pathophysiology. 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: CHM 351 or permission of instructor.

CLS 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.

CLS 406 Cytotechnology Clinical Internship. 14 hrs
Continuation of CLS 405.

Prereq: program approval.

CLS 407 Advanced Hematology. 3 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 BIO 407.

Prereq: CLS 307.

CLS 416 Basic Histotechnology and Histochemical Staining Methods. 2 hrs

Didactic and practicum 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.

CLS 417 Basic Electron Microscopy. 8 hrs
Didactic and practicum experience in basic biological electron microscopy. Electron microscopic histochemistry and special tech-

niques are also covered. Emphasis is on the electron microscope as a medical diagnostic tool.

Prereq: Program approval.

CLS 418 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 microscope in clinical medicine and research.

Prereq: Program approval.

CLS 419 Cytogenetics. 4 hrs

An intensive course in human cytogenetics. Human chromosome methodology, chromosome identification, and chromosomal abnormalities and their application in clinical medicine.

Prereq: Program approval.

CLS 432 Clinical Microbiology. 4 hrs

Lecture and laboratory covers mechanisms of pathogenesis and the specific bacterial and viral etiological agents of human disease; and methods of detection, isolation, enumeration, and identification used in clinical laboratories. Not open to those with credit in MIC 432.

Prereq: MIC 329 or permission of the instructor.

CLS 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. Not open to those with credit in BIO 434.

Prereq: CLS 307 and CLS 335.

CLS 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.

CLS 452 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.

CLS 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.

CLS 455 Clinical Chemistry Laboratory. 2 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.

Prereq or coreq: CLS 402.

CLS 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.

CLS 457 Clinical Methods Practicum. 1 hr

This one-week intensive course includes an orientation to hospitals training students, a one-day experience at the American Red Cross, and a combined urinalysis/phlebotomy experience at the hospital affiliates.

Prereq: Acceptance into clinical track.

CLS 459 Clinical Mycology Practicum. 1 hr

This is an intensive introductory lecture and laboratory course highlighting medically important fungi, disease states, and laboratory methods of isolation and identification. Credit/no credit.

Prereq: Acceptance into clinical track or permission of instructor.

CLS 477/478/479 Special Topics in Clinical Laboratory Sciences. 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.

CLS 487 Cooperative Education in Clinical Laboratory Sciences. 3 hrs

Three to 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 alternated with full-time attendance at the University. Offered on a graded or credit/no credit basis.

Prereq: CLS 387, permission of program director.

CLS 497/498/499 Independent Study. 1/2/3 hrs

Independent original endeavors involving library and/or laboratory work under the guidance of a clinical laboratory program faculty member or clinical associate faculty member.

Prereq: Permission of the instructor.

HEALTH ADMINISTRATION PROGRAM

Richard L. Douglass
Program Director/Associate Professor
328 King Hall
487-0460

Assistant Professor: Roberto Torres

Degree: Bachelor of Science

Program of Study
Curriculum:
Health administration

Advising is available through the faculty in the health administration program office.

Advising Coordinator: Richard L. Douglass

Clinical Affiliations

The program in health administration is one of only 29 undergraduate programs in the United States with full membership in the Association of University Programs in Health Administration (AUPHA) and the only full member among Michigan's colleges and universities. In addition, the Program is closely affiliated with the American Academy of Medical Administrators (AAMA). The Health Administration Student Association is a Student Chapter of the American College of Health Care Executives. Internship opportunities are an important component in the curriculum of the Program. The following organizations are representative of those in which Health Administration majors acquire field experience:

Alzheimer's Disease and Related Disorders Association, Southfield
Beyer Hospital, Oakwood Health Services, Ypsilanti
Catherine McAuley Health Center, Ann Arbor
Chelsea Community Hospital, Chelsea
City of Detroit, Bureau of Substance Abuse Services, Detroit
Detroit Health Care for the Homeless, Detroit
Detroit Osteopathic Hospital Corporation, Detroit
Detroit Receiving Hospital, Detroit

Garden City Osteopathic Hospital, Garden City
 Health Alliance Plan of Michigan, Detroit
 Hospice of Washtenaw, Ann Arbor
 Institute of Women's Medicine, Hutzel Hospital, Detroit
 Laurel Home Health Care Centers, Ypsilanti
 Lifechoices Health Care, Detroit
 M-Care, Ann Arbor
 McAuley-McPhearson Health Care, Howell
 Michigan Blue Shield and Michigan Blue Cross, Detroit
 Michigan Insurance Bureau, Lansing
 Mid-Staffordshire Health Authority, Staffordshire General
 Infirmary, Stafford, England
 Oakland County Department of Public Health
 Packard Community Clinic, Ann Arbor
 Saline Community Hospital, Saline
 St. Joseph Mercy Hospital, Ann Arbor
 Seaway Hospital, Trenton
 Traverse City Osteopathic Hospital, Traverse City
 University of Michigan Hospitals, Ann Arbor
 Visiting Nurse Association of Huron Valley, Ann Arbor
 Wayne County Medical Examiner's Office, Detroit

HEALTH ADMINISTRATION CURRICULUM

The curriculum concentrates on the principles and processes utilized in the field of health administration and management. The program is designed to thoroughly prepare those seeking a career in the administrative sector of the health care delivery system in any of its forms. It also is 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 senior year unless waived by the program director due to significant administrative experience. Courses denoted with an asterisk (*) complete the requirements for a degree. No outside minor is required. However, many students elect the gerontology minor.

A degree completion track 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.

A minor in health administration is available to undergraduate students at Eastern Michigan University. The curriculum for the minor in health administration includes 20-22 semester hours. Students interested in the minor should contact the program in writing and meet with the program's minor curriculum adviser.

Area	Sem hours
Symbolics and communication	10-15
Five courses as required by the basic studies program: Must include MTH 118 Mathematical Analysis for Social Sciences I	
Science and technology	7-10
Three courses as required by the basic studies program: Must include BIO 105 Biology and the Human Species	
Social science	8-12
Four courses as required by the basic studies program: Must include ECO 201-202 Principles of Economics I-II	
Arts and humanities	8-12
Four courses as required by the basic studies program: No restrictions.	

Cross-cultural or international studies	3
One course approved as described by the basic studies program: No restrictions.	
Physical education and health	2
As required for all undergraduate degree candidates.	
Required courses in Health Administration (HAD)*	
HAD 305 Introductory Seminar in the U.S. Health Care System	3
HAD 310 Administration of Health Care Organizations	3
HAD 311 Management of Health Services	3
HAD 415 Planning and Regulation of the Health Industry	3
HAD 420 Financial Management of Health Institutions	3
HAD 425 Decision Making for Health Administrators	3
HAD 480 Internship Seminar in Health Administration ..	3
HAD 487/488/489 Internship in Health Administration ...	3-9
Required courses in Associated Health Professions (AHP)*	
AHP 200 Medical Terminology	1
AHP 208 Ethical Dimensions in Health Care Delivery	2
AHP 305 Data Analysis for the Health Sciences (or MKT 360 Principles of Marketing)	3
AHP 401 Legal Issues in Health Care (or LAW 293 Legal Environment of Business, or PLS 301 The American Legal System)	3
Required courses in business administration and liberal arts*	
MTH 119 Mathematical Analysis for Social Sciences II 3	3
ECO 436 Health Economics	3
ACC 240-241 Principles of Accounting I-II	2
FIN 350 Principles of Finance	3
MGT 384 Human Resource Management	3
MGT 386 Organizational Behavior and Theory (or SOC 462 Complex Organizations)	3
ORI 265 Business Statistics I (or any of the following basic statistics courses: PSY 205 Quantitative Methods in Psychology, ECO 310 Economic Statistics, SOC 250 Social Statistics I)	3
BE 201 Microcomputers for Business Applications (or other computer-literacy course)	3
Electives	6-15
The following courses are suggested as possible electives:	
HAD 479 Special Topics: Health Care for the Homeless (Honors only)	
ACC 342 Managerial Cost Accounting	
ECO 322 American Labor Unions	
LAW 403 Employment Law	
NUR 380 Health and Illness Problems Throughout the Life Span	
ORI 374 Production/Operations Management	
PHI 220 Ethics	
PLS 332 Intergovernmental Relations and Federalism	
PSY 351 Industrial Psychology	
PSY 360 Abnormal Psychology	
SOC 307 Industrial Sociology	
SOC 311 Social Gerontology	
SOC 462 Complex Organizations	
For permissible College of Business courses (maximum 30 credit hours), see a program adviser.	
Total	124

HEALTH ADMINISTRATION MINOR CURRICULUM

Students must complete these course requirements for the health administration minor:

Minor in health administration

1. Required Courses	Sem hours
<i>Group I</i>	<i>15-16</i>
HAD 300 Health Care Issues or HAD 305 Introductory Seminar in the U.S. Health Care System	2-3

HAD 310 Administration of Health Care Organizations	3
HAD 311 Management of Health Services	3
HAD 415 Planning and Regulation of the Health Industry or HAD 420 Financial Management of Health Institutions	3
AHP 401 Legal Issues in Health Care	3
AHP 200 Medical Terminology	1
2. Restricted electives	
Group II	5-6
Students must elect two of the following:	
AHP 401 Legal Issues in Health Care	3
HAD 479 Special Topics in Health Care	3
AHP 208 Ethical Dimensions in Health Care Delivery	2
AHP 305 Data Analysis for the Health Sciences	3
NUR 380 Health and Illness Problems Throughout the Life Span	3
SWK 431 Substance Abuse	3
SWK 438 The Interdisciplinary Health Care Team	3
GRT 404 Gerontology Interdisciplinary Seminar	3
FCS 419 Consumer Resource Management: Health Care	3
AAS 351 The Social Context of African American Health	3
Total	20-22

HEALTH ADMINISTRATION COURSES

HAD 287 Cooperative Education in Health Administration. 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 (HAD 287 and HAD 387) alternated with full-time attendance at the University. *Prereq: Sophomore standing and health administration major.*

HAD 300 Health Care Issues. 2 hrs
This survey of the organization, traditions, professional stratification, 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 services in hospitals, public health systems, nursing homes, and ambulatory settings.

HAD 301 Health Care Issues Seminar. 1 hr
A seminar designed to accompany HAD 300 during semesters when HAD 305 is not taught. This seminar adds discussion and content to HAD 300 to bring the students to a level of understanding comparable to HAD 305. For HAD majors only.

HAD 305 Introductory Seminar in 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 relationship between components; the changing nature of the health field and implications for the future (encouraged in sophomore year or early junior year).

HAD 310 Administration of Health Care Organizations. 3 hrs
Analysis of modern health care organizations with emphasis on management structure, boards of trustees, administration, physicians, and others. Delivery of institutional patient care, role of professionals and other personnel, and departmental interrelatedness. *Prereq: HAD 305.*

HAD 311 Management of Health Services. 3 hrs
A continuation of HAD 310, emphasizing quantitative methods in program implementation, control, and evaluation. The administrative role in financial control, the legal aspects of control, and the control of human resources. *Prereq: HAD 310.*

HAD 387 Cooperative Education in Health Administration. 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 (HAD 287 and HAD 387) alternated with full-time attendance at the University. *Prereq: HAD 287.*

HAD 415 Planning and Regulation of the Health Industry. 3 hrs
Review of regulations affecting the health industry, particularly health planning. Ramifications for community, consumer, and provider groups. Legislation and implications. *Prereq: HAD 310.*

HAD 420 Financial Management of Health Institutions. 3 hrs
The application of generic concepts and tools to the health field. *Prereq: HAD 310.*

HAD 425 Decision Making for Health Administrators. 3 hrs
The integration of many knowledge areas into health administration. A capstone course utilizing case studies, role playing, simulation, and games. *Prereq: HAD 310.*

HAD 477/478/479 Special Topics in Health Administration. 1/2/3 hrs
For seniors. Topics included will depend upon the interests of the students and the faculty member's field of specialization.

HAD 480 Internship Seminar in Health Administration. 3 hrs
Seminar for those students taking an internship to provide a forum for the exchange of ideas and experiences. *Prereq: Program permission, and enrolled in internship program. Departmental GPA of 2.5 or higher.*

HAD 487/488/489 Internship in Health Administration. 3/6/9 hrs
Internship to provide formally structured and directed work experience to assist in integrating classroom learning with professional perspectives and working requirements. *Prereq: Program permission, concurrent enrollment in HAD 480 Internship Seminar in Health Administration.*

HAD 497/498/499 Independent Study. 1/2/3 hrs
Under the supervision of a health administration faculty member, study in subjects not covered in other course offerings, or advanced study in areas of special interest to the student. *Prereq: Program permission.*

OCCUPATIONAL THERAPY PROGRAM

Ruth A. Hansen
Program Director
328 King Hall
487-0460

Associate Professors: Ruth A. Hansen, Sherry Sayles-Folks
Assistant Professors: Ben Atchison, Normajean Bennett, Virginia Dickie
Instructors: Elizabeth Francis-Connolly, Judith Olson, LaDonn People

Degree: Bachelor of Science

Program of Study
Curriculum: Occupational therapy

Advising for occupational therapy-intent students is performed by the Academic Advising Center. After acceptance into the occupational therapy program, students are assigned a faculty adviser.

All students in professional programs must meet with their advisers before registering each semester.

Special Requirements

Admission

1. Students must first be accepted to the University by the Admissions Office before they can be considered by the Occupational Therapy Screening Committee. However, admission to EMU does not guarantee admission to occupational therapy. After acceptance by the University, a separate application must then be made to the occupational therapy program. Applications are available from occupational therapy in King Hall or from the Admissions Office.
2. Admission to the occupational therapy curriculum is competitive and based on the following:
 - a. A minimum grade point average of 2.5 on a 4.0 scale; at least a "B-" in three prerequisites and at least a "C" in the other one and in any major courses taken before beginning the program.
 - b. Completion of at least 40 semester hours of college credit (in addition to physical education activity courses) including the following prerequisites:
 PSY 101 General Psychology
 BIO 105 Biology and the Human Species
 Combined anatomy/physiology with lab or human physiology course
 CHM 105 Survey of Chemistry or CHM 119 Fundamentals of Chemistry or equivalents.
 - c. Acceptance is provisional. Before the student actually begins the professional curriculum, evidence of successful completion of at least 55 semester hours and the following additional prerequisite courses must be presented with at least a "B-" in two of these courses and at least a "C" in the other one: PSY 360 Abnormal Psychology, FA 101 Introduction to Art, human growth and development, or psychology of development, or child psychology.
 The prerequisite courses may be taken at this University, at another four-year college/university or at a junior/community college.
 - d. Completed information on the application form with emphasis on work/volunteer experiences with ill, handicapped individuals.
 - e. Volunteer/work experiences with non-ill/non-handicapped individuals.
 - f. Three references required: at least one from a supervisor of the work experience with ill/handicapped individuals; at least one from a supervisor of the work experience with non-ill/non-handicapped individuals; and one from another source. No personal references will be accepted (friend, neighbor, etc.)
 - g. Application deadlines are February 10 for the following fall semester and July 15 for the following winter semester.

The availability of fieldwork placements and other considerations restrict the number of students admitted to the classes that begin each fall and winter semester.

Criteria for continuance in the occupational therapy curriculum is based upon the following:

1. Scholarship:
 - a. A minimum EMU cumulative grade point average of 2.0 on a 4.0 scale must be maintained.
 - b. All students must achieve a minimum letter grade of "C-" in all courses in the OT program (OT 300, 301, 302, 303, 304, 308, 400, 403, 418, 420, 421, 488, 489, gerontology; ZOO 317, 326, 417; HAD 300; and IE 358).
 If the student receives a "D" (D+, D, D-) in an occupational therapy course, the student must retake the course

- and obtain at least a "C" grade before the student is allowed to take the next course in the sequence, and will be automatically placed on "Academic Warning" status. A second "D" in any course in the OT program will result in automatic dismissal.
 - c. A letter grade of "E" in any required course will result in automatic dismissal from the OT program.
2. Demonstrated competence in:
 - a. Speaking effectiveness
 - b. Written expression
3. Demonstrated responsibility for:
 - a. Punctuality and attendance
 - b. Communication with instructors, supervisors, students
 - c. Organization of time
 - d. Professional appearance
4. Freedom from any kind of probation, administrative, academic, or social. While on academic probation, no student may register for, remain in, or receive credit for the science and mathematics courses or the practical arts (Group VI) courses within the occupational therapy curriculum.

Supervised fieldwork of a minimum of six months is required for the baccalaureate degree and to become eligible for the national certification examination. Assignment to field placement is arranged and approved by the program and is by recommendation of the occupational therapy faculty. OT 488 and OT 489 Fieldwork are full-time placements of a minimum of three months each.

Certification requires successful completion of all academic requirements, fieldwork experiences, and the recommendation of the faculty. A registered occupational therapist (OTR) is one who has passed the certification examination administered by the American Occupational Therapy Certification Board.

Accreditation of the occupational therapy curriculum is authorized by the Committee on Allied Health Education and Accreditation of the American Medical Association and the Accreditation Committee of the American Occupational Therapy Association.

The professional segment of the program requires four semesters of work and, in addition, a minimum of six months full-time fieldwork experience. Courses in the occupational therapy major are usually offered in the fall and winter semesters only.

OCCUPATIONAL THERAPY CURRICULUM

The occupational therapy curriculum leads to a Bachelor of Science degree in occupational therapy or to a second baccalaureate degree for candidates who have earned a prior degree. Completion of courses identified by an asterisk (*) satisfies all major and minor requirements for a degree. No outside minor is needed.

Area	Sem hours
Symbolics and communication	10-15
Requirements 1-5 (page 26)	
Science and technology	34-35
PSY 101 General Psychology	3
BIO 105 Biology and the Human Species	4
CHM 105 Survey of Chemistry or CHM 119 Fundamentals of Chemistry	5-4
*ZOO 317 Human Gross Anatomy	5
*ZOO 326 Human Physiology	3
(May be taken as prerequisite)	
*ZOO 417 Neuroanatomy	3
A second Psychology course	3
*OT 303 Conditions I	3
*OT 403 Conditions II	3
Social science	12
Requirements 1 and 2 (page 28)	6

Any two-course sequence offered in sociology/cultural anthropology	6
Arts and humanities	12
Requirements 1, 2, 3, and 4 (page 29)	12
Cross-cultural or international studies	
Education	4
EDP 325 Life Span Human Growth and Development (in designated section for occupational therapy and nursing students)	4
Practical arts	39-44
PED 200 Anatomy and Physiology	5
(not required if ZOO 326 elected as prerequisite)	
*HAD 300 Health Care Issues	2
*IE 358 Tools and Materials	3
*OT 300 Introduction to Occupational Therapy	2
*OT 301 Practicum in Occupational Therapy	1
*OT 302 Developmental Activities I	2
*OT 304 Developmental Activities II	2
*OT 308 Programming for Early Childhood	6
*OT 400 Seminar in Health Care Issues	1
*OT 418 Programming for Childhood and Adolescence	5
*OT 419 Programming for Adulthood and Aging	5
*OT 420 Fieldwork (part-time)	2
*OT 421 Fieldwork (part-time)	2
*OT 488 Fieldwork (full-time)	3
*OT 489 Fieldwork (full-time)	3
Physical education and health	2
Physical education activity courses	2
(Any two courses in military science may be applied.)	
Electives	1-10
Total	124

OCCUPATIONAL THERAPY COURSES

OT 178 A View of Occupational Therapy.	2 hrs
An overview of roles and functions of occupational therapists in a variety of settings. Career information is explored including helping skills, comparison to other fields, salaries, outlook, and application process.	
OT 287 Cooperative Education in Occupational Therapy.	3 hrs
A two-course sequence that provides a work position designed to offer experience related to occupational therapy while the student receives academic credit and financial support. Available to students pursuing the profession of occupational therapy at the freshman, sophomore, or junior levels. Consists of either full-time work experience alternated with full-time attendance at the University, or a combination of part-time work and academic courses. Cooperative education does <i>not</i> substitute for occupational therapy Fieldwork I or II. <i>Prereq: Approval of the Cooperative Education Office and program permission.</i>	
OT 300 Introduction to Occupational Therapy.	2 hrs
The roles and functions of occupational therapy in providing direct and indirect health care service. A foundation for the advanced professional courses. To be taken concurrently with OT 301 Practicum, and with or after ZOO 317 and ZOO 326. <i>Prereq: Admission to the program.</i>	
OT 301 Practicum in Occupational Therapy.	1 hr
An opportunity for students to develop skills in observing and interacting with individuals requiring occupational therapy intervention. To be taken concurrently with OT 300 Introduction to Occupational Therapy. <i>Prereq: Admission to the program.</i>	
OT 302 Developmental Activities I.	2 hrs
The theory, analysis, and application of developmental activities used in occupational therapy intervention. May be taken concu-	

rently with OT 303 Conditions I and OT 308 Programming for Early Childhood.

Prereq: IE 358. Prereq or coreq: OT 300.

OT 303 Conditions I. 3 hrs
Health and illness and selected conditions that affect occupational performance and require OT intervention.
Prereq: For OT majors: OT 300, ZOO 317, and ZOO 326. For non-OT majors: department permission.

OT 304 Developmental Activities II. 2 hrs
Theory, analysis, and application of developmental activities used in occupational therapy intervention with adults and aged persons. May be taken concurrently with OT 403, OT 418.
Prereq: OT 302, OT 303, OT 308.

OT 308 Programming for Early Childhood. 6 hrs
The rationale and methods of evaluating the developmental status of the young child in relation to the performance of life tasks. Includes methods of translating the evaluation data into program plans appropriate for the young child. To be taken concurrently with or after OT 302, OT 303, ZOO 417.
Prereq: OT 300.

OT 387 Cooperative Education in Occupational Therapy. 3 hrs
A two-course sequence that provides a work position designed to offer experience related to occupational therapy while the student receives academic credit and financial support. Available to students pursuing the profession of occupational therapy at the freshman, sophomore, or junior levels. Consists of either full-time work experience alternated with full-time attendance at the University, or a combination of part-time work and academic courses. Cooperative education does *not* substitute for occupational therapy Fieldwork I or II.
Prereq: OT 287.

OT 400 Seminar in Health Care Issues. 1 hr
The issues covered in HAD 300 as they pertain to occupational therapy. To be taken concurrently with OT 419.

OT 403 Conditions II. 3 hrs
Conditions that interrupt development and performance in later childhood and adolescence and necessitate intervention.
Prereq: For OT majors: OT 303, OT 308. For non-OT majors: department permission.

OT 418 Programming for Childhood and Adolescence. 5 hrs
Methods of evaluating the developmental status and performance of the older child and adolescent. Results of evaluation methods are used to determine program plans using specific approaches. May be taken concurrently with OT 403.
Prereq: OT 303, OT 308.

OT 419 Programming for Adulthood and Aging. 5 hrs
Methods of evaluating the developmental status and performance of the adult. Students plan intervention programs based on the results of the evaluation, using specific occupational therapy approaches.
Prereq: OT 418.

OT 420 Fieldwork (part-time). 2 hrs
An experience with children and/or adolescents in evaluating, planning, and implementing supervised occupational therapy intervention programs. May be taken concurrently with OT 403, OT 418.
Prereq: OT 303, OT 308.

OT 421 Fieldwork (part-time). 2 hrs
Experience with young, middle, and/or older adults in evaluating, planning, and implementing supervised occupational therapy intervention programs.
Prereq: OT 418. To be taken concurrently with or after OT 419.

OT 477/478/479 Special Topics in Occupational Therapy. 1/2/3 hrs
Experimental courses or special topics in occupational therapy may be offered (to be announced).
Prereq: Department permission.

OT 488/489 Fieldwork (full-time). 3 hrs each
A full-time three month experience in a selected health services agency, where the student will gain in-depth experience in evaluation and programming for occupational therapy intervention.
Prereq: Department permission; completion of all on-campus courses.

OT 490 Fieldwork (full-time elective). 3 hrs
A fieldwork experience with special populations or in special settings other than those completed in the required placements.
Prereq: OT 488 and OT 489; department permission.

OT 497/498/499 Independent Study. 1/2/3 hrs
Independent work following approved plan to develop knowledge in specialized areas.
Prereq: Department permission.

HUMAN, ENVIRONMENTAL, AND CONSUMER RESOURCES

E. A. Rhodes
Department Head
108 Roosevelt Building
487-1217

Professors: Betty L. Bornemeier, Mary M. Krieger, Duane M. Laws, Ruby L. Meis
Associate Professors: Polly W. Buchanan, Deborah L. deLaski-Smith, Virginia A. North, Gwendolyn M. Reichbach
Assistant Professors: Betty L. Barber, Louise Jones, Sarah E. Moore, N. Annette Peel, Deborah A. Silverman

The Department of Human Environmental and Consumer Resources provides students with concepts and competencies in preparation for professional roles. Emphasis is placed on improving the quality of life for individuals. Career opportunities are available in private and public institutions, in educational systems, in businesses and industry, and with federal, state, and local governmental agencies.

The dietetics program is accredited by the American Dietetic Association.

The interior design program is accredited by the Foundation for Interior Design Education Research (FIDER).

Degree: Bachelor of Science

Programs of Study

Curricula:

Dietetics
Fashion merchandising
Hospitality management
Interior design

Minors:

Clothing and textiles
Human Environments
Human Nutrition
Occupational foods
Occupational foods for secondary, K-12, and special education-secondary

Advising is arranged by calling the department for an appointment. Specialized advising may be obtained according to the following list. Faculty members may be contacted directly.

Advising Coordinators:

Dietetics: Deborah Silverman
Fashion merchandising: Betty Bornemeier
Hospitality management: Polly Buchanan
Interior design: Virginia North
Clothing and textiles: Mary Krieger
Nutrition: Deborah Silverman
Occupational foods: Polly Buchanan

Graduate study leads to the master's degree in Human, Environmental, and Consumer Resources; see the Graduate Catalog.

CURRICULUM FOR DIETETICS

This specialized educational program, accredited by The American Dietetic Association, integrates academic study with practice experience in a coordinated undergraduate program in general 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 Credentialing

Examination for Registered Dietitians. Career opportunities for dietitians are available in hospitals and other health care facilities; in community agencies; in industrial, university, and school food service programs; in business; in teaching; or in research.

Admission into the dietetics program is not guaranteed by admission to the University. Students must submit applications by January 15 of their sophomore year for entrance into the professional phase of the program the following fall semester.

The applicant must meet the following requirements to be considered for the professional phase of the program:

1. Junior standing achieved by completing 55 or more semester hours or equivalent.
2. Minimum grade point average of 2.5.
3. Satisfactory completion ("B-" grade or above) of the following courses at time of entrance into the program: HEC 202 Human Nutrition, DTC 301 Orientation to Dietetics, HEC 211 Experimental Foods, a grade of "C-" or better in BIO 105 Biology and the Human Species, CHM 121-122 General Chemistry I, CHM 123-124 General Chemistry II, ECO 201 Principles of Economics I, and coursework in organic chemistry.

Application forms that describe the requirements in more detail may be obtained from the coordinator of the dietetics program. The availability of clinical facilities limits the number of students admitted to each class. Therefore, a screening procedure is used to select the most qualified students for the available positions in the program. Academic status is a primary consideration in this screening procedure.

Students accepted into the dietetics program who desire to substitute courses taken at other colleges and/or universities for the 300- and 400-level dietetics courses offered by the Department of Human, Environmental, and Consumer Resources must successfully complete (70 percent or above) a theoretical and/or practical examination during the semester prior to the term in which the required course is scheduled.

Criteria for continuance in the program are as follows:

1. Students receive a "C-" grade or better in any required course in science and mathematics and in major courses after being admitted to the program.
2. A letter grade of "D" ("D+", D, D-") in one required course automatically warns the student of difficulty and the need for academic counseling. Automatic dismissal from the Dietetics Program occurs when the student receives letter grades of:
 - "D's" ("D+", D, D-") in two (2) dietetics courses (DTC prefix) in one semester, or,
 - "D's" ("D+", D, D-") in two (2) courses in Sciences and Technology or,
 - "D's" ("D+", D, D-") in one (1) dietetics course and one (1) required course or,
 - "E's" in one (1) dietetics course or one (1) required course.
3. Opportunity to continue in the Dietetics Program is contingent upon:
 - retaking at least one of the required courses in which a letter grade of "D" was earned and receiving a final grade of at least a "C-"
 - retaking the dietetics courses in which a letter grade of "D" was earned and receiving a final grade of at least a "C-"
 - retaking the dietetics courses in which a letter grade of "E" was earned and receiving a final grade of at least a "C-"

AND

readmission into the Dietetics Program.
4. In preparing to assume professional careers in dietetics, students are expected to assume responsibility for all their learning, to support the ethics and standards of practice of their profession, and to value honesty in the fulfillment of scholarly and professional endeavors. 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 to dietetics.

In addition to meeting basic studies requirements, all students on this curriculum must complete all other courses specified. These particular curricular, major or minor requirements specify both courses and the number of hours to be completed. Students completing this curriculum have met the major and minor requirements for a degree. No outside minor is needed.

Area	Sem hours
Symbolics and communication	14-15
ENG 121 English Composition	3
CTA 121/124 Fundamentals of Speech	2-3
A second course in ENG (page 26) or CTA 225 Listening Behavior, CTA 226 Non-Verbal Communication, or CTA 227 Interpersonal Communication)	3
SOC 250 Social Statistics I	3
HHS 226 Computers for Health and Human Services	3
Science and technology	31
PSY 101 General Psychology	3
BIO 105 Biology and the Human Species	4
CHM 121-124 General Chemistry I-II with labs	8
CHM 270-271 Organic Chemistry with lab	5
CHM 351 Introductory Biochemistry	3
CHM 453 Biochemistry Laboratory	2
MIC 328 Introductory Microbiology	3
ZOO 326 Human Physiology	3
Social science	12
PLS 112 American Government	3
History course 101/102/103/106/123/124	3
ECO 201 Principles of Economics I	3
SOC 105 Introductory Sociology	3
Arts and humanities	12
LIT 100 The Reading of Literature	3
A second course in literature or oral interpretation (page 29)	3
A philosophy course	3
A course in art, music, dance or theatre arts	2-3
Practical arts	62
Specialization courses	57
HEC 202 Human Nutrition	3
HEC 211 Experimental Foods	4
DTC 301 Orientation to Dietetics	2
DTC 311 Community Nutrition Experience	2
DTC 312 Community Nutrition	2
DTC 321 Dietetic Skills	2
DTC 383 Clinical Nutrition I Experience	2
DTC 384 Clinical Nutrition I	2
HEC 393 Food Systems Management I Experience	2
HEC 394 Food Systems Management I	2
DTC 402 Nutrient Metabolism	3
DTC 435 Seminar in Dietetics	2
DTC 481 Ambulatory Nutrition Care Experience	2
DTC 482 Ambulatory Nutrition Care	1
DTC 483 Clinical Nutrition II Experience	4
DTC 484 Clinical Nutrition II	1
DTC 485 Clinical Nutrition III	5
HEC 492 Food Systems Management II Experience	4
HEC 494 Food Systems Management II	1
DTC 495 Food Systems Management III	5
MGT 384 Human Resource Management	3
MGT 386 Organizational Behavior and Theory	3
Physical education and health	2
Physical education activity courses	2
(Any two courses in Military Science may be applied)	
Electives	0
Total	135-137

CURRICULUM FOR FASHION MERCHANDISING

The fashion merchandising curriculum offers practical career-oriented knowledge and skills as well as theoretical foundations of marketing fashion apparel and accessories. A marketing or management minor is required.

In addition to meeting the basic studies requirements (pp. 26-30), all students on this curriculum must complete all other courses specified. These particular curricular, major or minor requirements specify both courses and the number of hours to be completed for a degree.

Area	Sem hours
Social science	8-12
A course in U.S. government	
A course in history	
A course in economics	
A second course in a two-course sequence in economics	
Cross-cultural or international studies	
At least one approved course in cross-cultural or international studies must be completed in the process of meeting the basic studies requirements (page 30).	
Major in fashion merchandising	46-48
<i>Foundation courses</i>	
HEC 300 Professional Perspectives	3
<i>Specialization courses</i>	42
FM 105 Integrated Arts	3
FM 135 Cultural Study of Fashion	3
FM 145 Introduction to Merchandising	3
IDE 208 Introduction to Basic Design	3
FM 235 Textiles for Consumers	3
FM 255 Apparel Analysis	3
FM 345 Theories and Practices in Fashion Merchandising I	3
FM 355 Theories and Practices in Fashion Merchandising II	2
FM 356 Theories and Practices in Fashion Merchandising II Lab	1
FM 380 Fashion of the Haute Couture	3
FM 390 Visual Merchandising	3
FM 404 Textile Testing	3
FM 437 Professional Seminar	3
FM 443 Merchandising of Interior Furnishings	3
HEC 487 Field Experience	3
FM elective approved by adviser	1-3
Physical education and health	2
Physical education activity courses	2
(Any two courses in military/science may be applied)	
Minor in marketing or management	21
Required	
ACC 240 Principles of Accounting I	3
MKT 360 Principles of Marketing	3
MGT 386 Organizational Behavior and Theory	3
Choose 12 credits from marketing courses or management courses.	
Electives	12-13
Total	124

CURRICULUM FOR HOSPITALITY MANAGEMENT

Hospitality management provides an interdisciplinary program which integrates principles of food and hotel management with the physical sciences, social sciences and business. Students must complete the required courses in each of the four areas of the basic studies and the practical arts. In addition to meeting the basic studies requirements, all students on this curriculum must com-

plete all other courses specified. These particular curricular, major or minor requirements specify both courses and the number of hours to be completed for a degree. A minor in management or nutrition is required.

Area	Sem hours
Symbolics and communication	14-15
ENG 121 English Composition	3
CTA 121/124 Fundamentals of Speech	2-3
A course in mathematical reasoning	3
CSC 136 Computers for the Non-Specialist or HHS 226 Computers for Health and Human Services	3
Elective	3-5
<i>Recommended:</i>	
ENG 225 Intermediate English Composition	
ENG 324 Principles of Technical Communication	
ENG 326 Research Writing	
CTA 224 Public Speaking	
CTA 225 Listening Behavior	
CTA 226 Non-Verbal Communication	
FRN/GER/SPN/JPN 121 Beginning French/German/Spanish/Japanese	
Science and technology	10
BIO 105 Biology and the Human Species	4
CHM 115 Chemistry and Society	3
PSY 101 General Psychology or IT 240 Science, Technology, and People	3
Social science	15
PLS 112 American Government	3
HIS 103 Twentieth Century Civilization or HIS 124 The United States, 1877 to the Present	3
ECO 201-202 Principles of Economics I-II	6
Any cross-cultural/international studies course	3
Arts and humanities	12
Two courses in literature or foreign language literature ...	6
One course in philosophy or religion	3
(Suggest PHI 221 Business Ethics)	
One course in art, music, or theatre arts	3
<i>Recommend:</i>	
FA 165 Graphic Design for Non-Majors	
FA 101 Introduction to Art	
FA 122 Two-Dimensional Design	
Practical arts	66
<i>Specialization courses</i>	34
HM 103 Introduction to the Hospitality Industry	2
HM 204 Sanitation in the Hospitality Industry	1
HM 376 Legal Aspects of the Hospitality Industry	2
HM 430 Seminar in Hospitality Management	2
HM 440 Financial Management in Hospitality Management	3
HM 441 Commercial Purchasing	3
HM 470 Hospitality Industry Marketing	3
HM 496 Hospitality Management Internship	5
HEC 180 Experimental Foods	4
HEC 288 Cooperative Education	2
HEC 388 Cooperative Education	2
HEC 393 Food Systems Management I Experience	2
HEC 394 Food Systems Management I	2
HEC 492 Food Systems Management II Experience	4
HEC 494 Food Systems Management II	1
<i>Required Specialization Electives:</i>	9
Select 3 courses from below:	
GEO 113 Foundations of Guest Service	3
HEC 201 Nutrition for Consumers	3
HM 251 Meal Service Management	3
IDE 364 Facility Management	3
HM 368 Hospitality Information Systems	3

Select 1 course from the list below to meet department requirement for taking one HEC course not in the major:

- FCS 109 Interpersonal Relations in the Family, IDE 369 Human Factors and Environmental Design *General Elective* 2-3
- Select one course from list below:
- HED 210 Standard American Red Cross First Aid
- GEO 110 World Regions
- REC 100 Introduction to Recreation and Leisure
- CSC 136 Computers for the Non-Specialist

Required minor	21
Management, College of Business	
MGT 202 Business Communications	3
ACC 240 Principles of Accounting I	3
MKT 360 Principles of Marketing	3
MGT 384 Human Resource Management	3
MGT 386 Organizational Behavior and Theory	3
Physical education	2
Total	123-126

CURRICULUM FOR INTERIOR DESIGN

The interior design curriculum, which is interdisciplinary in nature, prepares students to become professional interior designers. The integrated major includes courses in fine arts, management, marketing, construction, and textiles in addition to the courses in interior design. Creative problem solving in the area of human-environment relationships is emphasized. The focus of the program is on the theory, processes, and skills necessary for graduates of the program to reach the highest levels of professional achievement. The curriculum aims to prepare students to become professional interior designers. The interior design program is accredited by the Foundation for Interior Design Education Research (FIDER).

In addition to meeting basic studies requirements, all students on this curriculum must complete all other courses specified. Students completing this curriculum have met the major and minor requirements for a degree. No outside minor is needed.

Before students may enter studio courses at the 300-level or above in the Interior Design Major*, all of the following standards must be met.

1. The student must achieve a GPA of 2.70 or above as calculated from the grades in the following courses: IDE 110 Interior Design Studio I, IDE 111 Human Factors and Special Needs, IDE 120 Interior Design Studio II, IDE 121 Interior Design Materials and Components, FA 122 Two-Dimensional Design, FA 123 Drawing I, CSC 136 Computers for the Non-Specialist, 1 course in English composition, 1 course in Physical Science, PSY 101 or PSY 102 General Psychology, IT 201 Construction Systems, IDE 210 Interior Design Studio III, IDE 211 Lighting for Interiors, IDE 220 Interior Design Studio IV, FM 235 Textiles for Consumers, IDE 221 Environmental Systems for Interiors, FA 231 Three-Dimensional Design.
2. The student must receive a "C-" grade or better in each of the courses listed above in 1.
3. The student must receive a Pass (Pass/Fail) on a comprehensive design exam given during IDE 220 Interior Design Studio IV. The exam will test the student's ability to apply the design process in solving an interior design problem. The tenure-track faculty members in the Interior Design major will be responsible for grading the exam.

If conditions 1, 2, and 3 above are successfully met by the student, then the student will be allowed to formally apply for condition 4.

4. The student must receive a Pass (Pass/Fail) on a verbal and visual presentation of the portfolio. A minimum of two tenure-track faculty from the Interior Design major and two practicing professional interior designers will evaluate the presentations. Creativity, verbal presentation skills, and potential to do professional interior designs will be judged.

**Specifically, interior design studio courses that are 300-level and above include: IDE 310 Interior Design Studio V: Residential, IDE 312 Computers for Interior Design, IDE 320 Interior Design Studio VI: Contract, IDE 410 Interior Design Studio VII: Contract, and IDE 420 Interior Design Studio VIII: Contract.*

Area	Sem hours
Symbolics and communication	15
A course in English composition	3
CTA 124 Fundamentals of Speech	3
Either ENG 324 Principles of Technical Communication, or an upper level course in speech communication	3
A course in mathematical reasoning	3
CSC 136 Computers for the Non-Specialist	3
Science and Technology	11-12
A course in physical science	
PSY 101/102 General Psychology	3
A course in science or technology	
Social science	8-12
A course in U.S. government	
A course in history	
A course in anthropology, economics, geography or sociology.	
One of the following:	
A second course in a two-course history sequence.	
A second course in a two-course anthropology, economics, geography or sociology sequence.	
An approved course in cross-cultural or international studies.	
Arts and humanities	8-12
Requirements 1, 2, and 3 (page 29)	5-9
FA 122 Two-Dimensional Design	3
Cross-cultural or international studies	
Requirement: One course selected from basic studies areas I-IV.	
1. Required courses	77
IDE 110 Interior Design Studio I	4
IDE 111 Human Factors and Special Needs	3
IDE 120 Interior Design Studio II	3
IDE 121 Interior Design Materials and Components	3
FA 123 Drawing I	3
IT 201 Construction Systems	3
IDE 210 Interior Design Studio III	3
IDE 211 Lighting for Interiors	3
IDE 220 Interior Design Studio IV	4
IDE 221 Environmental Systems for Interiors	2
FA 231 Three-Dimensional Design	3
FM 235 Textiles for Consumers	3
IDE 310 Interior Design Studio V: Residential	4
IDE 311 History of Interiors: Ancient-1800	2
IDE 312 Computers for Interior Design	3
IDE 313 Space Planning and Specifications	3
IDE 320 Interior Design Studio VI: Contract	4
IDE 321 History of Interiors: 1800-Present	2
MKT 360 Principles of Marketing	3
IDE 410 Interior Design Studio VII: Contract	4
IDE 420 Interior Design Studio VIII: Contract	4
IDE 421 Field Experience in Interior Design	2
IDE 422 Professional Practice in Interior Design	3
MGT 386 Organizational Behavior and Theory	3

Physical education and health	2
Physical education activity courses	2
(Any two courses in military science may be applied)	
Electives	0-2
Total	124

MINORS OFFERED IN THE DEPARTMENT OF HUMAN, ENVIRONMENTAL, AND CONSUMER RESOURCES

CLOTHING AND TEXTILES

This is a non-teaching minor except as a part of the curriculum for teachers of consumer home economics education.

	Sem hours
Minor in clothing and textiles	24
1. Required courses	12
FM 118 Apparel Studio	3
FM 145 Introduction to Merchandising	3
FM 235 Textiles for Consumers	3
FM 255 Apparel Analysis	3
2. Restricted electives	12
Choose one course from each of the following areas:	
<i>Construction skills</i>	
FM 302 Fashion Manufacturing Techniques	3
FM 392 Pattern Design	3
FM 460 Tailoring	3
<i>Methodology</i>	
FM 390 Visual Merchandising	3
HEC 499 Directed Study	3
<i>Social-psychological-historical</i>	
FM 135 Cultural Study of Fashion	3
FM 380 Fashion of the Haute Couture	3
<i>Textiles application</i>	
FM 119 Early American Textiles	3
FM 404 Textile Testing	3
FM 443 Merchandising of Interior Furnishings	3

HUMAN ENVIRONMENTS

	Sem hours
Minor in human environments	20-21
1. Required courses	9
IDE 111 Human Factors and Special Needs	3
IDE 120 Interior Design Studio II or IDE 208 Introduction to Basic Design	3
IDE 269 Housing for Consumers	3
2. Restricted electives	11
IDE 121 Interior Design Materials and Components	3
(May not be taken if IDE 208 was elected in core.)	
FCS 109 Interpersonal Relations in the Family	3
IDE 211 Lighting for Interiors	3
IDE 221 Environmental Systems for Interiors	3
IDE 311 History of Interiors: Ancient-1800	2
IDE 321 History of Interiors: 1800-Present	2
FCS 322 Family Financial Management	3
IDE 364 Facility Management	3

NUTRITION

This is a non-teaching minor which benefits students enrolled in the majors of Nursing, Sports Medicine, and Family and Consumer Sciences except when needed as part of the curriculum for teachers of consumer home economics education.

	Sem hours
Minor in nutrition	20
1. Required courses	13
HEC 201 Nutrition for Consumers	3
HEC 211 Experimental Foods	4

DTC 312 Community Nutrition	3
HEC 412 Nutrition of the Life Cycle	3
2. Restricted electives	7
FCS 113 Family Health Care, DTC 301 Orientation to Dietetics, DTC 402 Nutrient Metabolism, FCS 419 Consumer Resource Management: Health Care, HEC 498 Directed Study, HEC 487 Field Experience, HED 120 Healthful Living, HED 402 Selecting Health Products and Services, HED 420 Health and Aging	

OCCUPATIONAL FOODS (AVAILABLE ONLY TO BUSINESS EDUCATION AND TECHNOLOGY EDUCATION MAJORS) SECONDARY, K-12, AND SPECIAL EDUCATION-SECONDARY TEACHER CERTIFICATION

See p. 368.

OCCUPATIONAL FOODS

Students who will qualify for the Vocational Secondary Provisional Teaching Certificate may choose to take the courses listed below in order to earn an endorsement in occupational foods. The course work will convert to 2,000 hours of supervised experience in quantity foodservice operations. An additional 2,000 hours of recent and relevant supervised experience in quantity foodservice are required.

	Sem hours
Minor in occupational foods	23
1. Required courses	23
HM 251 Meal Service Management	3
HEC 374 Methods of Teaching Occupational Foods	2
HEC 393 Food Systems Management I Experience	2
HEC 394 Food Systems Management I	2
HM 440 Financial Management in Hospitality Management	3
HM 441 Commercial Purchasing	3
HEC 487 Field Experience	3
HEC 492 Food Systems Management II Experience	4
HEC 494 Food Systems Management II	1

DIETETICS COURSES

DTC 177/178/179 Special Topics. 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.

DTC 277/278/279 Special Topics. 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.

DTC 301 Orientation to Dietetics. 2 hrs.
Orientation to dietetics profession by exploring its roles in the health care system, by examining the different facets and specializations of the profession, and investigating future trends.
Co-prereq: HEC 202.

DTC 311 Community Nutrition Experience. 2 hrs
Supervised practice experience in various community nutrition settings, with emphasis on nutrition education techniques and community organization process.
Coreq: DTC 312.

DTC 312 Community Nutrition. 3 hrs
Emphasis on nutrition education theories and techniques. Exploration of nutrition programs of federal, state, and local agencies: Assessing, planning, implementing, and evaluating nutrition programs in various community settings.
Prereq: HEC 202.

- DTC 321 Dietetic Skills.** 2 hrs
Principles of basic skills of interviewing and counseling techniques. Emphasis on nutritional assessment and use of medical terminology.
Prereq: DTC 301.
- DTC 377/378/379 Special Topics.** 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.
- DTC 383 Clinical Nutrition I Experience.** 2 hrs
Supervised practice experience in the clinical nutrition professional environment. With emphasis on nutrition assessment utilizing a review of systems approach.
Coreq: DTC 384.
- DTC 384 Clinical Nutrition I.** 2 hrs
Introduction to clinical nutrition with emphasis on the delivery of nutrition support in conditions of hyper-metabolism, gastrointestinal, and endocrine systems disorders. Open only to dietetics students.
Prereq: DTC 301 and DTC 321.
- DTC 402 Nutrient Metabolism.** 3 hrs
Biochemical and metabolic functions of nutrients with emphasis on cellular reactions and their relationship to health and disease.
Prereq: HEC 201 or HEC 202. Coreq: ZOO 326.
- DTC 435 Seminar in Dietetics.** 2 hrs
Analysis and application of research topics and techniques in foods and nutrition as they apply to the field of dietetics.
Prereq: Senior dietetics or hospitality management student.
- DTC 477/478/479 Special Topics.** 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.
- DTC 481 Ambulatory Nutrition Care Experience.** 2 hrs
Supervised clinical experience in various ambulatory care settings. Open only to dietetics majors.
Coreq: DTC 482.
- DTC 482 Ambulatory Nutrition Care.** 1 hr
Aspects of nutrition care applied to ambulatory care settings including the workplace and long term care facilities. Emphasis on marketing strategies, consultive practice areas, health care regulations, and payment mechanisms in nutrition care.
Prereq: DTC 384. Coreq: DTC 484.
- DTC 483 Clinical Nutrition II Experience.** 4 hrs
Supervised clinical experience in the clinical nutrition professional environment. Open only to dietetics majors.
Coreq: DTC 484.
- DTC 484 Clinical Nutrition II.** 1 hr
Development, implementation, and evaluation of nutritional care plans for individuals requiring modified diets. Supervised clinical experiences. Open only to dietetics students.
Prereq: DTC 484.
- DTC 485 Clinical Nutrition III.** 5 hrs
Formulation, implementation, and evaluation of nutritional care plans for individuals with abnormal nutrient metabolism. Supervised clinical experiences. Open only to dietetics students.
Prereq: DTC 484.
- DTC 495 Food Systems Management III.** 5 hrs
Administrative functions of food service departments such as assessing, planning, decision making, evaluating, and training. Communication, stress control, and behavior management.
Prereq: HEC 494.

FAMILY AND CONSUMER SCIENCE COURSES

- FCS 109 Interpersonal Relations in the Family.** 3 hrs
The skills and attitudes essential for improving interpersonal relationships in groups: work or social networks. Insight into the behavior of self and others will be emphasized to help the student achieve competence in various types of interpersonal relationships.
Prereq: Nine hours in family and child development.
- FCS 112 Introduction to Consumer Affairs.** 3 hrs
A study of the roles of consumers as they interact with the economic system, government, and other consumers. Redress mechanisms, legislation affecting consumers, credit practices and regulations, and financial planning.
- FCS 113 Family Health Care.** 2 hrs
Survey of current health problems and community resources available to families.
- FCS 177/178/179 Special Topics.** 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.
- FCS 209 Marriage and Interpersonal Competence.** 3 hrs
Skills needed for interpersonal competence in marriage, such as communication and decision-making. The marital dyad and the various stages of development in marriage until parenthood.
- FCS 277/278/279 Special Topics.** 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.
- FCS 285 Resource Management: Individual and Family.** 3 hrs
Effective management of resources: decision-making, communication process, time and energy management, and special managerial situations affecting the individual and family.
- FCS 305 Family Development: Middle Childhood.** 3 hrs
Attitudes, knowledge, and skills related to working with children ages 5-12 in the family environment. Topics such as the effects of culture, peer influences, growth and development, and guidance.
Prereq: CUR 214 and CUR 215.
- FCS 306 Parenting.** 3 hrs
Theories, principles, and skills essential for multi-dimensional aspects of the parental role as it interfaces with other roles undertaken by an individual during the life cycle.
Prereq: Junior or senior standing or department permission.
- FCS 307 Child Development Laboratory.** 1 hr
Practicum experience with preschool children. Emphasis on the student's acquiring competence in observing and guiding young children.
Prereq: Junior standing, department permission.
- FCS 322 Family Financial Management.** 3 hrs
Management of family resources to solve economic problems and fulfill goals and needs through consideration of investments, family decision-making, taxes, estate planning, credit, and insurance.
- FCS 361 Issues in Family and Child Development.** 3 hrs
Assessment and critical analysis of readings and research related to current issues influencing families. Emphasis will be on relevant topics affecting the wellness of families.
Prereq: FCS 209 and junior standing.

FCS 370 Methods and Materials in Consumer Home Economics Education. 3 hrs

Planning of curriculum, units of work, interrelations of home economics education programs, and the total school and community. Not open to graduate students for graduate credit.
Prereq: EDP 322 and junior standing.

FCS 371 Resources in Teaching Consumer Home Economics Education. 3 hrs

Responsibilities of consumer home economics teachers, selection of appropriate resources and learning strategies for secondary programs, relationship of evaluation techniques to total program.
Prereq: FCS 370.

FCS 375 Professional Seminar: Family Life Education. 2 hrs

Developing, implementing, and assessing community Family Life Education Programs, resources, and the development of professional skills.

FCS 377/378/379 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

FCS 419 Consumer Resource Management: Health Care. 3 hrs

Economics and personal financial analysis of decisions and actions involved in obtaining health and medical care. How to be an effective assertive consumer of health care.

FCS 450 Adult Role Transitions. 3 hrs

Investigation of changes during early, middle, and later adulthood. Normative and non-normative role transitions related to work and family for women and men.

FCS 461 Family Interaction 3 hrs

The intricate and complex nature of family interaction. The family as a system, development of a conceptual framework for intervention through education or counseling.

Prereq: Nine hours in family and child development.

FCS 472 Consumer Economic Issues. 3 hrs

A macro approach to contemporary issues facing consumers. Impact of public policies on solutions to economic problems for individuals and families. Interrelationship of consumer and the marketplace.

Prereq: FCS 112 and ECO 201, or department permission.

FCS 473 Consumer Economic Problems. 3 hrs

A micro approach to the prevention and resolution of consumer problems including the legal, voluntary, and educational alternatives available to consumers.

Prereq: FCS 112 and ECO 201, or department permission.

FCS 474 Seminar in Consumer Affairs. 2 hrs

Capstone course providing theory and practice related to structure and function of consumer affairs operations in various organizational types.

Prereq: FCS 112 and FCS 322; FCS 472 and FCS 473 recommended.

FCS 477/478/479 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

FASHION MERCHANDISING COURSES**FM 105 Integrated Arts.** 3 hrs

The application of design elements and principles to human and contemporary environmental needs. Laboratory required.

FM 118 Apparel Studio. 3 hrs

Apparel construction using a commercial pattern. Emphasis is placed on fabric selection, fit, techniques.

FM 119 Early American Textiles. 3 hrs

Survey of textiles used in early history of North America; laboratory experiences allow students to develop skills in spinning wool and flax, traditional weaving, and natural dyeing.

FM 135 Cultural Study of Fashion. 3 hrs

A study of the social, psychological, and physical aspects of fashion as related to culture, society, and the individual.

Prereq: PSY 101/102 or equivalent.

FM 145 Introduction to Merchandising. 3 hrs

Analysis of the fashion industry from designing to distribution through major domestic and foreign markets. Emphasis is placed on fashion trends and cycles, history of merchandising, and careers. Field trip required.

FM 177/178/179 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

FM 210 Display Techniques. 2 hrs

The techniques, resources, and evaluation of effective displays for use in educational, commercial, and informational exhibits. Participation experiences in all phases of display work.

Prereq: FM 105.

FM 235 Textiles for Consumers. 3 hrs

The analytical study of fibers, yarns, fabrics, and finishes with emphasis on the performance of apparel and interiors fabrics. Laboratory required.

FM 255 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/evaluate apparel. Laboratory required.

Prereq: FM 135 and FM 235.

FM 277/278/279 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

FM 302 Fashion Manufacturing Techniques. 3 hrs

Experiences and analysis of fashion production. Includes selection of commercial equipment and textiles.

Prereq: FM 118.

FM 345 Theories and Practices in Fashion Merchandising I. 3 hrs

Applications of merchandising mathematic concepts to buying functions and activities. Major focus on problem solving. Field trips required.

Prereq: FM 145.

FM 355 Theories and Practices in Fashion Merchandising II. 2 hrs

Adaptation of fashion merchandising concepts (FM 345) to computer systems. Development of processing tasks using specific merchandising information.

Prereq: FM 345 and CSC 136 or equivalent. Coreq: FM 356.

FM 356 Theories and Practices in Fashion Merchandising II Lab. 1 hr

Implementation and analysis of fashion merchandising functions utilizing computer. Simulation problem solving.

Coreq: FM 355.

FM 377/378/379 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

FM 380 Fashion of the Haute Couture. 3 hrs

A detailed study of 20th-century American and European fashion and its relationship to identifiable costumes of the past with emphasis on haute couture. Field trip required.

Prereq: FM 135 and FM 145.

FM 390 Visual Merchandising. 3 hrs

Analysis of visual media and techniques used in presentation of merchandise in a variety of settings. Laboratory participation integrates theory and practice.

FM 392 Pattern Design. 3 hrs

Principles of pattern making and special problems in clothing construction and design.

Prereq: FM 118.

FM 404 Textile Testing. 3 hrs

Chemical and physical testing of textile products with emphasis on laboratory techniques, standards, and interpretation of data for consumer use.

Prereq: FM 235 and one laboratory science course.

FM 437 Professional Seminar. 3 hrs

Exploration of professional aspects of merchandising. Emphasis on career preparation. Presentation of fashion related enterprises. Lectures by specialists. Field trips required.

Prereq: Senior standing, FM 355, and FM 356.

FM 439 Fashion Markets. 2 hrs

Comprehensive overview of the world fashion markets with emphasis on their development, operation, and contribution; includes a trip to one fashion-related market.

Prereq: Completion of 85 hours and department permission.

FM 443 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.

FM 460 Tailoring. 3 hrs

Fundamental construction processes and special techniques applied to the construction of tailored garments; alterations and adaptations.

Prereq: FM 118.

FM 477/478/479 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

HOSPITALITY MANAGEMENT COURSES**HM 103 Introduction to the Hospitality Industry.** 2 hrs

Orientation to the lodging and foodservice industry by tracing the industry's growth and development; reviewing the organization of lodging, food service, and tourism operations; and by focusing on industry opportunities and future trends.

HM 177/178/179 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

HM 204 Sanitation in the Hospitality Industry. 1 hr

Management of basic sanitation in foodservice and lodging facilities. Meets specifications required for National Institute for the Food Service Industry certification.

HM 251 Meal Service Management. 3 hrs

Theories, principles and skills for food and beverage service in institutional, commercial and resort properties. Supervisory techniques and training styles effective for food service.

Prereq: HEC 211 and HEC 201 or HEC 202.

HM 277/278/279 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

HM 368 Hospitality Information Systems. 3 hrs

A systematic approach to front office procedures, including record keeping, the reservation processes, collection procedures, and customer relations.

Prereq: CSC 136 or HHS 226.

HM 376 Legal Aspects of the Hospitality Industry. 2 hrs

Introduction to the rights and responsibilities that the law grants to or imposes upon hospitality managers. Illustration of possible consequences of failure to comply with legal obligations.

Prereq: Three courses in major.

HM 377/378/379 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

HM 430 Seminar in Hospitality Management. 2 hrs

Current external topics influencing the internal operation of a food service or hospitality facility. Participation in professional and community projects.

Prereq: Senior hospitality management major, HM 496 (or co-req).

HM 440 Financial Management in Hospitality Management. 3 hrs

Techniques used by hospitality managers to control food, equipment, labor, and operating costs. Purchasing, labor, and pilferage controls and fiscal management.

Prereq: HEC 494.

HM 441 Commercial Purchasing. 3 hrs

Study of principles and techniques applicable to purchasing with emphasis on selection and specification requirements for food, supplies, equipment, and contract services.

Coreq: HEC 494 or department permission.

HM 470 Hospitality Industry Marketing. 3 hrs

Basic knowledge for developing, implementing, and evaluating strategic marketing plans for hospitality properties. Includes forecasting procedures, needs assessments, and presentation formats.

Prereq: HEC 494 and MKT 360.

HM 477/478/479 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

HM 496 Hospitality Management Internship. 5 hrs

Practical experience in managing a hospitality operation including assessing, planning, implementing, evaluating, and training.

Prereq: HEC 494.

**HUMAN, ENVIRONMENTAL, AND CONSUMER
RESOURCES COURSES**

- HEC 107 Food for Man.** 2 hrs
An interdisciplinary study of the relationships between food habits and social, psychological, religious, and cultural factors.
- HEC 177/178/179 Special Topics.** 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.
- HEC 201 Nutrition for Consumers.** 3 hrs
Study of nutrient needs for the development and maintenance of normal growth and health. Not open to students who take HEC 202.
- HEC 202 Human Nutrition.** 3 hrs
Study of sources and functions of nutrients and the processes of digestion, absorption, and metabolism in health and disease. For dietetics, sports medicine, and nursing majors. Not open to students who take HEC 201.
Prereq: CHM 120 or CHM 121-122.
- HEC 211 Experimental Foods.** 4 hrs
Nature and reactions of food explained in terms of chemical composition, microbial flora, and manipulative practices.
Prereq: CHM 120 or CHM 270.
- HEC 220 Seminar in Lighting.** 1 hr
Development of interior design lighting knowledge through hands-on demonstrations of and laboratory experiences with lighting sources, controlling devices, and lighting solutions. Student financed off-campus experience required.
Prereq: Sophomore standing.
- HEC 221 Seminar in Contract Design Products.** 2 hrs
Examination of contract interior design products through product seminars and hands-on examination of products at the annual contract design conference, NEOCON, held at the Merchandise Mart in Chicago, Ill. Student financed off-campus experience required.
Prereq: Sophomore standing.
- HEC 235 Textiles for Consumers.** 3 hrs
The analytical study of fibers, yarns, fabrics, and finishes with emphasis on the performance of apparel and interiors fabrics. Laboratory required.
- HEC 271 Household Equipment and Technology.** 3 hrs
Selection factors, basic principles, new technology, and trends in household equipment.
- HEC 277/278/279/280 Special Topics.** 1/2/3/4 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.
- HEC 287/288/289 Cooperative Education.** 1/2/3 hrs
Employment in an appropriate setting, chosen to provide supervised practical experience. Credit hours determined by program area and academic adviser. Offered on credit/no credit basis only.
Prereq: Approval of the Cooperative Education Office and department permission.
- HEC 300 Professional Perspectives.** 3 hrs
Study of professional perspectives including reactions to global futuristic trends; problem solving capabilities; issues of wellness, ethics, and professional commitment; and adaptation to new technology. Required for all department majors.
Prereq: Junior standing.
- HEC 374 Methods of Teaching Occupational Foods.** 2 hrs
Responsibilities of occupational home economics teachers, selection of appropriate resources and learning strategies for secondary level occupational programs, relationship of evaluation techniques to total program.
Prereq: FCS 370.
- HEC 377/378/379 Special Topics.** 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.
- HEC 387/388/389 Cooperative Education.** 1/2/3 hrs
Employment in an appropriate setting, chosen to provide supervised practical experience. Credit hours determined by program area and academic adviser. Offered on credit/no credit basis only.
Prereq: Approval of the Cooperative Education Office and department permission.
- HEC 393 Food Systems Management I Experience.** 2 hrs
Application of basic components of an operating quantity food service facility. Supervised practice experience.
Coreq: HEC 394.
- HEC 394 Food Systems Management I.** 2 hrs
Introduction to food systems management with emphasis on sanitation, safety, equipment selection and operation, food purchasing, receiving and storage, and personnel management.
Prereq: HEC 211, MGT 386.
- HEC 412 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: HEC 201 or HEC 202.
- HEC 416 Contemporary Issues In Nutrition.** 3 hrs
Exploration of nutrition controversies, issues, and problems of local, national, and world significance.
Prereq: HEC 201 or HEC 202.
- HEC 477/478/479/476 Special Topics.** 1/2/3/4 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.
- HEC 487 Field Experience.** 3 hrs
Supervised field experiences working with family social agencies and/or businesses in the area of specialization emphasizing professional competencies and self-evaluation. Sections of course offered for specialization areas as needed. Foreign students need work permit before registration.
Prereq: Department permission—senior standing.
- HEC 490/491 Special Work (Honors).** 1/2 hrs
Additional experiences for promising seniors making a more detailed study of some phase of home economics. Work will be based on a problem of research interest with written and/or oral report. Regulations regarding honors courses will be observed.
Prereq: Senior standing.
- HEC 492 Food Systems Management II Experience.** 4 hrs
Principles of food production procedures emphasizing financial and quality controls in institutional foodservice systems. Supervised practice experience.
Prereq: HEC 393. Coreq: HEC 494.
- HEC 494 Food Systems Management II.** 1 hr
Application of supervisory processes to food service systems with emphasis on cost and quality control in food production and labor management.
Prereq: HEC 394, MGT 384, and MIC 328 or HM 204.

HEC 497/498/499 Directed Study. 1/2/3 hrs
Opportunity for qualified senior students to carry on an intensive study or project in their area of specialization.
Prereq: Department permission.

INTERIOR DESIGN COURSES

IDE 110 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.
Prereq: Interior design majors only.

IDE 111 Human Factors and Special Needs. 3 hrs
Introduction to the principles of ergonomics and anthropometrics as they influence the design of interior environments. Emphasis on how human factors and special user needs impact interior design.

IDE 120 Interior Design Studio II. 3 hrs
Introduction to interior design theory, philosophy, and process. Emphasis on creativity, design analysis, programming, concept development, space planning, and communication skills for introductory level residential and contract designs.
Prereq: IDE 110

IDE 121 Interior Design Materials and Components. 3 hrs
Investigation of characteristics, properties, and uses of materials and components specified by the interior designer. Emphasis on interior construction materials and components, surfacing materials, and furnishing materials.

IDE 177/178/179 Special Topics. 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.

IDE 207 Interior Design Computer Lab. 1 hr
An introduction to the use of microcomputers in interior design. Experiences with concept writing, specification writing, and computer aided design and drafting for interiors.
Prereq: Sophomore standing.

IDE 208 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.

IDE 210 Interior Design Studio III. 3 hrs
Development of advanced interior design graphic presentation skills. Emphasis on delineation, axonometric and perspective drawing, and rendering techniques.
Prereq: IDE 120, FA 122, FA 123.

IDE 211 Lighting for Interiors. 3 hrs
Introduction to lighting design for interior environments with emphasis on lighting fundamentals, lighting design process and methods, and the physiological and psychological effects of light.

IDE 220 Interior Design Studio IV. 4 hrs
Execution of design problems using design process 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 intermediate level residential and contract design problems.
Prereq: IDE 111, IDE 121, IDE 210, IDE 211, FA 231. Prereq or concurrent: IT 201, IDE 221, FM 235.

IDE 221 Environmental Systems for Interiors. 2 hrs
Introduction to acoustics, noise control, climate control, plumbing, and electrical systems in interiors. Emphasis on environmental systems principles necessary for the solution of interior design problems.

IDE 269 Housing for Consumers. 3 hrs
Consumer housing as it relates to social, psychological, legislative, and economic conditions for individuals and families in society.
Prereq: Sophomore standing.

IDE 277/278/279 Special Topics. 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.
Prereq: Department permission.

IDE 310 Interior Design Studio V: Residential. 4 hrs
Application of the design process to contract design focusing on physiological, socio-psychological, functional, and aesthetic elements and their relationship to user needs. Emphasis on medium-scale contract design problems.
Prereq: Meet criteria for enrollment in 300-level interior design studio courses.

IDE 311 History of Interiors: Ancient-1800. 2 hrs
Chronological survey of interior design from ancient times through the mid-nineteenth century. Emphasis on design, function, construction, and evolution of interior environments and the sociological, psychological, and cultural factors that influenced historical interiors, furniture, accessories, and ornamental design.
Prereq: Junior standing or department permission.

IDE 312 Computers for Interior Design. 3 hrs
Introduction to the use of computers in interior design. Emphasis on computer-aided design.
Prereq: CSC 136. Meet criteria for enrollment in 300-level interior design studio courses.

IDE 313 Space Planning and Specifications. 3 hrs
Space planning and specification techniques for interiors. Emphasis on corporate standards for furniture and finishes, CSI specifications format, performance standards for interior finishes and materials, and the code search process.
Prereq: IDE 110, IDE 211, or IT 228.

IDE 320 Interior Design Studio VI: Contract. 4 hrs
Application of the design process to contract design focusing on physiological, socio-psychological, functional, and aesthetic elements and their relationship to user needs. Emphasis on medium scale contract design problems.
Prereq: IDE 310, IDE 312, IDE 313.

IDE 321 History of Interiors: 1800-Present. 2 hrs
Chronological survey of interior design from the mid-nineteenth century through the present. Emphasis on design, function, construction, and evolution of interiors and the sociological, psychological, and cultural factors that influence interior environments.
Prereq: Junior standing or department permission.

IDE 364 Facility Management. 3 hrs
An examination of principles for coordinating the physical workplace with the people and work of the organization. Integrates the principles of business administration, architecture, and the behavioral and engineering sciences.
Prereq: Two courses in major.

IDE 369 Human Factors and Environmental Design. 3 hrs
An interdisciplinary approach to interior design and housing; interior design and architectural research results. The methodol-

ogy for incorporating these research results into the design of interior spaces.

Prereq: Junior or senior standing.

IDE 377/378/379 Special Topics. 1/2/3 hrs
An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

IDE 410 Interior Design Studio VII: Contract. 4 hrs
Application of the design process in solving advanced contract design problems in design specialization areas, including historic preservation, restoration, and adaptive reuse. Emphasis on physiological, socio-psychological, functional, and aesthetic elements and their relationship to user needs.

Prereq: IDE 311, IDE 320, IDE 321.

IDE 420 Interior Design Studio VIII: Contract. 4 hrs
Application of the design process for the comprehensive solution of large scale, complex, contract design problems focusing on physiological, socio-psychological, functional, and aesthetic elements and their relationship to user needs.

Prereq: MGT 386, IDE 410.

IDE 421 Field Experience In Interior Design. 4 hrs
Supervised work experience in the interior design field. Emphasis on professional competency, professional ethics, and self-evaluation.

Prereq: IDE 410.

IDE 422 Professional Practice in Interior Design. 3 hrs
Examination of business principles and practices as applied in the interior design field. Emphasis on marketing interior design services, managing interior design firms, and managing interior design projects.

Prereq: MKT 360, MGT 386.

IDE 449 Facility Programming and Post Occupancy Evaluation. 3 hrs

An examination of the techniques and concepts used in facility programming and post occupancy evaluation and the interrelatedness of these two processes. An emphasis of the use of programming and evaluation in facility management.

Prereq: IDE 313 or IDT 314 and IDE 320 or IDT 314 and IDE 111.

IDE 469 Strategic Planning and Research for Facility Management. 3 hrs

An introduction to strategic planning and research techniques in facility management with an emphasis on site and interior environment needs and evaluation.

Prereq: IDE 364.

IDE 477/478/479 Special Topics. 1/2/3 hrs

An experimental course designed to investigate specific topics of concern in specialization areas.

Prereq: Department permission.

NURSING EDUCATION

Regina Williams
Department Head
228 King Hall
487-2310

Professors: Betty Beard, Leola Hogan, Virginia Skurski, Regina Williams

Associate Professors: Janice Humphreys, Glenda Lindseth, Susan Pfoutz, Lorraine Wilson

Assistant Professors: Carlee Lehna, Kathleen Hillegas, Suzanne Ivey, Sharon Jackonen, Sandra Nelson, Jacquelyn Newsome, Nancy Prince, M. Gaie Rubenfeld, Barbara Scheffer

Degree: Bachelor of Science in Nursing

Program of Study

Curriculum:
Nursing

Advisers are assigned to each student. Adviser lists are posted on the bulletin board.

Admission to the University, even if students indicate an intention of entering the nursing curriculum, does not guarantee admission to the nursing program.

Prospective students should request an application from the Admissions Office, 401 Pierce Hall, early in their freshman year. The application will specify exact requirements, deadline dates, and expected notification times.

Students are eligible for consideration for selection into the nursing program upon completion of a minimum of 30 semester hours of University credit including PSY 101 General Psychology, either SOC 105 Introductory Sociology or ANT 135 Introduction to Cultural Anthropology, CHM 120 Fundamentals of Organic and Biochemistry, and ENG 121 English Composition or equivalent. Required prerequisite courses are subject to change.

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 follow the same admission procedures as stated above. In addition, registered nurse students must have 1) a valid Michigan Nurse License; 2) achieve at least 45 on the ACT-PEP examination or successful completion of the National League of Nursing Mobility Profile II exams with a minimum decision score of 90. Eighteen credit hours from the student's junior or community college are awarded as equivalent to sophomore baccalaureate nursing credits after completion of requirement 2 above.

Criteria for continuance follows a structured sequence of courses in the professional phase of the curriculum. Any elective or other course selected must fit in around the core of professional courses.

Students should plan carefully for the demanding nature of this professional part of the nursing program and the extensive clinical hours required. This professional segment requires six sequential semesters of work.

Because of the rapidly changing nature of the health care field, it is necessary that graduates have current professional nursing skills and knowledge in order to practice successfully. Therefore, the following policies have been established:

Once admitted to the EMU nursing program, students must complete all nursing sequence courses, including NUR 270 Pharmacology and NUR 320 Pathophysiology, within a period of six calendar years to be considered eligible for graduation.

The University may give credit for nursing courses taken at a four year college/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

In preparing to assume professional nursing careers, students are expected to assume responsibility for their learning, to support the ethics and goals of their profession, and to value honesty in the fulfillment of scholarly and professional endeavors. Students must abide by the University code of conduct as outlined in the University Catalog. Students who violate the University code of conduct will be subject to appropriate disciplinary action.

The Nursing Department recognizes its responsibilities to the public and 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 requirement 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 medical centers, community hospitals, public schools, nursing homes, county health agencies, and home health care agencies. Students are expected to provide their own transportation.

Nursing students are assessed \$15.00 per credit hour on all clinical laboratory courses. Fifty percent of these funds go to the department to help defray the cost of updating, replacing, and maintaining equipment and supplies used in the classroom laboratories (skills lab, health assessment, and computer labs).

Certification follows receipt of a Bachelor of Science in Nursing degree (BSN). Students are eligible to qualify as registered nurses through the Michigan Board of Nursing by passing the national nursing licensure examination.

This nursing program is accredited by the National League for Nursing, and prepares graduates to function in a variety of settings: clinics, physicians' offices, hospitals, health maintenance organizations, public health agencies, and home care coordinating agencies.

NURSING CURRICULUM

This curriculum leads to the Bachelor of Science in Nursing (BSN) degree and requires the following courses to complete the 124 semester 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 Nursing Department for the most accurate information.

Area	Sem hours
Symbolics and communication	14-17
ENG 121 English Composition	3
CTA 121/124 Fundamentals of Speech	2-3
Upper level writing composition or speech communication or foreign language	3-5
Recommend MTH 270 Elementary Statistics or SOC 250 Social Statistics I	3
Recommend HHS 226 Computers for Health and Human Services	3
Science and technology	18
CHM 120 Fundamentals of Organic and Biochemistry ...	4
PSY 101 General Psychology	3
ZOO 201 Human Anatomy and Physiology I, ZOO 202 Human Anatomy and Physiology II, and MIC 328 Introductory Microbiology	11
Social science	12
See basic studies requirements (page 28):	
Arts and humanities	11-12
See basic studies requirements (page 29).	

Required supportive courses	7
HEC 202 Human Nutrition	3
EDP 325 Life Span Human Growth and Development ...	4
Required nursing courses for generic students	48
NUR 204 Framework for Nursing	6
NUR 250 Nursing Science I	3
*NUR 251 Nursing Science I Clinical Laboratory	3
NUR 270 Pharmacology	2
NUR 304 Nursing Science II	3
*NUR 305 Nursing Science II Clinical Laboratory	3
NUR 320 Pathophysiology	3
NUR 350 Nursing Science III	3
*NUR 351 Nursing Science III Clinical Laboratory	4
NUR 370 Health Assessment	3
NUR 404 Nursing Science IV	3
*NUR 405 Nursing Science IV Clinical Laboratory	5
NUR 450 Nursing Science V	3
*NUR 451 Nursing Science V Clinical Laboratory	4
Required nursing courses for registered nurse students ...	48
NUR 270 Pharmacology	2
NUR 310 Concepts of Professional Practice	2
NUR 320 Pathophysiology	3
NUR 340 Concepts of Professional Practice II	3
*NUR 341 Concepts of Professional Practice II Clinical Laboratory	3
NUR 370 Health Assessment	3
NUR 390 Seminar: Theories of Nursing	2
NUR 410 Concepts of Nursing Practice III	2
NUR 411 Concepts of Nursing Practice III Clinical Laboratory	3
NUR 450 Nursing Science V	3
*NUR 451 Nursing Science V Clinical Laboratory	4
ACT-PEP Nursing Credit	18
Physical education and health courses	2
(Any two courses in military science may be applied)	
Electives	12-14
Total	124

*A lab fee of \$15.00 per credit hour is assessed on each clinical laboratory course.

NURSING EDUCATION COURSES

NUR 204 Framework for Nursing.	6 hrs
Study of the concepts and skills upon which professional nursing is based. The nature of nursing, the interrelatedness of man and his environment, the health-illness continuum, and the health care delivery system.	
<i>Prereq: Admission to the nursing program, department permission.</i>	
NUR 210 Use of the Nursing Process.	2 hrs
Study of the four components of the nursing process and their implementation in nursing practice. Lecture: two hours per week.	
<i>Prereq: Department permission.</i>	
NUR 250 Nursing Science I.	3 hrs
Health promotion for individuals and families integrating family and teaching/learning theories.	
<i>Prereq: NUR 204, ZOO 201, EDP 325. Pre/Coreq: ZOO 202, HEC 202, NUR 320.</i>	
NUR 251 Nursing Science I Clinical Laboratory.	3 hrs
Clinical nursing practice in ambulatory care clinics, public schools, and industry with emphasis on the nursing process to promote health.	
<i>Prereq: NUR 204, ZOO 201, EDP 325. Pre/coreq: ZOO 202, HEC 202, NUR 320. Coreq: NUR 250.</i>	

- NUR 270 Pharmacology.** 2 hrs
The fundamental principles of pharmacology including the action of drug groups on the human body and how drugs are administered, absorbed, metabolized, and excreted.
Prereq: NUR 320 and department permission.
- NUR 304 Nursing Science II.** 3 hrs
The needs of families facing the crisis of hospitalization. The nursing care needs of selected obstetrical and general medicine patients.
Prereq: NUR 250, NUR 251. Prelcoreq: NUR 270, MIC 328.
- NUR 305 Nursing Science II Clinical Laboratory.** 3 hrs
Clinical learning experiences in community hospitals. Laboratory: six hours per week.
Prereq: NUR 250, NUR 251. Prelcoreq: NUR 270, MIC 328. Coreq: NUR 304.
- NUR 310 Concepts of Professional Practice.** 2 hrs
The concepts upon which professional nursing is based. Adaptation theory introduced and applied to the concepts of the individual, family, groups, and community. Lecture: Two hours per week.
Prereq: Admission to RNIBSN nursing completion program.
- NUR 320 Pathophysiology.** 3 hrs
The dysfunctions created by major physical illnesses, theories of causation, and signs and symptoms of the more usual syndromes.
Prereq: Department permission.
- NUR 340 Concepts of Professional Practice II.** 3 hrs
Content includes the processes used by the professional nurse in practice, and concepts of community health nursing. Primary and tertiary prevention are emphasized. Lecture: three hours per week.
Prereq: NUR 310, NUR 320, NUR 370, EDP 325.
- NUR 341 Concepts of Professional Practice II Clinical Laboratory.** 3 hrs
Clinical nursing practice occurs in schools and community mental health settings. Students work with clients as individuals and in groups. Emphasis is on the use of the nursing process in the promotion of family and community health. Laboratory: Six hours per week.
Prereq: NUR 310, NUR 320, NUR 370, EDP 325.
- NUR 350 Nursing Science III.** 3 hrs
Concepts for nursing care of aged and/or chronically ill clients. Lecture three hours per week.
Prereq: NUR 304, NUR 305. Prelcoreq: NUR 370.
- NUR 351 Nursing Science III Clinical Laboratory.** 4 hrs
Clinical practice in extended care facilities, mental health agencies, and the nursing skills laboratory. Laboratory: eight hours per week.
Coreq: NUR 350.
- NUR 360 Gerontological Nursing.** 2 hrs
Provides an overview of normal bio-psychosocial changes in aging and nursing interventions to promote optimal wellness.
Prereq: Junior standing in the generic program. Department permission.
- NUR 361 Oncology Nursing.** 2 hrs
This course focuses on the assessment and management of adults and children with cancer. Care of the family living with cancer and strategies for adaptation are identified and discussed.
Prereq: NUR 304.
- NUR 370 Health Assessment.** 3 hrs
Familiarizes students with health history-taking and physical examination techniques. Laboratory sessions provide opportunities for doing assessments under the guidance of the nursing faculty. Lecture: two hours per week. Laboratory: two hours per week.
Prereq: ZOO 201, 202; NUR 320. Department permission.
- NUR 380 Health and Illness Problems Throughout the Life Span.** 2 hrs
An overview of common health problems and an orientation to terminology and concepts related to health care delivery. Etiologies, preventions, and treatments for selected illnesses and the biopsychological impact of these illnesses for the individual, family, and community. For non-nursing students.
Prereq: Department permission.
- NUR 390 Seminar: Theories of Nursing.** 2 hrs
Theory and its relationship to the advancement of the nursing discipline. A realistic explanation of the language, a basic view of the value of theories, an explanation of the development and evaluation of theories and an overview of current nursing theory. Lecture: two hours per week.
Prereq: Junior or senior standing in the generic program and department permission. Admission to RNIBSN completion program and department permission.
- NUR 404 Nursing Science IV.** 3 hrs
The nurse's role in assisting hospitalized patients with serious health problems. Usual treatment modalities and concomitant nursing care responsibilities. Lecture: three hours per week.
Prereq: NUR 350, NUR 351.
- NUR 405 Nursing Science IV Clinical Laboratory.** 5 hrs
Assignment to acute care facilities to provide nursing experiences with more seriously ill persons and to orient the students to large institutions whose major responsibility is treatment of illness. Laboratory: ten hours per week.
Prereq: NUR 350, NUR 351. Coreq: NUR 404.
- NUR 410 Concepts of Nursing Practice III.** 2 hrs
The nurse's role in secondary health care with emphasis on planning beyond the hospital setting. Communication skills necessary for group interaction, concepts of stress, and crisis management and intervention. Lecture: two hours per week.
Prereq: NUR 320, NUR 370, NUR 340, NUR 341, NUR 390.
- NUR 411 Concepts of Nursing Practice III Clinical Laboratory.** 3 hrs
Contracted learning experiences in maternal-child, mental health or medical-surgical nursing based on the outcome of portfolio assessment. Laboratory: one hour per week or equivalent.
Prereq: NUR 320, NUR 340, NUR 341, NUR 370, NUR 390 or department permission.
- NUR 450 Nursing Science V.** 3 hrs
Introduction to concepts of nursing research, nursing management theories, and professional issues. Lecture: three hours per week.
Prereq: NUR 404 and NUR 405, department permission or NUR 410 and NUR 411 (RN-BSN completion program).
- NUR 451 Nursing Science V Clinical Laboratory.** 4 hrs
Clinical practice in the care of clients in a public health or home health care agency, and a hospital unit management area. Laboratory: eight hours per week.
Prereq: NUR 404 and NUR 405, or NUR 410 and NUR 411 (RN-BSN completion program).
- NUR 477/478/479 Special Topics in Nursing.** 1/2/3 hrs
Experimental courses or special topics in nursing may be offered (to be announced).
Prereq: Department permission.
- NUR 497/498/499 Independent Study.** 1/2/3 hrs
A student may work with a faculty member independently to pursue a topic of interest to the student. Independent study is a student-initiated project.
Prereq: Department permission.

SOCIAL WORK

Donald M. Loppnow
 Department Head
 411 King Hall
 487-0393

Professors: Kaaren Brown, Don Ifill, Linda F. Kurtz, Ronald Lewis, Donald M. Loppnow, Emily Jean McFadden, Marjorie Ziefert

Associate Professors: Elvia Krajewski-Jaime, Crystal Mills, George Mink, Lynn Nybell, Leroy Watts

Assistant Professors: Sylvia Sims Gray, Elizabeth Kaufman, Enos Massie, Elizabeth Schuster, Marilyn Wedenoja

The Social Work program offers students a generalist foundation of knowledge, values, and skills integral to entry level professional social work careers. It includes a fully accredited major and minor in social work and is distinct among baccalaureate social work programs in offering an extensive series of supplemental courses that form the Family and Children's Services program and the Health Care Services program.

The department supports two student organizations, the Student Social Work Organization and a student chapter of the National Association of Black Social Workers. Members of the student organizations sponsor social activities and community service projects, serve on faculty committees and sponsor an annual student conference. All social work students are encouraged to be involved in one or both organizations.

Degree: Bachelor of Science or Bachelor of Arts

Programs of Study

Curriculum:

Social work (professional degree)

Minor:

Social work

Supplemental/elective programs:

Family and children's services
 Health care services

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 adviser or the University Honors Program.

Advising responsibilities will be assigned to social work faculty members. Students should contact the Department of Social Work to set up an advising appointment. In addition:

1. All social work students should obtain a copy of the department's advising handbook titled *The Doorway to Undergraduate Social Work Education at EMU*. This handbook will be given to the student at the initial session with a social work adviser.
2. Before students enroll in the required 300- and 400-level social work courses, they must meet with a social work faculty adviser to review a variety of issues such as academic performance, class scheduling, and overall progress and development in the program. Since the class cards for the required 300- and 400-level courses are available only in the Department of Social Work, students must see an adviser and pick up class cards before registering.

3. Faculty advisers are available by appointment for evening advising sessions.

Field experience required 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 executed during the students' senior year, either fall and winter terms or winter and spring-summer terms. Students will be in the field 16 hours per week, Tuesdays and Thursdays, for the semesters in the field placement cycle. *Open only to social work majors.*

Eligibility for field placement:

1. A 2.0 overall grade point average at the time of entering and during field placement (no probation).
2. A 2.3 overall grade point average in social work at the time of entering and during field placement.
3. Students must have completed all required social work courses through the 300 level before beginning field placement. In addition, students must have completed EDP 325 Life Span Human Growth and Development, and PSY 360 Abnormal Psychology prior to field placement.
4. Students must receive a grade of "C" or better in their first semester field placement and practice classes (SWK 408 Social Work Practice II, and SWK 488 Field Experience I) to be eligible to continue in the second semester (SWK 409 Social Work Practice III and SWK 489 Field Experience II). Students who receive a grade of "E" in either semester of field placement (SWK 488-489 Field Experience I-II) must obtain special departmental permission to repeat the course.
5. A field placement application must be obtained from the social work office, 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 announced 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 (SWK 488 Field Experience I) must take SWK 408 Social Work Practice II concurrently. Students enrolling for the second term of field placement (SWK 489 Field Experience II) must take SWK 409 Social Work Practice III concurrently. In addition, students must take SWK 405 Analysis and Change of Social Welfare Policies concurrently during one of the two semesters of field placement.
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. Academic credit for life experience and previous work experience will not be granted in lieu of field placement.
9. Students in field placement must adhere to professional standards as set forth in the Code of Ethics of the National Association of Social Workers.
10. All students should obtain and read a copy of the department field placement policies.

Accreditation is by the Council on Social Work Education, the accrediting body for baccalaureate and 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.

SOCIAL WORK CURRICULUM

This curriculum leads to the Bachelor of Science or the Bachelor of Arts degree. Students completing the curriculum will have met the major and minor requirements for graduation; no outside minor is required. Specific courses required to complete the designated 124 hours leading to a degree in social work are indicated by an asterisk (*).

Area	Sem hours
Symbolics and communication	14-15
Requirements 1, 2, 3, and 4 (Box page 26)	
*SOC 250 Social Statistics I	3
Science and technology	13
Requirement 1-A course in physical science (Box page 27)	
Requirement 2-A course in life science	
*BIO 105 Biology and the Human Species	4
*PSY 101 General Psychology	3
*PSY 360 Abnormal Psychology	3
Social science	63
Requirements 1 and 2 (Box page 28)	6
1. Required courses	
*ANT 135 Introduction to Cultural Anthropology	3
*SOC 105 Introductory Sociology	3
*SOC 462 Complex Organizations	3
*Two courses on statistics and research completed by taking either Option 1 or Option 2	6
Option 1	
SOC 341 Quantitative Methods of Social Research I	3
SOC 342 Quantitative Methods of Social Research II	3
Option 2	
SOC 250 Social Statistics I (fulfills Area I-mathematical reasoning)	3
SOC 304 Methods in Sociological Research	3
*SWK 120 Introduction to Social Work Services and Professional Roles	3
*SWK 222 Social Welfare Policies and Services	3
*SWK 315 Theoretical Bases for Social Work Practice	3
*SWK 317 Social Work Practice I	3
*SWK 360 Practice Issues with People of Color	3
*SWK 388 Pre-Professional Practicum	3
*SWK 403 Practice Issues with Women	3
*SWK 405 Analysis and Change of Social Welfare Policies	3
*SWK 408 Social Work Practice II	3
*SWK 409 Social Work Practice III	3
*SWK 488 Field Experience I	6
*SWK 489 Field Experience II	6
2. Restricted electives	9
*Choose two courses from the following:	
AAS 101 Introduction to African American Studies	
ANT/SOC 205 Minority Women in the United States	
ANT/SOC 214 Racial and Cultural Minorities	
ANT 233 Peoples and Cultures of Mexico	
ANT 236 Peoples and Cultures of Africa	
ANT 237 Indians of North America	
ANT 248 Peoples and Cultures of the Pacific	
FLA 215 The Culture of the Latino Groups in the United States (may also count in arts and humanities area.)	
ECO 321 Minority Workers in the Labor Market	
HIS 305 Indians of the United States	
HIS 315 History of Black Americans	
HIS 341 The Middle East, 1798 to Present	
HIS 342 North Africa, 1798 to Present	
HIS 348 Twentieth Century Africa	
HIS 356 Latin America: National Period	
HIS 375 Modern India	
LIT 204 Native American Literature (also may count in Area IV)	

LIT 260 African American Literature (also may count in Area IV)

PSY 340 Psychological Perspectives on Prejudice and Discrimination

*Choose one course from the following:

PSY 242 Psychology of Women

SOC 344 Sociology of Sex Roles

Arts and humanities	12
Requirements 1, 2, 3, and 4 (page 29)	12
Education	4
*EDP 325 Life Span Human Growth and Development	4
Physical education and health	2
Physical education activity courses	2
Electives	6-7
Total	124

MINOR IN SOCIAL WORK

Sem hours
 Minor in social work

This minor is compatible with the disciplines where the college graduate will be in a helping role with people.

1. Required courses	6
SWK 120 Introduction to Social Work Services and Professional Roles	3
SWK 222 Social Welfare Policies and Services	3
2. Electives	14-15
Choose 14-15 credits selected from social work courses (SWK).	

SUPPLEMENTAL ELECTIVE PROGRAMS

FAMILY AND CHILDREN'S SERVICES PROGRAM

The family and children's services program (FCSP) is a series of elective courses focusing on providing social work services to families and children. It is intended as supplemental content for students working toward a bachelor's degree in social work and related professions, or as an educational resource available on a continuing education basis for agency staff who wish to enhance their knowledge and skills in social work with families and children. This program is not a major or minor.

In order to complete the FCSP, the student-practitioner must complete SWK 477 Special Topics: Policies and Issues in Services to Families and select any three additional courses from the following courses, which are a part of the program:

SWK 419 Family-Centered Practice
SWK 420 Working with Aging People
SWK 422 Specialized Services for Families with Children in Placement
SWK 424 Social Work with Physically and Mentally Handicapped
SWK 431 Substance Abuse
SWK 435 Group Work with Children and Families
SWK 460 The Law and Social Work with the Family
SWK 465 Social Work, Sex, and the Family
SWK 470 Supervising Staff and Volunteers

The process of selecting courses should be accomplished in consultation with a faculty adviser. Upon completion of the four courses with at least a 2.5 grade point average in the courses, the student is awarded a certificate recognizing completion of the FCSP. This certificate is not a professional credential but does document completion of focused coursework.

HEALTH CARE SERVICES PROGRAM

The health care services program (HCSP) includes a series of elective courses that focus on the roles of social workers and other

health care professionals in providing health care services. It is intended as supplemental content for students working toward bachelor's degrees in social work and related professions and as an educational resource available on a continuing education basis for agency staff who wish to enhance their knowledge and skills in social work and health care. This program is not a major or minor.

The health care services program is built on a group of four courses that are intended to provide students with an understanding of social work practice in a broad spectrum of health care settings. These courses provide both an interdisciplinary focus and an emphasis on health care and the family. In addition, students must complete any one of three options intended to prepare students for social work in medical settings, substance abuse programs or mental health settings. The student practitioner must complete a total of 12 credits distributed as follows:

	Sem hours
1. Required courses	9
SWK 419 Family-Centered Practice	3
SWK 438 The Interdisciplinary Health Care Team	1
SWK 439 Social Work Practice in Health Care Settings	3
HAD 300 Health Care Issues	2
2. One of the following options	3
<i>Medical Option</i>	
NUR 380 Health and Illness Problems Throughout the Life Span	2
SWK 457 Separation, Loss, and Grief	1
<i>Substance Abuse Option</i>	
SWK 431 Substance Abuse	3
<i>Mental Health Option</i>	
SWK 440 Issues in Mental Health Practice	3
Total	12

The process of selecting courses that complement and supplement the student's interests should be done in consultation with a faculty adviser. Upon completion of the 12 credits for the HCSP with at least a 2.5 grade point average in the courses, the student is awarded a certificate recognizing completion of the HCSP. This certificate is not a professional credential but does document completion of focused coursework.

SOCIAL WORK COURSES

SWK 120 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.

SWK 177/178/179 Special Topics in Social Work Practice. 1/2/3 hrs

Specialized topics integral to contemporary social work practice. Social work faculty members will select contemporary topics that are unique and different from existing social work courses. Since topics change, a student may take the course more than once.

Prereq: SWK 120.

SWK 222 Social Welfare Policies 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 socio-cultural conditions, and prevailing ideologies.

Prereq: SWK 120.

SWK 287 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 alternated with full-time attendance at the University. Students who wish to substitute a cooperative education course

for the practicum component of SWK 388 must enroll in SWK 388 concurrently with one of the cooperative courses. Cooperative education does not substitute for the field placement courses required of all social work majors.

Prereq: SWK 120, sophomore standing, approval of the cooperative education office, and department permission.

SWK 315 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.

Prereq: SWK 120, SWK 222, PSY 101, SOC 105, and EDP 325; or department permission. ANT 135 and PSY 360 recommended.

SWK 317 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 SWK 388.

Prereq: SWK 120, SWK 222, and SWK 315. Non-social work majors must have department permission.

SWK 360 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.

SWK 387 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 alternated with full-time attendance at the University. Students who wish to substitute a cooperative education course for the practicum component of SWK 388 must enroll in SWK 388 concurrently with one of the cooperative courses. Cooperative education does not substitute for the field placement courses required of all social work majors.

Prereq: SWK 120, sophomore standing, approval of the cooperative education office, and department permission.

SWK 388 Pre-Professional 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. Social work majors must take concurrently with SWK 317.

Prereq: Non-social work majors must have junior standing, SWK 120, and department permission.

SWK 403 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 effect social work practice with women.

Prereq: SOC 344 or PSY 242, or department permission.

SWK 405 Analysis and Change of Social Welfare Policies. 3 hrs

Current social policy and its intended and unintended effects on client populations. Policy analysis and strategies and methods for policy change. Social work majors must enroll concurrently in SWK 408 and SWK 488.

Prereq: SWK 120, SWK 222, and either PLS 112 or PLS 202.

- SWK 408 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. Must be taken concurrently with SWK 405 and SWK 488.
Prereq: SWK 317, SWK 360, and SWK 388.
- SWK 409 Social Work Practice III.** 3 hrs
A continuation of SWK 408; examines in more depth a variety of social work practice models, interventive strategies, methods, roles, and skills. Must be taken concurrently with SWK 489 Field Experience II.
Prereq: SWK 405 and SWK 408.
- SWK 413 Women and Aging.** 3 hrs
Designed to provide social work, women's studies, and gerontology students with 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.
Prereq: Junior/senior or graduate standing.
- SWK 419 Family-Centered Practice.** 3 hrs
A foundation course for the family and children's services program and an elective for students interested in social work with families. The family as a social/psychological system that meets the needs of both children and adults. Practice knowledge and skill in delivering services and developing resources for families at risk.
Prereq: SWK 120, SWK 222, or department permission.
- SWK 420 Working with Aging People.** 3 hrs
The role of 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.
Prereq: SWK 120, SWK 222, or department permission.
- SWK 422 Specialized Services for Families with Children in Placement.** 3 hrs
Practice knowledge and skills for working with families where out-of-home placement of children has become necessary. Issues of identity, ethnicity, and continuity in child welfare. The social worker's role in planning for permanence and working in a team approach with foster parents and other substitute care providers.
Prereq: SWK 120, SWK 222, or department permission.
- SWK 424 Social Work with Physically and Mentally Handicapped.** 3 hrs
The impact of intellectual, emotional, and/or physical handicapping conditions upon the individual, the family, and the community, including public attitudes, policies, and programs. Social work practice knowledge, values, and skills in the planning and delivery of preventive and supportive services.
Prereq: SWK 120, SWK 222, or department permission.
- SWK 431 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.
Prereq: SWK 120, SWK 222, or department permission.
- SWK 435 Group Work with Children and Families.** 3 hrs
Social group work 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.
Prereq: SWK 120, SWK 222, or department permission.

- SWK 438 The Interdisciplinary Health Care Team.** 1 hr
The purpose and function of interdisciplinary teams in health care settings and the roles and collaboration of health care professionals such as doctors, dietitians, health administrators, nurses, psychologists, physical therapists, occupational therapists, and social workers. Instruction by an interdisciplinary team.
Prereq: SWK 120 and SWK 222 or department permission. No prerequisites for non-social work students who are majoring in health disciplines and who have at least junior standing.
- SWK 439 Social Work Practice in Health Care Settings.** 3 hrs
Social work roles and practice in health care settings with primary emphasis on their application in medical settings. The social work roles and practice intervention strategies in mental health settings and substance abuse services settings.
Prereq: SWK 120 and SWK 222 and Services or department permission.
- SWK 440 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.
Prereq: SWK 120, SWK 222, or department permission.
- SWK 457 Separation, Loss, and Grief.** 1 hr
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.
Prereq: SWK 120 and SWK 222, or department permission.
- SWK 460 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.
Prereq: SWK 120, SWK 222, or department permission.
- SWK 463 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: SWK 120, SWK 222, or department permission.
- SWK 465 Social Work, Sex, and the Family.** 3 hrs
Impact of sexual behavior and issues of sexuality on family relationships and the development of children. A broad view of human sexuality focusing on assessment and social work intervention in situations in which sexual issues are significant, including incest, adolescent sexual relationships, sexual preferences, birth control, venereal disease, and sexual functioning.
Prereq: SWK 120, SWK 222, or department permission.
- SWK 467 Crisis Intervention.** 2 hrs
Systems in crisis including different types of crises, indications of a system in crisis and crisis intervention strategies.
Prereq: SWK 120 and SWK 222, or department permission.
- SWK 470 Supervising Staff and Volunteers.** 3 hrs
Models of supervision and the roles of the social services supervisor. The basic knowledge, skills, and values required for effective supervision of bachelor's degree level staff, paraprofessional staff, and volunteers within family and children's services agencies.
Prereq: SWK 120, SWK 222, or department permission.
- SWK 477/478/479 Special Topics in Social Work Practice.** 1/2/3 hrs
Specialized topics integral to contemporary social work practice. Social work faculty members will select contemporary topics that

are unique and different from existing social work courses. Since topics change, a student may take the course more than once.
Prereq: SWK 120, SWK 222, or department permission.

SWK 488 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 Department of Social Work, 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. Must be taken concurrently with SWK 405 and SWK 408.
Prereq: SWK 315, SWK 317, SWK 360, SWK 388, and department permission.

SWK 489 Field Experience II. 6 hrs
 A continuation of SWK 488. A student must receive a "C" or better in SWK 488, 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 SWK 409.

SWK 490 Senior Thesis Seminar. 3 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: Senior standing, social work major, and course work on statistics and research methodology.

SWK 497/498/499 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.

GERONTOLOGY MINOR

Elizabeth Schuster
 Coordinator
 416 King Hall
 487-2465

Lecturer: Anne Robinson

The gerontology minor is administered by the Department 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 20-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 graduate or undergraduate students who wish to supplement their studies with a detailed knowledge of gerontology or who contemplate entering graduate 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, to those working in institutions or nursing facilities for the elderly, for community organization and social service workers, and for educators.

Advising is arranged through the program coordinator.

	Sem hours
Minor in gerontology	20
Students are required to complete elective requirements by choosing courses from each of the following three content areas:	

- Psychosocial and environmental aspects of aging*
1. **Required courses** 6
 - SOC 311 Social Gerontology 3
 - PSY 323 Psychology of Human Aging 3
 2. **Electives** 10
 - EDP 325 Life Span Human Growth and Development 4

- EDP 402 Learning in the Later Years 3
 - PSY 551 Psychology of Death and Dying 2
 - Biological and health aspects of aging*
 - IDE 269 Housing for Consumers 3
 - IDE 369 Human Factors and Environmental Design 3
 - REC 310 Leisure and the Older Adult 3
 - NUR 360 Gerontological Nursing 2
 - 1. **Required course** 2
 - BIO 239 Biology of Aging 2
 - 2. **Electives** 9
 - HEC 201 Nutrition for Consumers or HEC 202 Human Nutrition 3
 - HEC 412 Nutrition of the Life Cycle 3
 - PED 479 Special Topics: Health and Aging 3
 - Policies and services for the aging*
 - 1. **Required course** 3
 - SWK 420 Working with Aging People 3
 - 2. **Electives** 25-26
 - HAD 300 Health Care Issues 2
 - HAD 310 Administration of Health Care Organizations 3
 - ECO 327 Inequality and Economic Justice 3
 - SWK 413 Women and Aging 3
 - SWK 424 Social Work with Physically and Mentally Handicapped 3
 - SWK 457 Separation, Loss, and Grief 1
 - GRT 411 Issues in Caring for People with Alzheimer's and Related Illnesses 3
 - GRT 417 Work and Retirement 2
 - Gerontology practicum or research* 2-3
 - GRT 488/489 Gerontology Practicum 2-3
- Note: 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 GRT 488/489.*
- Gerontology electives** 6-7
 (Select from courses listed above and courses with a GRT prefix. Selected 500-level courses are available with approval.)

GERONTOLOGY COURSES

GRT 404 Gerontology Interdisciplinary Seminar. 3 hrs
Prereq: Senior standing, completion of two courses in the gerontology minor or equivalent.

GRT 411 Issues in Caring for People with Alzheimer's and Related Illnesses. 3 hrs
 This course is designed for undergraduate/graduate students and health care professionals who work with older people with Alzheimer's disease and their families. The first part of the course includes a discussion of the disease, caregiving issues, and community resources for families. The second half of the course will focus on specific techniques for caring for people with dementia.
Prereq: Junior/senior or graduate student.

GRT 417 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 lifespan, and work past the age of 65.
Prereq: Junior/senior or graduate student.

GRT 477/478/479 Special Topics. 1/2/3 hrs
 Content will change from semester to semester. An experimental course for subject matter not yet provided in other program offerings. Students may elect this course more than once as long as different topics are covered.

GRT 488/489 Gerontology Practicum. 2/3 hrs
 Integration of knowledge and skills gained from other gerontology courses and life experiences. Insights on aging available from

the humanities disciplines.

Prereq: Senior standing, completion of two courses in the gerontology minor or advising coordinator's permission.

GRT 497/498/499 Gerontology 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.



COLLEGE OF TECHNOLOGY

Robert Ristau, Interim Dean
150 Sill Hall
487-0354

DEPARTMENTS

Business and Industrial Education
Industrial Technology
Interdisciplinary Technology
Military Science

COLLEGE OF TECHNOLOGY

The College of Technology seeks to meet the existing and emerging personnel needs of business, industry, and education. Critical to its formation in 1980 was information gathered from 575 industries in Michigan that indicated a significant need for trained technologists in a wide variety of industrial positions.

To meet these needs, four-year baccalaureate programs and graduate programs have been designed to provide a solid foundation in mathematics, science, technology, management, and human relations. Program content is practical and applied with many opportunities for laboratory and cooperative work experiences. Graduates are trained for middle-level technological management positions in production, research, and marketing for business and industry.

Business and industry teaching and industrial training personnel programs, which have existed at EMU for a considerable length of time, were combined to form this college. Also included within the college is the University's long-standing military science program, which provides training for and entry into the active Army, Army Reserve, or National Guard as a commissioned officer.

The college currently is comprised of the departments of Business and Industrial Education, Industrial Technology, Interdisciplinary Technology, and Military Science. Inherent in the interdisciplinary program is the use of existing courses and personnel throughout the University.

Shared with the College of Arts and Sciences are two preparatory programs: pre-architecture and pre-engineering. The Department of Industrial Technology provides advising coordination for these programs.

Degrees offered by the college are the Bachelor of Science degree and the Bachelor of Business Education degree, described under the Department of Business and Industrial Education.

BUSINESS AND INDUSTRIAL EDUCATION

Ann M. Remp
Acting Department Head
14 Sill Hall
487-4330

Professors: Alice W. Callum, Gerald L. Jennings, Lewis D. Kieft, Ann M. Remp, Mary F. Robek, H. James Rokusek, Rosetta C. Wingo

Associate Professors: James L. Barnes, Thomas L. McDole, Earl C. Meyer, Herbert H. Wilson

Assistant Professors: John R. Cordani, David W. Leopard

Business and industrial education offers the following degree programs:

Degree:

Bachelor of Business Education

Business education curriculum

Majors:

Business services and technology education for secondary education

Marketing education for secondary education

Degree:

Bachelor of Science

Industrial education curriculum

Majors:

Industrial-vocational education for secondary education

Technology education for secondary education

Minor:

Technology education for elementary and special education-elementary

Degree:

Bachelor of Science

Office technology curriculum

Majors:

Administrative management

Executive assistant

Legal assistant

Office automation

Minor:

Office technology

Advising Coordinators:

Administrative management: Mary F. Robek

Business services and technology education: Rosetta C. Wingo

Executive assistant: Mary F. Robek

Legal assistant: Alice W. Callum

Marketing education: Earl C. Meyer

Office automation: John R. Cordani

Office technology minor: Mary F. Robek

Technology education/industrial-vocational education: Gerald L. Jennings

Technology education minor: Lewis D. Kieft

Graduate study leads to the Master of Business Education degree and the Master of Arts degree in industrial education. For a description of the graduate program and courses, consult the Graduate Catalog.

MAJORS OFFERED IN THE BUSINESS AND INDUSTRIAL EDUCATION DEPARTMENT

BUSINESS EDUCATION CURRICULUM

The Bachelor of Business Education degree is designed for individuals preparing for careers as junior high school business teachers, high school teachers of marketing or business services and

technology education, or other positions requiring teacher certification. Students completing the professional program will find teaching and non-teaching careers in business open to them.

BUSINESS SERVICES AND TECHNOLOGY EDUCATION

SECONDARY TEACHER CERTIFICATION

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 qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in business education, certification code "GX," or, with appropriate work experience, certification code "VB." The certification test covering this field is #32, "Business Education." See page 370.

MARKETING EDUCATION

SECONDARY TEACHER CERTIFICATION

The Marketing Education major leads to a Michigan Department of Education Secondary Provisional Certificate and vocational endorsement qualifying the prospective teacher in such areas as sales, retailing, marketing, and advertising.

This major can be completed only in conjunction with the Bachelor of Business Education curriculum. Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in business education, certification code "GX," or, with appropriate work experience, certification code "VB." The certification test covering this field is #36, "Marketing (Distributive Education)." See page 372.

INDUSTRIAL EDUCATION CURRICULUM

The Industrial Education curriculum prepares teachers of technology education for the middle and senior high school, and teachers of industrial-vocational subjects for the senior high school and community college. It offers a broad-based description of modern industry and technology, and the opportunity to acquire specialized competencies in a number of technical areas.

INDUSTRIAL-VOCATIONAL EDUCATION

SECONDARY TEACHER CERTIFICATION

The Industrial-Vocational major is designed to prepare teachers of industrial-vocational subjects for senior high school and community college vocational education programs. Graduate 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 Industrial Education curriculum. This major qualifies individuals to teach only in selected occupational areas. The Occupational Education Endorsement is valid for six years. By that time, individuals must have completed additional requirements to qualify for Full Vocational Authorization.

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 industrial-vocational subject area under the Annual Vocational Authorization would also find this major to be a desirable option.

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in vocational trades, certification code "VT." The certification test covering this field is an occupational area test. See page 371.

TECHNOLOGY EDUCATION

SECONDARY TEACHER CERTIFICATION

The technology education major is designed to prepare 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 education. Graduates may qualify for vocational endorsement (Temporary Vocational Authorization) by completing 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 Industrial Education curriculum. Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in industrial arts, certification code "IX." The certification test covering this field is #38, "Industrial Arts." See page 374.

OFFICE TECHNOLOGY CURRICULUM

The Bachelor of Science degree is designed for individuals preparing for administrative management, executive assistant, legal assistant (paralegal profession), and office automation careers. Individuals who complete this professional curriculum should find many career opportunities open to them.

Students should follow the basic studies guidelines in the catalog under which they entered the University. Students following the new basic studies must include a course in cross cultural or international studies within the basic studies. Please follow general guidelines except for specific requirements as noted below.

Students without appropriate background or prerequisites which are identified for courses in the majors are responsible to take those prerequisites. Transfer students should see the program adviser in their major to determine where transfer credit will be used on the major.

OFFICE TECHNOLOGY/ADMINISTRATIVE MANAGEMENT MAJOR

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.

Area	Sem hours
Symbolics and communication	18-19
Requirements 1 and 2 (page 26)	6-7
ENG 324 Principles of Technical Communication	3
MTH 118-119 Mathematical Analysis for Social Sciences I-II	6
BE 201 Microcomputers for Business Applications	3

Science and technology	9
Requirements 1 and 3 (page 27)	6
PSY 101 General Psychology	3
Social science	12
Requirements 1 and 2 (page 28)	6
ECO 201-202 Principles of Economics I-II	6
Arts and humanities	12
Requirements 1, 2, 3, and 4 (page 29)	12
Physical education and health	2
Physical education activity courses	2

ADMINISTRATIVE MANAGEMENT MAJOR

Major in administrative management	50
Administrative and information management concepts	21
BE 395 Office Administration	3
BE 396 Records Administration	3
BE 495 Office Automation	3
BE 496 Records Administration Using Database	3
MGT 384 Human Resource Management	3
MGT 485 Human Resource Development	3
Restricted electives	3
Choose one course:	
MKT 374 Business to Business Marketing	3
See additional restricted elective list.	
Business foundations	21
BE 100 Contemporary Business	3
ACC 240-241 Principles of Accounting I-II	6
FIN 350 Principles of Finance	3
LAW 293 Legal Environment of Business	3
MKT 360 Principles of Marketing	3
ORI 265 Business Statistics I	3
Information processing	8
BE 123 Word Processing/Keyboarding Applications	2
BE 210 Concepts of Word/Information Processing	3
BE 224 Computer-based Business Mathematics	3

OFFICE TECHNOLOGY/EXECUTIVE ASSISTANT MAJOR

The executive assistant major prepares individuals for administrative support positions. Students receive a solid foundation in office technology skills and applications, business principles, communication skills, and office systems.

Area	Sem hours
Symbolics and communication	14-15
Requirements 1 and 2 (page 26)	5-6
ENG 324 Principles of Technical Communication	3
MTH 118 Mathematical Analysis for Social Sciences I ...	3
BE 201 Microcomputers for Business Applications	3
Science and technology	9
Requirements 1 and 3 (page 27)	6
PSY 101 General Psychology	3
Social science	12
Requirements 1 and 2 (page 28)	6
ECO 201-202 Principles of Economics I-II	6
Arts and humanities	8-12
Requirements 1, 2, 3, and 4 (page 29)	
Physical education, military science, or equivalent (2)	

Executive Assistant major	53 sem hrs
Administrative and information systems	15
BE 395 Office Administration	3
BE 396 Records Administration	3
MGT 386 Organizational Behavior and Theory	3
MGT 402 Business Report Writing	3
BE 422 Office Systems	3
BE 496 Records Administration Using Database	3

Business foundations	18
BE 100 Contemporary Business	3
MGT 202 Business Communications	3
ACC 240-241 Principles of Accounting I-II	6
LAW 293 Legal Environment of Business	3
MKT 360 Principles of Marketing	3
Information processing	17
*BE 123 Word Processing/Keyboarding Applications ...	2
BE 210 Concepts of Word/Information Processing	3
BE 220 Word/Information Processing Operations	3
BE 222 Transcription Applications and Technology	3
BE 224 Computer-based Business Mathematics	3
*BE 325 Shorthand Transcription	3
*Students without appropriate background must take BE	
122 Keyboarding for Office Technology and/or BE	
225 Gregg Shorthand	2-3
Restricted electives	3
CTA 321 Parliamentary Procedure and Meeting	
Management	3
BE 387 Cooperative Education	3
IDT 436 Electronic Publishing Technology	3

OFFICE TECHNOLOGY/LEGAL ASSISTANT (PARALEGAL) MAJOR

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, preparing for trial, and using computer-assisted research tools. Employment opportunities are excellent in law firms, corporations, banks, hospitals, state and federal government, and court systems. This major offers professional training and lays a foundation for a career in the legal field. This program is accredited by the American Bar Association.

Area	Sem hours
Symbolics and communication	14-15
Requirements 1, 2, and 4 (page 26)	8-9
BE 201 Microcomputers for Business Applications	3
ENG 324 Principles of Technical Communication	3
Science and technology	9
See University guidelines (page 27)	
Social science	12
Requirements 1 and 2 (page 28)	6
ECO 201-202 Principles of Economics I-II	6
Arts and humanities	8-12
See University guidelines (page 29)	
Physical education and health	2
Physical education activity courses	2

LEGAL ASSISTANT (PARALEGAL) MAJOR

Major in legal assistant (paralegal)	59
I. Required courses	33
BE 211 Introduction to Paralegalism and Legal	
Terminology	3
BE 220 Word/Information Processing Operations	3
BE 304 Legal Writing, Research, and Analysis I	3
BE 305 Advanced Legal Writing, Research, and	
Analysis II	3
BE 308 Personal Injury Law and Litigation	3
BE 311 Probate, Estates, and Wills	3
BE 313 Family Law	3
CTA 357 Interviewing as Communication	3
BE 411 Civil Litigation, Investigation, and Procedure ...	3

BE 412 Court Documents and Court Rules	3
BE 416 Legal Assistant Internship (Paralegal)	3
2. Restricted electives (minimum)	9
BE 414 Advanced Probate, Estates, and Trusts	3
BE 415 Bankruptcy Law	3
BE 497/498/499 Independent Study	1-3
PLS 301 The American Legal System	3
PLS 341 International Law	3
PLS 456 Criminal Law I	3
RES 210 Real Estate Principles and Practices	3
LAW 293 Legal Environment of Business	3
LAW 393 Law of Business Enterprises	3
LAW 403 Employment Law	3
LAW 455 Real Estate Law	3
Business and information processing core: (all required) ...	17
BE 100 Contemporary Business	3
BE 123 Word Processing/Keyboarding Applications	2
BE 224 Computer-based Business Mathematics	3
ACC 240 Principles of Accounting I	3
BE 395 Office Administration	3
BE 396 Records Administration	3

OFFICE TECHNOLOGY/OFFICE AUTOMATION MAJOR

The major in office automation was created to meet the changing demands of the automated office. The program is designed to prepare individuals for positions in local area network administration, microcomputer and office systems administration, client liaison and training, customer support, and information center positions.

Area	Sem hours
Symbolics and communication	17-18
Requirements 1 and 2 (page 26)	5-6
ENG 324 Principles of Technical Communication	3
MTH 118-119 Mathematical Analysis for Social Sciences I-II	6
BE 201 Microcomputers for Business Applications	3
Science and technology	9-10
See University guidelines (page 27)	
Social science	12
Requirements 1 and 2 (page 28)	6
ECO 201-202 Principles of Economics I-II	6
Arts and humanities	8-12
Requirements 1, 2, 3, and 4 (page 29)	
Physical education and health	2
Physical education activity courses	2

OFFICE AUTOMATION MAJOR

Major in office automation	65
Systems and automation concepts	24
BE 310 Word/Information Processing Administration	3
BE 395 Office Administration	3
BE 396 Records Administration	3
BE 422 Office Systems	3
BE 495 Office Automation	3
BE 496 Records Administration Using Database	3
BE 387 Cooperative Education	3
Choice of one:	3
BE 487 Cooperative Education; IDT 305 Communication Transmission Systems, IDT 436 Electronic Publishing Technology	
Business foundations	21
BE 100 Contemporary Business	3
ACC 240-241 Principles of Accounting I-II	6
ACC 342 Managerial Cost Accounting	3

LAW 293 Legal Environment of Business	3
MKT 360 Principles of Marketing	3
ORI 265 Business Statistics I	3
Information processing	12
BE 123 Word Processing/Keyboarding Applications	2
BE 210 Concepts of Word/Information Processing	3
BE 220 Word/Information Processing Operations	3
BE 224 Computer-based Business Mathematics	3

OFFICE TECHNOLOGY RESTRICTED ELECTIVES

Students should select restricted electives in consultation with their office technology program advisers.

BE 122 Keyboarding for Office Technology	2
BE 205 Women in Business	3
BE 210 Concepts of Word/Information Processing	3
BE 211 Introduction to Paralegalism and Legal Terminology	3
BE 220 Word/Information Processing Operations	3
BE 222 Transcription Applications and Technology	3
BE 225 Gregg Shorthand	3
BE 310 Word/Information Processing Administration	3
BE 325 Shorthand Transcription	3
BE 387 Cooperative Education in Business Education	3
BE 412 Court Documents and Court Rules	3
BE 422 Office Systems	3
BE 495 Office Automation	3
BE 496 Records Administration Using Database	3
BE 487 Cooperative Education	3
BE 497/498/499 Independent Study	1/2/3

MINORS OFFERED IN THE BUSINESS AND INDUSTRIAL EDUCATION DEPARTMENT

TECHNOLOGY EDUCATION

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 industrial arts, certification code "IX." The certification test covering this field is #38, "Industrial Arts." 17 hours for elementary program; 16 hours for special education programs. See page 376.

OFFICE TECHNOLOGY

	Sem hours
Minor in office technology	21
Required courses	12
BE 201 Microcomputers for Business Applications	3
*BE 220 Word/Information Processing Operations	3
BE 224 Computer-based Business Mathematics	3
BE 395 Office Administration	3
*Students must take BE 123 Word Processing/Keyboarding Applications if they do not have appropriate background.	
Choose one option	9
Option I Shorthand:	
BE 225 Gregg Shorthand	3
BE 325 Shorthand Transcription	3
BE 222 Transcription Applications and Technology	3
Option II Information Processing:	
BE 210 Concepts of Word/Information Processing	3
BE 222 Transcription Applications and Technology	3
BE 396 Records Administration	3

BUSINESS EDUCATION COURSES

- BE 100 Contemporary Business.** 3 hrs
The American business enterprise. Contemporary problems and future challenges. Career decision-making in terms of business careers. Open to all freshmen, sophomores and non-business upperclassmen.
- BE 119 Keyboarding for Computers.** 2 hrs
Basic touch keyboarding skills for persons who plan to work with modern information processors, all of which utilize a basic alpha-numeric keyboard and/or a 10-key numeric pad. Lab fee required. For non-majors.
- BE 122 Keyboarding for Office Technology.** 2 hrs
Basic techniques and manipulative skills for efficient machine operation. Speed and control emphasized. Introduction to applications through centering, tabulating, and structuring keyboarded material for various purposes. Lab fee required.
- BE 123 Word Processing/Keyboarding Applications.** 2 hrs
Continued skill development. Application of skill to keyboarding special communication forms, letters, manuscripts and tabulated reports. Improved form and punctuation. Lab fee required.
Prereq: BE 119 or BE 122 or one year of high school word processing or keyboarding. No credit is given to students who have received credit for two years of high school word processing.
- BE 200 Principles of Marketing and Business Education.** 3 hrs
An introduction to marketing and office education. The scope and importance of vocational education with emphasis on marketing and office education. Pre-student teaching experience will be initiated in conjunction with this course.
- BE 201 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. Lab fee required.
- BE 205 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.
- BE 210 Concepts of Word/Information Processing.** 3 hrs
The concepts and functions of word processing equipment, procedures, and career opportunities. Applications and the organization of word processing services; the extension of word processing through the use of peripherals.
- BE 211 Introduction to Paralegallism and Legal Terminology.** 3 hrs
An overview of the nature of the legal assistant (paralegal) program, with a look at the roles, opportunities, responsibilities and problems encountered. The student is introduced to areas of the law in which the legal assistant may work. Ethical considerations are addressed and legal terminology will be introduced and emphasized. Must be completed in the first 12 hours of the major.
- BE 220 Word/Information Processing Operations.** 3 hrs
Advanced document applications including merge and list processing, graphics, math operations, and database integration. Keyboarding speed and accuracy is also included, as well as refinement of proofreading and editing skills. Lab fee required.
Prereq: BE 123 or equivalent and BE 201.
- BE 222 Transcription Applications and Technology.** 3 hrs
Using automated office equipment to produce mailable office communications from dictated and other input. Building language arts, keyboarding and word processing skills into transcription skills required for word processing employment. Lab fee required.
Prereq: BE 220.
- BE 224 Computer-based Business Mathematics.** 3 hrs
Application of computer-based tools and procedures to the solution of mathematical problems encountered in the business office. Lab fee required.
Prereq: BE 201 or department permission.
- BE 225 Gregg Shorthand.** 3 hrs
An introduction to the alphabet, brief forms and theory of Gregg shorthand. No credit given to students who previously have completed a course in Gregg shorthand theory.
Prereq: BE 123 or equivalent.
- BE 250 Personal Finance.** 3 hrs
The management of financial resources to satisfy personal or family goals. Budgeting, consumer credit, investments, insurance, real estate, wills and trusts and income taxes. Students learn to make decisions within the context of a realistic consumer-oriented environment. Open to all students.
- BE 277/278/279 Current Topics in Business Education.** 1/2/3 hrs
These courses are offered on an experimental basis or for some special need.
Prereq: Department permission.
- BE 304 Legal Writing, Research, and Analysis I.** 3 hrs
This course is designed to develop basic skills in analyzing legal problems, researching those problems, and searching for legal authority. Emphasis is given to preparing and writing legal memoranda, and to good legal writing. The student will also be introduced to computer research.
Prereq: ENG 121.
- BE 305 Advanced Legal Writing, Research, and Analysis II.** 3 hrs
This course will build upon skills acquired in Legal Writing and Analysis I. The student will learn how to prepare an appellate brief and how to do such legal writing as law office letters and legal instruments. Special emphasis will be given to drafting simple contracts and a study of commonly used contract forms.
Prereq: BE 304.
- BE 308 Personal Injury Law and Litigation.** 3 hrs
A study of the law and litigation techniques in personal injury cases. Students will become acquainted with such torts as assault, battery, false imprisonment, defamation and strict product liability. Study will be directed particularly to the fields of negligence and medical malpractice.
- BE 310 Word/Information Processing Administration.** 3 hrs
Techniques to utilize staff and equipment most effectively, record keeping, work flow, evaluating personnel, establishing policies and standards of operation as applied to word processing.
Prereq: BE 201, BE 210, BE 220.
- BE 311 Probate, Estates, and Wills.** 3 hrs
The student will study the Probate Code and probate procedures, descendants' estates, death and inheritance taxes, and other related problems. Special attention will be given to wills and how wills are drafted.
- BE 313 Family Law.** 3 hrs
A basic introduction to the areas of domestic law, including such subjects as divorce, adoption, abortion, parental rights, children's rights, child abuse, neglect and guardianship. The course will be

directed toward the legal assistant's role in preparing course documents and other tasks of the paralegal in this area.

BE 325 Shorthand Transcription. 3 hrs
Development of transcription skills. Application of shorthand, keyboarding, and English skills to produce business communications neatly and accurately at an acceptable rate.

Prereq: BE 225, or a measured speed of 80 wpm or more in one of the shorthand systems and a keyboarding speed of 50 net words per minute.

BE 344 Administration of Computer Systems. 3 hrs
To provide an introduction to the principles and practices required to operate a computer operating system in the educational or small/medium institution environment. The course will deal with both the operating system in micro- and mini-computer forms as a program and as a complete system. The course will emphasize the daily tasks a small/medium system administrator must accomplish.
Prereq: BE 201, BE 224, BE 396, ENG 324.

BE 364 Methods of Teaching General Business Subjects. 2 hrs
Methods in teaching general business, business law and typewriting with application to classroom situations. Objectives, lesson planning, techniques of teaching and sources of materials.
Prereq: RDG 311 and EDP 322. A 2.5 GPA in all business education subjects taken at EMU is required before enrollment, with no academic probation. To be taken semester before student teaching. Admission to the teacher education program.

BE 365 Methods of Teaching Office Education. 2 hrs
Methods of teaching shorthand, office block, bookkeeping, accounting, typewriting, word processing and cooperative education classes. Objectives, lesson planning, techniques of teaching and sources of materials.
Prereq: EDP 322 and BE 364. A 2.5 GPA in all business education subjects taken at EMU is required before enrollment, with no academic probation.

BE 366 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.
Prereq: EDP 322. A 2.5 GPA in all business education subjects taken at EMU is required before enrollment, with no academic probation.

BE 367 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. Examines current trends in marketing education curriculum.

BE 368 Management of Marketing Education Programs. 2 hrs
Examines the marketing educator roles of DECA adviser, public relations specialist, career counselor, program administrator/supervisor, and professional educator.

BE 377/378/379 Current Topics in Business Education. 1/2/3 hrs
These courses are offered on an experimental basis or for some special need.
Prereq: Department permission.

BE 387 Cooperative Education in Business Education. 3 hrs
Business education majors will be placed on a job that relates to their primary area of study for one semester. During this period regular employees' benefits may be received. Graded credit/no credit. Credit applicable to the major in business education only.

BE 395 Office Administration. 3 hrs
Office problems from the point of view of the administrator. Office organization, physical facilities, nature of office work, personnel relations, and control of office output.
Prereq: BE 201.

BE 396 Records Administration. 3 hrs
Management methodology in records, control, costs, protection, retention, retrieval and disposal. Records administration as a management tool.
Prereq: BE 201.

Note: Students are expected to have taken ENG 121 and BE 211 before taking the following legal assisting classes: BE 411, BE 412, BE 414, BE 415, BE 416.

BE 411 Civil Litigation, Investigation, and Procedure. 3 hrs
A comprehensive survey of civil litigation and procedure. The student will be introduced to every phase of litigation starting with the filing of the lawsuit through the appellate process. The student will be expected to draw up a complaint and a number of pleadings, as well as drafting interrogatories and digesting depositions. Legal investigation will be addressed.

BE 412 Court Documents and Court Rules. 3 hrs
Study will be made of Michigan Court Rules and court forms commonly used in the Michigan Court system. The student will learn the practical aspects of preparing court forms for a variety of legal actions. Federal Court Rules will also be discussed.

BE 414 Advanced Probate, Estates, and Trusts. 3 hrs
This course will build upon the material covered in BE 311 Probate, Estates, and Wills. Subject matter will include the Probate Code and probate procedure, federal and state inheritance taxes. Special emphasis will be given to trusts, purposes for them, and the drafting of trusts.
Prereq: BE 311.

BE 415 Bankruptcy Law. 3 hrs
A study will be made of the Federal Bankruptcy Code, with emphasis on Chapters 7, 11, and 13. Students will learn how to prepare the necessary papers for filing for bankruptcy.

BE 416 Legal Assistant Internship. 3 to 6 hrs
Placement for students will be arranged with law firms, courts, or corporations, etc., for on-the-job training as a legal assistant. Each student will have a supervisor on the job and a faculty supervisor. The latter will consult with students individually or in a group meeting. A written report is required at completion of the internship. Where appropriate criteria are met, Cooperative Education can be substituted for an Internship.
Prereq: Permission of Instructor, BE 304, BE 305, BE 411, BE 412.

BE 422 Office Systems. 3 hrs
Integration of automated office subsystems such as word processing, graphics, transcription, calendaring, scheduling, accounting, and records management into the office setting. Lab fee required.
Prereq: BE 220, BE 224.

BE 461 Projects and Simulations in Marketing Education. 2 hrs
Project and simulation methods in marketing education are explored with a major focus on the organization and coordination of the school store. Implementation steps for the entrepreneurship simulation are developed. Small scale simulations and projects are also studied as well as procedures for developing simulations and projects.

BE 477/478/479 Current Topics in Business Education. 1/2/3 hrs
These courses are offered on an experimental basis or for some special need.

Prereq: Department permission.

BE 487 Cooperative Education in Business Education. 3 hrs
Business education majors will be placed on a job that relates to their primary area of study for one semester. During this period regular employees' benefits may be received. Graded credit/no credit. Credit applicable to the major in business education only.

Prereq: BE 387.

BE 495 Office Automation. 3 hrs

Overview of office automation and its relationship to information, information technology, and the application of information technology to the office. Significant new technologies and systems, how to apply these effectively, how to organize for office automation and how to implement office automation. Lab fee required.

Prereq: BE 201, BE 210, BE 220, BE 224, BE 395.

BE 496 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. Extensive applications using database software. Lab fee required.

Prereq: BE 201 and BE 396.

BE 497/498/499 Independent Study. 1/2/3 hrs

Students pursue some special area of study or experimentation under the direction of a designated faculty member from the department.

Prereq: Department permission.

INDUSTRIAL EDUCATION COURSES

IE 103 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. Considers human and environmental factors in design solutions. Illustration and description of structures, shapes, and forms used in those solutions. Lab fee required.

Pre- or coreq: FA 122.

IE 105 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 eotechnic, paleotechnic, neotechnic, and atomic periods of technology.

IE 106 Processing Technology. 3 hrs

An introduction to tools, materials, and process and their application to discrete and integrated systems of technology. Interrelationships between humans and machines will be studied to develop the student's ability to transfer knowledge of processes from one environment to the other. Lab fee required.

Prereq: Course work in high school and/or college chemistry or physics recommended.

IE 114 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. Lab fee required.

IE 118 Energy Technology. 3 hrs

Forms, sources and uses of energy for application to technology. Description of past, present, and future systems that transform,

transmit, store, control, and utilize energy. Considers energy conservation issues. Laboratory experiences focus on experimenting with energy conversions and measurement. Lab fee required.

IE 152 Arts and Crafts. 3 hrs

Experience in design and use of a wide variety of craft materials. Avocational and recreational use of craft media.

IE 246 Safety in Technology and Industrial-Vocational Education. 3 hrs

Safety, health, and environmental factors and their implications for technology and industrial-vocational educators, students, laboratories, and instructional programs.

IE 250 Foundations of Technology and Industrial-Vocational Education. 3 hrs

An introduction to the foundations and implementation of technology education and industrial-vocational education. Past, present, and future developments in the profession will be studied through lectures, discussion, seminars, micro-teaching, school visitations, and pre-student teaching activities.

IE 252 Prevocational/Vocational Special Needs Program. 4 hrs

An examination of the role of special education personnel in providing career awareness, prevocational skill development, and vocational education support activities. Laboratory activities focus on the integration of these concepts on a broad continuum from elementary to secondary school programs. Lectures and field experiences will be used to illustrate a variety of programs and services. Lab fee required.

IE 253 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. Lab fee required.

IE 277/278/279 Current Topics in Industrial Education. 1/2/3 hrs

These courses are offered on an experimental basis or for some special need.

Prereq: Department permission.

IE 350 Curriculum in Technology and Industrial-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 evaluating technology and industrial-vocational education students and programs.

Prereq: IE 250.

IE 354 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: IE 253. Lab fee required.

IE 355 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: IE 354.

IE 358 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. Lecture: two hours per week. Laboratory: two hours per week. Lab fee required.

Prereq: Occupational Therapy major or department permission.

IE 377/378/379 Current Topics in Industrial Education. 1/2/3 hrs
These courses are offered on an experimental basis or for some special need.

Prereq: Department permission.

IE 387 Cooperative Education in Industrial Education. 3 hrs
Industrial 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. Graded credit/no credit. Credit applicable to the major in industrial education only.

IE 450 Solving Technological Problems. 3 hrs
A capstone experience in the technology component of the technology teacher education curriculum. Student applies problem solving techniques to arrive at the solution to a technological problem.

Prereq: IE 103, IE 106, IE 114, IE 118, IE 350; senior standing and department approval.

IE 452 Principles of Vocational-Technical Education. 3 hrs
Concepts and principles of vocational-technical education; current issues in vocational education in Michigan.

Prereq: IE 350 or department permission.

IE 460 Practicum in Technology and Industrial-Vocational Education. 2 hrs

Direct involvement in solving teaching/learning problems in technology and industrial-vocational education. Emphasis upon developing appropriate strategies for managing the classroom and laboratory environment. Concurrent with IE 461 and student teaching.

Prereq: IE 350.

IE 461 The Teaching of Technology and Industrial-Vocational Education. 2 hrs

Examines the relationship between principles of effective learning and various methods of instruction in technology and industrial-vocational education. Emphasis upon the preparation of lessons and units of study and the evaluation of instruction. Taken concurrently with IE 460 and student teaching.

Prereq: IE 350.

IE 477/478/479 Current Topics in Industrial Education. 1/2/3 hrs
These courses are offered on an experimental basis or for some special need.

Prereq: Department permission.

IE 487 Cooperative Education in Industrial Education. 3 hrs
The second in a two-course sequence for industrial 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 the major in industrial education only. Graded credit/no credit.

Prereq: IE 387.

IE 497/498/499 Directed 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 adviser-chair.

INDUSTRIAL TECHNOLOGY

Everett N. Israel
Department Head
118 Sill Hall
487-2040

Professors: Jerald A. Griess, Everett N. Israel, John J. Jellema, Max E. Kanagy, Walter W. Tucker, John A. Weeks

Associate Professors: Daniel J. Fields, Su-Chen (Jonathon) Lin, Erik Lokensgard, Thomas G. Soyster

Assistant Professors: Alfred C. Roth, Fuh-Cwo (Tony) Shiu, Pamela K. Speelman, Tracy S. Tillman

Instructors: Larry Darling, Peter J. Loughney, Philip Rufe, James J. Stein

The Industrial Technology Department offers two curricula: construction management with one major and a minor, and manufacturing with two majors and a minor. In addition, two pre-professional programs are shared with the College of Arts and Sciences—pre-architecture and pre-engineering. Advising for these programs is provided by this department.

Degree: Bachelor of Science

Programs of Study

Construction curriculum

Major:

Construction management

Minor:

Construction management

Manufacturing curriculum

Majors:

Computer-aided design

Manufacturing

Concentrations:

Computer-aided manufacturing

Manufacturing technology

Plastics

Manufacturing (transfer)

Pre-professional programs:

Pre-engineering

Pre-architecture

Advising procedure is posted outside the department office. It is recommended that majors see their department adviser each semester to review their program. Majors are responsible for meeting the requirements for graduation. A new student in the department not assigned to an adviser should call the department office (487-2040) for an appointment.

Advisers:

Computer-aided design: Jerald Griess, Tony Shiu, Pamela Speelman

Computer-aided manufacturing: Max Kanagy, Jonathon Lin

Construction management: Larry Darling, Peter Loughney, James Stein, John Weeks

Manufacturing (transfer): John Jellema

Manufacturing technology: Alfred Roth, Tracy Tillman, Walter Tucker

Plastics: Erik Lokensgard

Pre-engineering: Tracy Tillman

Pre-architecture: Peter Loughney

Graduate study leads to the Master of Science degree in industrial technology. Available areas of concentration are manufacturing, quality, and construction management. These degrees are described in the Graduate Catalog.

MAJORS OFFERED IN THE INDUSTRIAL TECHNOLOGY DEPARTMENT

CONSTRUCTION CURRICULUM

The construction curriculum includes course work in basic studies with specified science and mathematics courses, recommended business course selectives (a list of recommended course electives that require the prior approval of a construction management adviser), and technical courses. A minor is not required.

CONSTRUCTION MANAGEMENT MAJOR

The construction management major is designed to prepare men and women for middle- and upper-level management in general 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.

Area	Sem hours
Symbolics and communication	19
CTA 121 Fundamentals of Speech	2
ENG 121 English Composition	3
ENG 324 Principles of Technical Communication	3
IT 105 Computer Applications for Industry	3
MTH 107 Plane Trigonometry	2
MTH 118-119 Mathematical Analysis for Social Sciences I-II	6
Science and technology	11
CHM 119 Fundamentals of Chemistry	4
PHY 221 Mechanics, Sound, and Heat	4
PSY 101 General Psychology	3
Social science	12
PLS 112 American Government	3
A course in history	3
ECO 201-202 Principles of Economics I-II	6
Arts and humanities	11-12
A course in philosophy or religion	3
A course in art, dance, music, or theatre arts	2-3
A course in literature	3
A course in cross-cultural or international studies	3
Major in construction management	67
IT 125 Introduction to Construction	2
IT 201 Construction Systems	3
IT 206 Surveying	3
IT 213 Construction Safety	3
IT 228 Construction Drawing	3
IT 229 Analysis of Commercial Prints	3
IT 301 Planning and Scheduling	3
IT 302 Contract Documents, Regulations, and Specifications	3
IT 303 Electrical, Mechanical, and Equipment Systems	3
IT 387 Cooperative Education in Industrial Technology	3
IT 401 Construction Estimating and Bidding	3
IT 402 Construction Materials	3
IT 403 Production Control	2
IT 406 Construction Law	2
IT 450 Fundamentals of Construction Project Management	3
GLG 160 Physical Geology	4
ACC 130 Accounting for Non-Business Majors	3
LAW 293 Legal Environment of Business	3
MGT 384 Human Resource Management	3
Construction management restricted elective	3
(Adviser approval required)	
Math/science restricted elective	3

(Adviser approval required)	
Business restricted elective	6
(Adviser approval required)	
FIN 350 Principles of Finance	3
FIN 352 Financial Management for Entrepreneurs	3
FIN 358 Analysis of Financial Statements	3
LAW 393 Law of Business Enterprises	3
LAW 403 Employment Law	3
MGT 202 Business Communications	3
MGT 360 Supervisory Theory and Practice	3
MGT 386 Organizational Behavior and Theory	3
MGT 484 Management-Union Relations	3
MKT 360 Principles of Marketing	3
ORI 215 End-User Computing	3
ORI 265 Business Statistics I	3

Physical education and health	2
Physical education activity courses	2
(Military science courses may be substituted for physical education.)	
Free electives	1-2
Total	124

MANUFACTURING CURRICULUM

The manufacturing curriculum includes course work in basic studies with specified science and mathematics course, manufacturing core courses, and major courses in computer-aided design (CAD), computer-aided manufacturing (CAM), manufacturing, and plastics technology. A minor is not required.

COMPUTER-AIDED DESIGN MAJOR

Men and women majoring in computer-aided design (CAD) are prepared for a wide range of computer related job opportunities. Graduates are employed in industry as CAD engineers, software development engineers, applications programmers, technical support engineers, systems managers, training consultants, entry-level designers, as well as in equipment sales and support. The applications of computer graphics are becoming more diverse and are found in many areas such as architecture, medicine, mapping, facilities management, and government.

The CAD major includes a core of manufacturing courses designed to provide a well-rounded graduate with hands-on experiences. Engineering graphics courses are included to provide an understanding of the process of producing models on the computer. In the CAD courses the students gain knowledge of graphics programming concepts involving interactive 2-D and 3-D wireframe drawing, hidden surface removal, shaded surfaces, business graphics, animation, interfaces, menu and icon development, database management, and microcomputer applications.

Area	Sem hours
Symbolics and communication	19
CTA 121 Fundamentals of Speech	2
ENG 121 English Composition	3
ENG 324 Principles of Technical Communication	3
IT 105 Computer Applications for Industry	3
MTH 107 Plane Trigonometry	2
MTH 118-119 Mathematical Analysis for Social Sciences I-II	6
Science and technology	15
CHM 119 Fundamentals of Chemistry	4
PHY 221 Mechanics, Sound, and Heat	4
PHY 222 Electricity and Light	4
PSY 101 General Psychology	3
Social science	12
PLS 112 American Government	3
A course in history	3
ECO 201-202 Principles of Economics I-II	6

Arts and humanities	11-12
A course in philosophy or religion	3
A course in art, dance, music, or theatre arts	2-3
A course in literature	3
A course in cross-cultural or international studies	3
Major in CAD	60
CSC 137 Introduction to FORTRAN Programming	3
CSC 279 Special Topics: Programming in "C"	3
IT 103 Introduction to Automation	3
IT 106 Industrial Computer Applications for Manufacturing	3
IT 122 Engineering Graphics I	3
IT 123-124 Manufacturing Processes and Methods I-II	6
IT 203 Industrial Operations	3
IT 223 Engineering Graphics II	3
IT 231 Industrial Computer Graphics	3
IT 316 Manufacturing Tooling	3
IT 324 Industrial Drawing	3
IT 325 Applied Mechanics, Kinematics, and Design	3
IT 387 Cooperative Education in Industrial Technology	3
IT 425 Advanced Manufacturing Methods	3
IT 431 Interactive Industrial Computer Graphics	3
IT 432 3-D Computer-Aided Design	3
IT 433 Advanced Computer-Aided Design	3
IT 490 Manufacturing Technology Laboratory	3
Elective (must be approved by adviser)	3
Physical education and health	2
Physical education activity courses	2
(Military science courses may be substituted for physical education.)	
Free electives	4-5
Total	124

MANUFACTURING MAJOR

The manufacturing major consists of four concentrations: computer-aided manufacturing, manufacturing technology, plastics, and manufacturing (transfer). Majors must complete the Basic Studies requirements outlined below plus requirements in one of the concentrations. Manufacturing's rapid evolution to dependence on developments in the research laboratory rather than the shop floor has created a void in the spectrum of available personnel. The increasingly theoretical preparation of the engineer, mandated by the advancing complexity of the technology, is not generally appropriate for production supervision and middle management.

The lack of appropriately-trained supervisory personnel has become even more acute since the beginning of the computer revolution and has recently increased, fueled by the availability of low-cost computer hardware and increasing demands for higher productivity.

The computer-aided manufacturing concentration combines instructional experiences in robotics, control and power systems, and numerical control. The concentration is designed to prepare individuals for supervisory and management positions in automated plants and factories for both today and in the future.

Area	Sem hours
Symbolics and communication	19
CTA 121 Fundamentals of Speech	2
ENG 121 English Composition	3
ENG 324 Principles of Technical Communication	3
IT 105 Computer Applications for Industry	3
MTH 107 Plane Trigonometry	2
MTH 118-119 Mathematical Analysis for Social Sciences I-II	6
Science and technology	15
CHM 121 and 122 General Chemistry I	4
PHY 221 Mechanics, Sound, and Heat	4
PHY 222 Electricity and Light	4

PSY 101 General Psychology	3
Social science	12
PLS 112 American Government	3
A course in history	3
ECO 201-202 Principles of Economics I-II	6
Arts and humanities	11-12
A course in philosophy or religion	3
A course in art, dance, music, or theatre arts	2-3
A course in literature	3
A course in cross-cultural or international studies	3
Physical education and health	2
Physical education activity courses	2
(Military science courses may be substituted for physical education.)	
Total	59-60

COMPUTER-AIDED MANUFACTURING CONCENTRATION

Major in CAM	60
IT 103 Introduction to Automation	3
IT 106 Industrial Computer Applications for Manufacturing	3
IT 122 Engineering Graphics I	3
IT 123-124 Manufacturing Processes and Methods I-II	6
IT 200 Industrial Electricity and Controls I	3
IT 203 Industrial Operation	3
IT 218 Industrial Electricity and Controls II	3
IT 223 Engineering Graphics II	3
IT 316 Manufacturing Tooling	3
IT 318 Fluid Power	3
IT 324 Industrial Drawing	3
IT 361 Computer Numerical Control	3
IT 387 Cooperative Education in Industrial Technology	3
IT 420 Industrial Quality Control	3
IT 425 Advanced Manufacturing Methods	3
IT 426 Manufacturing Communication Systems	3
IT 485 Flexible Manufacturing Systems	3
Select two of three courses	6
ACC 130 Accounting for Non-Business Majors	3
IT 427 Advanced Industrial Control	3
IT 461 CAD/CAM NC Programming	3
Free electives	3-4
Total	124

MANUFACTURING TECHNOLOGY CONCENTRATION

The manufacturing technology concentration prepares individuals for employment as professionals in industrial production. It is clearly associated with the field of engineering involving work in planning, organizing, improving, and controlling the production process. The concentration provides technical knowledge, skills, and attitudes necessary for working closely with other people in solving technical, managerial, and production problems.

Major in manufacturing technology	60
IT 103 Introduction to Automation	3
IT 106 Industrial Computer Applications for Manufacturing	3
IT 122 Engineering Graphics I	3
IT 123-124 Manufacturing Processes and Methods I-II	6
IT 200 Industrial Electricity and Controls I	3
IT 203 Industrial Operation	3
IT 218 Industrial Electricity and Controls II	3
IT 223 Engineering Graphics II	3
IT 316 Manufacturing Tooling	3
IT 318 Fluid Power	3
IT 325 Applied Mechanics, Kinematics, and Design	3
IT 361 Computer Numerical Control	3

IT 387 Cooperative Education in Industrial Technology	3
IT 420 Industrial Quality Control	3
IT 421 Manufacturing Product and Process Analysis	3
IT 425 Advanced Manufacturing Methods	3
IT 490 Manufacturing Technology Laboratory	3
ACC 130 Accounting for Non-Business Majors	3
Restricted elective	3
Free electives	3-4
Total	124

PLASTICS CONCENTRATION

The plastics concentration is designed to prepare men and women for a wide range of technical positions in the plastics processing industry. Graduates have a general understanding of the plastics industry, polymer materials, common plastics processes, and finishing and decorating techniques. Graduates are employed as cost estimators, sales and marketing representatives, production schedulers, mold designers, production supervisors, and quality control supervisors as well as in their related technical specialties.

Major in plastics	60
IT 103 Introduction to Automation	3
IT 106 Industrial Computer Applications for Manufacturing	3
IT 122 Engineering Graphics I	3
IT 123-124 Manufacturing Processes and Methods I-II	6
IT 200 Industrial Electricity and Controls I	3
IT 202 Plastics	3
IT 203 Industrial Operation	3
IT 218 Industrial Electricity and Controls II	3
IT 223 Engineering Graphics II	3
IT 306 Plastic Processing	3
IT 318 Fluid Power	3
IT 387 Cooperative Education in Industrial Technology	3
IT 409 Plastics Mold Design and Construction	3
IT 410 Plastics Product Design	3
IT 411 Plastics Fabricating and Decorating	3
IT 420 Industrial Quality Control	3
CHM 270-271 Organic Chemistry with lab	5
IDT 310 Polymers for Engineers and Technologists	3
Restricted elective	1
Free electives	3-4
Total	124

MANUFACTURING (TRANSFER) CONCENTRATION

The manufacturing transfer concentration is designed to serve those individuals who wish to continue their manufacturing education and seek a bachelor's degree. It is especially designed to accommodate the needs of students transferring from community colleges with a technical associate's degree. The concentration includes coursework in basic studies, some specified science and mathematics courses, and additional adviser-approved technical coursework at the upper level.

Major in manufacturing (transfer)	55
Restricted electives at the 100-400 level	6
Restricted EMU IT electives at the 300-400 level	15
Maximum of 34 transfer hours of technical courses	34
Note: 12 hours from above must be from approved technical management courses	
Free electives	9-10
Total	124

MINORS OFFERED IN THE INDUSTRIAL TECHNOLOGY DEPARTMENT

These minors are designed to provide majors in industry, business, and science with an introduction to technical applica-

tions. Employment opportunities for persons with these majors often are enhanced with technical courses.

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 Department of Industrial Technology. A maximum of six semester hours may be transferred from outside the department.

CONSTRUCTION MANAGEMENT

	Sem hours
Minor in construction management	21
1. Required courses	8
IT 125 Introduction to Construction	2
IT 201 Construction Systems	3
IT 228 Construction Drawing	3
2. Restricted electives	13
IT 229 Analysis of Commercial Prints	3
IT 301 Planning and Scheduling	3
IT 302 Contract Documents, Regulations, and Specifications	3
IT 401 Construction Estimating and Bidding	3
IT 402 Construction Materials	3

MANUFACTURING

	Sem hours
Minor in manufacturing	21
1. Required courses	6
IT 103 Introduction to Automation	3
IT 203 Industrial Operation	3
2. Restricted electives	15
Select an additional 15 hours from the following courses:	
*IT 105 Computer Applications for Industry	3
IT 106 Industrial Computer Applications for Manufacturing	3
IT 122 Engineering Graphics I	3
IT 123-124 Manufacturing Processes and Methods I-II	6
IT 200 Industrial Electricity and Controls I	3
IT 202 Plastics	3
IT 218 Industrial Electricity and Controls II	3
IT 223 Engineering Graphics II	3
IT 230 Introduction to Computer Graphic Systems	3
IT 231 Industrial Computer Graphics	3
IT 318 Fluid Power	3
IT 324 Industrial Drawing	3
*Not open to students who have completed the computer literacy requirement of basic studies.	

PRE-PROFESSIONAL PROGRAMS IN INDUSTRIAL TECHNOLOGY

The Department of Industrial Technology is responsible for coordinating and advising students in two of the University's pre-professional offerings: pre-architecture and pre-engineering. 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 Eastern Michigan University to other universities.

PRE-ENGINEERING PROGRAM

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 they plan to transfer to for specific requirements. Courses taken may apply to other majors at Eastern Michigan University if the student chooses to remain on campus.

	Sem hours
1. Required courses	35
ENG 121 English Composition	3
MTH 120-121 Calculus I-II	8
MTH 122 Elementary Linear Algebra	3
MTH 223 Multivariable Calculus	4
CHM 121-122 General Chemistry I with lab	4
CHM 241-242 Materials Science with lab	4
PHY 223 Mechanics, Sound, and Heat	5
PHY 224 Electricity and Light.....	5
One literature course	3
2. Recommended courses	22
CSC 137 Introduction to FORTRAN Programming or CSC 237 Computer Programming and Numeric Methods	3
CTA 121 Fundamentals of Speech	3
ECO 201-202 Principles of Economics I-II	6
ENG 225 Intermediate English Composition	3
Second literature course	3
One humanities course	3
3. Optional courses	3
IT 103 Introduction to Automation	3
IT 122 Engineering Graphics I.....	3
IT 223 Engineering Graphics II	3

PRE-ARCHITECTURE PROGRAM

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 they plan to transfer to for specific requirements. Courses taken may apply to other majors at Eastern Michigan University if the student chooses to remain on this campus.

	Sem hours
1. Required courses	57
ENG 121 English Composition	3
CTA 121 Fundamentals of Speech	2
MTH 120-121 Calculus I-II	8
CSC 137 Introduction to FORTRAN Programming	3
CHM 119 Fundamentals of Chemistry	4
PHY 223 Mechanics, Sound, and Heat	5
PHY 224 Electricity and Light.....	5
PLS 112 American Government	3
HIS 123 The United States to 1877	3
ECO 201-202 Principles of Economics I-II	6
PHI 130 Introduction to Logic or approved alternative	3
FA 123 Drawing I, dance, music, or theatre arts course	3
FA 231 Three-Dimensional Design	3
Two literature courses	6
2. Recommended course (course may not transfer)	2
IT 125 Introduction to Construction	2

INDUSTRIAL TECHNOLOGY COURSES

IT 101 Introduction to Industrial Drawing. 3 hrs
An introductory mechanical drawing course emphasizing lettering, measuring, geometric construction, sketching, equipment usage, pictorials, orthographic projection, and dimensioning. This course is intended for students without previous drafting experience. Lecture and laboratory course. This course does not count towards an IT major.

IT 103 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.

IT 105 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.

IT 106 Industrial Computer Applications for Manufacturing. 3 hrs
This course presents advanced DOS commands and concepts appropriate for microcomputers configured for CAD/CAM and other similar industrial applications. Lecture and laboratory course.
Prereq: A course in computer literacy.

IT 122 Engineering Graphics I. 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.
Prereq: IT 101 or one year of high school drafting.

IT 123 Manufacturing Processes and Methods I. 3 hrs
An introduction and survey of manufacturing processes and materials. Lectures, 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.

IT 124 Manufacturing Processes and Methods II. 3 hrs
An introduction and survey of machines, tools, processes, and materials of industry. Includes conventional and non-conventional machining, theory of metal removal, cutting tool geometry and materials, fixturing, and measuring devices. Lecture and laboratory course.
Prereq: IT 123 and MTH 107.

IT 125 Introduction to Construction. 2 hrs
Developing, planning, and scheduling of construction projects. Site development, material usage, specifications, estimating, and managing cost control are included.

IT 200 Industrial Electricity and Controls I. 3 hrs
The application of fundamental concepts and principles of electricity. Topics include direct and alternating current, resistance, reactance, basic electrical machines, and controls. The use of meters and test equipment is emphasized. Lecture and laboratory course.
Prereq: One and one-half years of high school algebra and trigonometry.

IT 201 Construction Systems. 3 hrs
Structural Systems, associated non-structural components, and considerations appropriate to mechanical, electrical, plumbing, and support equipment. Lecture and laboratory course.
Prereq: IT 125 and IT 228.

IT 202 Plastics. 3 hrs
A study of the plastics industry: material properties and identification, processing techniques, and application of design to product manufacture. Lecture and laboratory course.
Prereq: IT 123.

IT 203 Industrial Operation. 3 hrs
A survey course in the practices of manufacturing organizations. Units include careers, regulatory agencies, facilities management, group technology, problem solving, and quality decision-making.
Prereq: IT 123.

IT 206 Surveying. 3 hrs
The fundamental use of the transit and level. Linear measurement, angle measurements, extending straight lines, differential and

profile leveling, a simple transverse survey, and the keeping of accurate notes. Lecture and laboratory course.

Prereq: MTH 107.

IT 213 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 MIOSHA construction industry standards.

IT 215 Machine Tool Metalworking. 3 hrs
Machine tools and metalworking processes including turning, drilling, shaping, milling, and grinding. Principles of tooling, precision measurement, identification of metals. Lecture and laboratory course.

IT 218 Industrial Electricity and Controls II. 3 hrs
The student of electrical principles related to power and control. Course content includes motors, instrumentation, and programmable logic controls. Lecture and laboratory course.
Prereq: IT 200.

IT 219 Techniques of Energy Control. 3 hrs
An introduction to the use of tools, materials, machines, equipments, supplies, and mechanisms utilized in power mechanics for energy control. Lecture and laboratory course.

IT 223 Engineering Graphics II. 3 hrs
Engineering Graphics II is an advanced drawing course designed as a continuation of Engineering Graphics I. Units of instruction include fit classifications, geometric dimensioning and tolerancing, gears, cams, revolution, intersection, and development. Lecture and laboratory course.
Prereq: MTH 107 and IT 122.

IT 228 Construction Drawing. 3 hrs
Basic print reading skills. Symbols, terminology, print organization, and basic material take-off techniques. Sketching and some basic drawing skills required. Lecture and laboratory course.

IT 229 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.
Prereq: IT 228 or department permission.

IT 230 Introduction to Computer Graphic Systems. 3 hrs
Students are provided with opportunities to work on a variety of CAD and paint systems. Students will learn terminology for graphics hardware and software, write short graphics programs, and explore applications of graphics to their own field of study. Course does not count for CAD majors. Lecture and laboratory course.

IT 231 Industrial Computer Graphics. 3 hrs
A series of computer graphics programs illustrate graphics algorithms and terminology. Students write similar FORTRAN programs on graphics terminals using PLOT-10 subroutines. Topics include graphics, multiview drawings, rotations, databases, plotting and display techniques, and interactive programming. Lecture and laboratory course.
Prereq: MTH 107 and CSC 137.

IT 240 Science, Technology, and People. 3 hrs
This course will help people to better understand the complementary relationship between science and technology in (a) creating technical devices, services and systems and (b) solving problems.
Prereq: A basic studies approved physics or chemistry laboratory course.

IT 251 Material Analysis and Testing. 3 hrs
Study of the structure, characteristics, and working qualities of common industrial materials. Lecture and laboratory course.

IT 301 Planning and Scheduling. 3 hrs
The planning process of the construction industry. Various scheduling systems commonly used within the industry.
Prereq: IT 105 and IT 201.

IT 302 Contract Documents, Regulations, and Specifications. 3 hrs
The different types of construction contracts, construction documents and regulations, the role of specifications, and the project manual in the construction process.
Prereq: IT 201 and LAW 293, or department permission.

IT 303 Electrical, Mechanical, and Equipment Systems. 3 hrs
This course provides an understanding of mechanical, electrical, plumbing, drain-waste-vent, equipment considerations, and other specialized non-structural systems found in commercial buildings.
Prereq: IT 201 and IT 228.

IT 306 Plastic Processing. 3 hrs
A study of high polymers, basic resin types, and their application to molding and fabrication process. Analysis of chemical and physical properties, mold design, and problems of production. Experimentation and testing required. Lecture and laboratory course.
Prereq: IT 202.

IT 314 Integrated Circuits: Digital. 3 hrs
The study of combinational and sequential logic. Concepts of digital control and computer circuits. Lecture and laboratory course.
Prereq: IT 200.

IT 316 Manufacturing Tooling. 3 hrs
A study of manufacturing tooling systems with a focus on basic types, components, applications, and principles of design. Tooling for metallic and non-metallic materials is included. Lecture and laboratory course.
Prereq: MTH 107, IT 103, IT 124, IT 203, and IT 223.

IT 318 Fluid Power. 3 hrs
Industrial hydraulic and pneumatic power transmission. Emphasis is on components, system control techniques, logic, system analysis, and design. Lecture and laboratory course.
Prereq: PHY 221.

IT 324 Industrial Drawing. 3 hrs
An examination and application of engineering design and drawing using three-dimensional wireframe and solids techniques. Computer-aided design systems will be used to produce designs and drawings. Lecture and laboratory course.
Prereq: IT 223.

IT 325 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 statistics, dynamics, and modification of mechanisms. Lecture and laboratory course.
Prereq: PHY 221 and IT 223.

IT 360 CIM Operations. 3 hrs
Concepts, components, and application of computer-based industrial automation. The integration and implications of CAD, CAM, and business functions into CIM are included. This course does not count towards an IT major.
Prereq: IT 103 and IT 203.

IT 361 Computer Numerical Control. 3 hrs
NC programming for both CNC mill and lathe. The transfer of part descriptions into a detailed process plan, tool selection, and finally into NC machine codes. Computer-assisted programming, APT, and CAD/CAM for 2-D machining is emphasized. Verification is accomplished by laboratory work.
Prereq: MTH 107, IT 106, IT 124, and IT 223.

IT 387 Cooperative Education in Industrial 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. Graded credit/no credit. Credit applicable to the major in industrial technology or industrial teacher education only.

IT 401 Construction Estimating and Bidding. 3 hrs
The principles and procedures for developing estimates, bids, and contracts for residential and commercial construction.
Prereq: IT 201 and IT 229.

IT 402 Construction Materials. 3 hrs
The characteristics, specifications, and applications of basic construction materials such as stone, concrete, wood, glass, plastics, metals, and bituminous products. Lecture and laboratory course.
Prereq: IT 201.

IT 403 Production Control. 2 hrs
Methods of control used in the construction industry for production problems involving the estimate, bidding schedules, cost analysis, cost comparison, scheduling systems, evaluation, and debriefing.
Prereq: IT 301, IT 401, and ACC 130.

IT 406 Construction Law. 2 hrs
Common basic legal problems associated with construction contracting. Current areas of concern and the significant implications are covered.
Prereq: IT 302 and LAW 293.

IT 409 Plastics Mold Design and Construction. 3 hrs
Principles of mold design for a variety of plastic molding processes. Mold materials, machining, fabricating, and testing in appropriate processing equipment are required. Lecture and laboratory course.
Prereq: IT 306.

IT 410 Plastics Product Design. 3 hrs
The development of products through plastic materials selection and design includes the esthetics of design and the selection of engineering properties. Lecture and laboratory course.
Prereq: IT 306.

IT 411 Plastics Fabricating and Decorating. 3 hrs
Processes involved in forming and fastening of standard profile materials in plastics. Methods of joining, machining, and decorating of plastics materials and products are required. Lecture and laboratory course.
Prereq: IT 306.

IT 414 Integrated Circuits: Linear. 3 hrs
Fundamentals of discrete solid-state devices and linear integrated circuits. Concepts of instrumentation and control applications are included. Lecture and laboratory course.
Prereq: IT 200 or department permission.

IT 415 Communication Circuits. 3 hrs
Concepts and principles of electronics as applied to radio and television circuits. Concepts of instrumentation and control applications are required. Lecture and laboratory course.
Prereq: IT 200 or department permission.

IT 417 Industrial Robotics. 3 hrs
The nature and use of industrial robotics: capabilities, equipment and associated hardware, justification, preparation and installation, launching, and monitoring. Lecture and laboratory course.
Prereq: IT 106, IT 203, IT 218, and IT 318.

IT 420 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.
Prereq: MTH 118, MTH 119, and IT 203.

IT 421 Manufacturing Product and Process Analysis. 3 hrs
An advanced course in the analysis of manufacturing products and processes. Emphasis is placed on the identification and resolution of problems related to quality control and product reliability.
Prereq: MTH 119 and IT 420.

IT 424 Industrial Plant Facilities and Planning. 3 hrs
Planning procedures related to small plant and heavy industrial production. Mass production layout methods, machine and production equipment arrangements, types of plant architecture and related facilities, transportation and handling facilities, lighting, sewerage, ventilation, water supply, electrical power, personal facilities are included.

IT 425 Advanced Manufacturing Methods. 3 hrs
The course emphasizes computerized methods of planning, material handling, machining cells, and inspection. Lecture and laboratory course.
Prereq: IT 103, IT 124, IT 203, and IT 223.

IT 426 Manufacturing Communication Systems. 3 hrs
An overview of the computerization of information related to manufacturing production. Class will emphasize functional specification and installation problems of computer-integrated manufacturing communications systems. Lecture and laboratory course.
Prereq: IT 103, IT 106, IT 124, IT 203, and IT 223.

IT 427 Advanced Industrial Control. 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 utilizations of computers and programmable logic controllers for industrial control purposes. Lecture and laboratory course.
Prereq: IT 218 and IT 318.

IT 431 Interactive Industrial Computer Graphics. 3 hrs
Students develop a 2-D interactive graphics FORTRAN program. The use of graphics hardware and the generating, modifying, and transforming of graphics entities and databases are included. Lecture and laboratory course.
Prereq: IT 231 and a course in FORTRAN programming.

IT 432 3-D Computer-Aided Design. 3 hrs
Using a graphics "toolbox" on a microcomputer, students develop a 3-D interactive BASIC CAD program. Hidden surface removal, 3-D transformation surface shading, and 3-D databases are required. Lecture and laboratory course.
Prereq: IT 431.

IT 433 Advanced Computer-Aided Design. 3 hrs
Advanced computer-aided design course that focuses on menu modification, AutoLISP programming, and data interchange. Lecture and laboratory course.
Prereq: IT 223 and IT 431.

IT 434 Microcomputer Circuits. 3 hrs
The microprocessor and its applications in the control of machines and industrial process. Lecture and laboratory course.
Prereq: IT 314 and a computer programming course.

IT 450 Fundamentals of Construction Project Management. 3 hrs
Students combine many previous concepts and skills into a single comprehensive project which includes estimating, scheduling, production control techniques, and documentation procedures. Lecture and laboratory course.
Prereq: IT 301, IT 302, IT 401, and MGT 384.

IT 461 CAD/CAM NC Programming. 3 hrs
Study of conversion of part descriptions to numerical control programs for mill, lathe, and three-axis machining center. Advanced APT 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 are accomplished by laboratory work.
Prereq: IT 361.

IT 477/478/479 Current Topics in Industrial Technology. 1/2/3 hrs
These courses are offered on an experimental basis or for some special need.
Prereq: Department permission.

IT 485 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 using numerical control, robotics/programmable automation programming, development of a manufacturing database, and hierarchical computer control... Lecture and laboratory course.
Prereq: IT 361, IT 417, and IT 420.

IT 487 Cooperative Education in Industrial 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 credit/no credit.
Prereq: IT 387.

IT 490 Manufacturing Technology Laboratory. 3 hrs
This course is capstone for manufacturing technology majors and will focus on the development of the plans for a functioning manufacturing system. Student experiences will include the integration of a breadth of technical knowledge and skills as well as a significant degree of project management. Guided laboratory course.
Prereq: IT 316, IT 325, IT 420, IT 421, IT 425, and ENG 324.

IT 494/495/496 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.

IT 497/498/499 Directed 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 adviser and chairperson.

INTERDISCIPLINARY TECHNOLOGY

Paul D. Kuwik
Department Head
122 Sill Hall
487-1161

Professors: Taki Anagnostou, Stoil Dirlikov, Wayne Hanewicz, Frank Jones, Paul D. Kuwik, Demo Stavros, Ronald M. Westrum

Associate Professors: Gerald Lawver, John Preston
Assistant Professors: John Boyless, Mary Cullen, David Gore
Instructor: Timothy Doyle

Degree: Bachelor of Science

The Department of Interdisciplinary Technology draws heavily from other disciplines throughout the University. Its undergraduate programs are listed below and are in addition to a Master of Liberal Studies in technology and a Master of Science in polymers technology, described in the Graduate Catalog.

Programs of Study

Curricula:

Aviation management technology
Bilingual vocational teacher education
Communication technology
Facility management
Industrial distribution
Polymers and coatings technology

Minors:

Aviation flight technology
Graphic communication
Technology and society

Advising or additional information is available within the department. Consult with an advising coordinator listed below.

Advising Coordinators:

Aviation management technology: Timothy Doyle
Bilingual vocational teacher education: John Boyless
Communication technology: David Gore
Facility management technology: John Preston
Industrial distribution: Demo Stavros
Polymers and coatings technology: Taki Anagnostou
Aviation flight technology: Timothy Doyle
Graphic communication minor: David Gore
Technology and society minor: Ronald Westrum

MAJORS OFFERED IN THE INTERDISCIPLINARY TECHNOLOGY DEPARTMENT

AVIATION MANAGEMENT TECHNOLOGY CURRICULUM

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 coursework.

Area	Sem hours
Symbolics and communication (five courses)	14-17
A course in written composition	
A course in speech communication	
An upper level course in written composition	

A course in mathematical reasoning (MTH 109 Functional Mathematics II does not apply) IDT 201 Microcomputer Applications in Technology ...3	
Science and technology (three courses)	7-10
A course in physical science	
A course in life science	
IDT 150 Understanding Technology	3
Social science (four courses)	8-12
PLS 112 American Government	3
A course in history	3
ECO 201-202 Principles of Economics I-II	6
Arts and humanities (four courses)	8-12
A course in literature	
A second course in literature	
A course in philosophy or religion	
A course in art, dance, music, or theatre arts	
Cross-cultural or international studies	
At least one approved course in cross-cultural or interna- tional studies must be completed in the process of completing basic studies.	
Practical arts	66
IDT 100 Introduction to General Aviation	1
IDT 110, 210 Aircraft Maintenance I and II	6
IDT 120, 220 Flight Operations I and II	6
IDT 170 Aviation Ground Instruction	3
IDT 303 Aviation Law and Insurance	3
IDT 320 Aviation Safety, Accident Investigation, and Training	3
IDT 341 Instrument Flight/IFR Operations	3
IDT 387 Cooperative Education in Aviation Management Technology	3
IDT 413 Computers in Aviation	3
IDT 422 Aviation Maintenance, Operations, and Management	3
IDT 430 Aviation Facilities	3
MGT 384 Human Resource Management	3
MGT 386 Organizational Behavior and Theory	3
MTH 118-119 Mathematical Analysis for Social Sciences I-II	6
ORI 265 Business Statistics I	3
ACC 240-241 Principles of Accounting I-II	6
ECO 325 Collective Bargaining	3
FIN 350 Principles of Finance	3
Physical education and health	2
Physical education activity courses	2
(Any two courses in military science may be applied)	
Electives	7-11
Total	124

BILINGUAL VOCATIONAL TEACHER EDUCATION

Students wanting to become vocational teachers in high schools or vocational technical centers can participate in the bilingual vocational teacher education program. The program is a four-year curriculum in basic studies, education, practical arts, and an occupational specialty that leads to a bachelor's degree. Graduates also receive a Michigan temporary vocational authorization that enables them to teach in their occupational specialty. Two years of work experience in an occupational specialty are needed for the program. Financial aid is available to students in the program.

Two curricula are offered: a Bachelor of Science in industrial/vocational education and a Bachelor of Business Education:

BILINGUAL INDUSTRIAL-VOCATIONAL TEACHER EDUCATION CURRICULUM

Area	Sem hours
Symbolics and communication	15
A course in written communication	
A course in speech communication	
A course in one of the following areas: an upper-level course in written composition an upper-level course in speech communication a course in foreign language composition	
A course in mathematical reasoning IDT 201 Microcomputer Applications in Technology ...3	
Science and technology	9
A course in physical science	
A course in life science IDT 150 Understanding Technology	3
Social science	12
A course in U.S. government	
A course in history ECO 201-202 Principles of Economics I-II	6
Arts and humanities	12
A course in literature or an intermediate or advanced foreign language literature course	
An approved course in cross-cultural or international studies	
A course in philosophy or religion	
A course in art, dance, music, or theatre arts	
Education	30
EDP 322 Human Development and Learning	4
RDG 311 Teaching Reading in the Secondary School ...3	
SFD 328 Social Aspects of Teaching	3
SGN 251 Education of Exceptional Children	2
EDP 340 Introduction to Assessment and Evaluation3	
<i>Student Teaching Sequence*</i>	
IE 460 Practicum in Technology and Industrial- Vocational Education	2
IE 461 The Teaching of Technology and Industrial- Vocational Education	2
EDU 492 Student Teaching	12
Practical arts**	17
IT 213 Construction Safety	3
IE 250 Foundations of Technology and Industrial- Vocational Education	3
IE 350 Curriculum in Technology and Industrial- Vocational Education	3
IE 452 Principles of Vocational-Technical Education3	
IDT 478 Special Topics: Teaching Methods in Bilingual Vocational Education	2
IDT 479 Special Topics: Seminar in Bilingual Vocational Education	3
Occupational specialty***	35
Physical education	2
Physical education activity or military science courses2	
Total	135-140

Note: Satisfactory completion of this program will result in the Bachelor of Science degree and issuing of the Michigan temporary vocational authorization for teaching in occupational specialty, grades 9-12.

**Must hold 2.25 overall at EMU and 2.5 in major before enrolling in student teaching sequence.*

***The completion of this 50-hour curriculum satisfies all requirements for the major and minor areas of study.*

****The occupational specialty must be in an accredited N.E.S. title area and must be accompanied by two years (4,000 hours) of recent and relevant work experience. Academic credit towards this requirement can be granted for*

technical preparation in an occupation or for completion of appropriate examinations (e.g. the Michigan Occupational Competency Assessment Center test).

BILINGUAL OFFICE AND MARKETING TEACHER EDUCATION CURRICULUM

BILINGUAL OFFICE TEACHER EDUCATION

Area	Sem hours
Symbolics and communication	15
A course in written communication	
A course in speech communication	
A course in one of the following areas:	
an upper-level course in written composition	
an upper-level course in speech communication	
a course in foreign language composition	
A course in mathematical reasoning	
IDT 201 Microcomputer Applications in Technology ...	3
Science and technology	9
A course in physical science	
A course in life science	
IDT 150 Understanding Technology	3
Social science	12
A course in U.S. government	
A course in history	
ECO 201-202 Principles of Economics I-II	6
Arts and humanities	12
A course in literature or an intermediate or advanced foreign language literature course	
An approved course in cross-cultural or international studies	
A course in philosophy or religion	
A course in art, dance, music, or theatre arts	
Education	28
BE 200 Principles of Marketing and Business Education	3
EDP 322 Human Development and Learning	4
SFD 328 Social Aspects of Teaching	3
EDP 340 Introduction to Assessment and Evaluation	3
RDG 311 Teaching Reading in the Secondary School ...	3
SGN 300 Exceptional Children in the Regular Classroom ...	1
EDU 492 Student Teaching	12
Two business methods courses	4
BE 364 Methods of Teaching General Business Subjects and BE 365 Methods of Teaching Office Education or BE 366 Methods of Teaching Marketing Education	
Practical arts	50
Business education core	32
BE 100 Contemporary Business	3
BE 123 Word Processing/Keyboarding Applications	2
*BE 201 Microcomputers for Business Applications	3
BE 224 Computer-based Business Mathematics	3
ACC 240-241 Principles of Accounting I-II	6
BE 250 Personal Finance	3
LAW 293 Legal Environment of Business	3
MKT 360 Principles of Marketing	3
BE 395 Office Administration	3
BE 396 Records Administration	3
IDT 478 Special Topics: Teaching Methods in Bilingual Vocational Education	2
IDT 479 Special Topics: Seminar in Bilingual Vocational Education	3
Major in Business Education/Office Education	18
1. Required course	3
**BE 422 Office Systems	3

2. Required option	15
Choose one option from the following:	
<i>Option I: Accounting</i>	
ACC 340-341 Intermediate Accounting I-II	6
ACC 342 Managerial Cost Accounting	3
ACC 344 Tax Accounting	3
ACC 346 Governmental Accounting	3
<i>Option II: Data processing</i>	
ORI 219 File Processing and COBOL Programming	3
ORI 265 Business Statistics I	3
**Students electing business education/accounting or data processing should take a three hour restricted elective instead of BE 422 Office Systems	
ORI 317 System Simulation	3
ORI 413 Evaluation and Application of Computer Hardware	3
ORI 417 Systems Analysis and Design	3
<i>Option III: Shorthand</i>	
BE 220 Word/Information Processing Operations	3
BE 222 Transcription Applications and Technology	3
BE 225 Gregg Shorthand	3
BE 325 Shorthand Transcription	3
BE 495 Office Automation	3
<i>Option IV: Word processing</i>	
BE 210 Concepts of Word/Information Processing	3
BE 220 Word/Information Processing Operations	3
BE 222 Transcription Applications and Technology	3
BE 310 Word/Information Processing Administration ...	3
BE 495 Office Automation	3
Business Education Restricted Electives	
BE 201 Microcomputers for Business Applications	3
BE 205 Women in Business	3
BE 210 Concepts of Word/Information Processing	3
BE 211 Introduction to Paralegalism and Legal Terminology	3
ORI 219 File Processing and COBOL Programming	3
BE 220 Word/Information Processing Operations	3
BE 222 Transcription Applications and Technology	3
BE 225 Gregg Shorthand	3
BE 310 Word/Information Processing Administration ...	3
BE 325 Shorthand Transcription	3
MKT 374 Business to Business Marketing	3
BE 387 Cooperative Education in Business Education ..	3
LAW 393 Law of Business Enterprises	3
BE 411 Civil Litigation, Investigation, and Procedure ...	3
BE 412 Court Documents and Court Rules	3
BE 422 Office Systems	3
IE 452 Principles of Vocational-Technical Education ...	3
BE 495 Office Automation	3
BE 496 Records Administration Using Database	3
BE 487 Cooperative Education in Business Education ..	3
BE 497/498/499 Independent Study	1-3
Physical education and health	2
Physical education activity courses	2
(Any two courses in military science may be applied)	
Electives	0-3
Total	133
*Students electing the business education/data processing option must take ORI 215 End-User Computing in place of BE 201, MTH 118, and MTH 119.	
Note: Satisfactory completion of this program will result in the Bachelor of Science degree and issuing of the Michigan temporary vocational authorization for teaching in occupational specialty, grades 9-12.	
*Must hold 2.5 overall at EMU and 2.5 in major before enrolling in student teaching sequence.	
**The completion of this 50-hour curriculum satisfies all requirements for the major and minor areas of study.	

***The occupational specialty must be in an accredited N.E.S. title area and must be accompanied by two years (4,000 hours) of recent and relevant work experience. Academic credit towards this requirement can be granted for technical preparation in an occupation or for completion of appropriate examinations (e.g. the Michigan Occupational Competency Assessment Center test).

BILINGUAL MARKETING TEACHER EDUCATION

Area	Sem hours
Symbolics and communication	15
A course in written communication	
A course in speech communication	
A course in one of the following areas:	
an upper-level course in written composition	
an upper-level course in speech communication	
a course in foreign language composition	
A course in mathematical reasoning	
IDT 201 Microcomputer Applications in Technology ...	3
Science and technology	9
A course in physical science	
A course in life science	
IDT 150 Understanding Technology	3
Social science	12
A course in U.S. government	
A course in history	
ECO 201-202 Principles of Economics I-II	6
Arts and humanities	12
A course in literature or an intermediate or advanced foreign language literature course	
An approved course in cross-cultural or international studies	
A course in philosophy or religion	
A course in art, dance, music, or theatre arts	
Education	28
BE 200 Principles of Marketing and Business Education ...	3
EDP 322 Human Development and Learning	4
SFD 328 Social Aspects of Teaching	3
EDP 340 Introduction to Assessment and Evaluation	3
RDG 311 Teaching Reading in the Secondary School ...	3
SGN 300 Exceptional Children in the Regular Classroom ...	1
EDU 492 Student Teaching	12
Business methods courses	4
BE 364 Methods of Teaching General Business Subjects and Methods	2
<i>Courses appropriate to major:</i>	
BE 365 Methods of Teaching Office Education or BE 366 Methods of Teaching Marketing Education	2
Practical arts	50
Business education core	15
BE 100 Contemporary Business	3
ACC 240-241 Principles of Accounting I-II	6
LAW 293 Legal Environment of Business	3
MKT 360 Principles of Marketing	3
Major in marketing education	24
<i>Technical content courses</i>	
MKT 261 Contemporary Selling	3
MKT 363 Retailing	3
MGT 386 Organizational Behavior and Theory	3
MKT 365 Buyer Behavior	3
Select two of the following three semester hour courses:	
MKT 369 Advertising, MKT 374 Business to Business Marketing, LAW 393 Law of Business Enterprises, MKT 461 Sales Management, MGT 384 Human-Resource Management, MGT 485 Human Resource Development.	

Professional marketing education courses

BE 367 Curriculum in Marketing Education	2
BE 368 Management of Marketing Education Programs ...	2
BE 461 Projects and Simulations in Marketing Education ...	2
IDT 478 Special Topics: Teaching Methods in Bilingual Vocational Education	2
IDT 479 Special Topics: Seminar in Bilingual Vocational Education	3

Restricted Electives

BE 119 Keyboarding for Computers; BE 123 Word Processing/Keyboarding Applications; BE 201 Microcomputers for Business Applications; BE 224 Computer-based Business Mathematics; BE 250 Personal Finance; BE 387 Cooperative Education in Business Education; BE 487 Cooperative Education in Business Education; BE 497, 498, 499 Independent Study	11
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IE 452 Principles of Vocational-Technical Education

FM 145 Introduction to Merchandising, FM 235 Textiles for Consumers, FM 255 Apparel Analysis, FM 439 Fashion Markets	2
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Physical education and health

Physical education activity courses	2
(Any two courses in military science may be applied.)	

Electives

Total

129-133

COMMUNICATION TECHNOLOGY CURRICULUM

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 emphasis is 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.

Area	Sem hours
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Symbolics and communication

A course in written communication	
A course in speech communication	
ENG 324 Principles of Technical Communication or CTA 227 Interpersonal Communication or CTA 374 Intercultural Communication or any course in foreign language composition	3
MTH 118 Mathematical Analysis for Social Sciences I ...	3
IDT 201 Microcomputer Applications in Technology or ORI 215 End-User Computing	3

Science and technology

A course in physical science	
PSY 101 General Psychology	3
IDT 150 Understanding Technology	3

Social science

A course in U.S. government	
A course in history	
ECO 201 Principles of Economics I	3
ECO 202 Principles of Economics II, or a course in cross-cultural or international studies	3

Arts and humanities

A course in literature	
One of the following:	
a second course in literature	
an intermediate or advanced foreign language literature course	
a course in oral interpretation	

a course in cross-cultural or international studies
 A course in philosophy or religion
 A course in art, dance, music, or theatre arts

Academic major in communication technology 62

Media production

CTA 130 Introduction to Telecommunications and Film ... 3
 CTA 141 Introduction to Radio-TV-Film Production 3
 CTA 331 Fundamentals of Radio Production and
 Direction or CTA 332 Fundamentals of Television
 Production and Direction 3

Transmission systems

IT 200 Industrial Electricity and Controls I 3
 IDT 305 Communication Transmission Systems 3

Computer technology

CSC 238 Computer Science II 3
 CSC 239 Assembly and Machine Language
 Programming 3
 CSC 338 Computer Organization 3
 CSC 435 Introduction to Microprocessors 3

Communication theory and practice

CTA 227 Interpersonal Communication 3
 CTA 354 Organizational Communication 3

Business and investment skills

MKT 360 Principles of Marketing 3
 PSY 205 Quantitative Methods in Psychology 3

Management skills

ACC 240 Principles of Accounting I 3
 MGT 202 Business Communications 3

Industrial technology

IDT 121 Graphic Communication 3
 IT 231 Industrial Computer Graphics 3
 IDT 387 Cooperative Education in Interdisciplinary
 Technology 3
 IDT 409 Emerging Technologies in Storage and
 Retrieval 3
 IDT 425 Communication Technology and Social Change ... 3
 IDT 470 Senior Seminar in Communication Technology 2

Electives 8-13

Physical education and health 2

Physical education activity courses 2
 (Any two courses in military science may be applied.)

Electives 0-2

Total 124

FACILITY MANAGEMENT CURRICULUM

Facility management is the practice of coordinating the workplace with the people and work of the organization; it integrates the principles of business administration, architecture, and the behavioral and engineering sciences. Students completing this curriculum have met major and minor requirements for graduation. This major is currently undergoing revision; changes will be announced by the department.

Area	Sem hours
Symbolics and communication	15
A course in written composition	3
A course in speech communication	3
An upper-level course in written composition	3
A course in mathematical reasoning	3
IDT 201 Microcomputer Applications in Technology ... 3	
Science and technology	11
A course in physical science	4
A course in life science (biology or psychology)	4
IDT 150 Understanding Technology	3
Social science	12
See basic studies requirements, page 28	

Arts and humanities 12

 See basic studies requirements, page 29

Physical education 2

 Any two courses in Military Science may be applied.

Cross-cultural or international studies

 See basic studies requirements, page 30

Major in facility management 31

 IT 125 Introduction to Construction 2
 IDT 202 Introduction to Facility Management 2
 IT 228 Construction Drawing 3
 IDE 290 Lighting for Interiors 3
 LAW 293 Legal Environment of Business 3
 IDT 300 Energy Management Controls 3
 IDT 312 Heating, Ventilating, and Air Conditioning 4
 IDT 314 Utility Rates and Building Codes 2
 IDE 364 Facility Management 3
 IDE 369 Human Factors and Environmental Design 3
 IDT 432 Senior Seminar in Facility Management 3

Concentrations

 Choose one of the following:

Construction technology 18

 IT 201 Construction Systems 3
 IT 229 Analysis of Commercial Prints 3
 IT 301 Planning and Scheduling 3
 IT 302 Contract Documents, Regulations, and
 Specifications 3
 IT 387 Cooperative Education in Industrial Technology 3
 IT 401 Construction Estimating and Bidding 3

Energy management 13

 IT 200 Industrial Electricity and Controls I 3
 IDT 316 Lighting for Energy Management 2
 IDT 387 Cooperative Education in Interdisciplinary
 Technology 3
 IDT 412 Energy Measurement 2
 IDT 415 Computer Programming for Energy
 Management 3

Interior environments 15

 IDE 313 Space Planning and Specifications 3
 HEC 387 Cooperative Education 3
 HM 441 Commercial Purchasing 3
 IDE 449 Facility Programming and Post Occupancy
 Evaluation 3
 IDE 469 Strategic Planning and Research for Facility
 Management 3

Minor in management 21

Required

 RES 210 Real Estate Principles and Practices 3
 ACC 240 Principles of Accounting I 3
 MKT 360 Principles of Marketing 3
 MGT 386 Organizational Behavior and Theory 3

Recommended courses

 MGT 384 Human Resource Management 3
 MGT 483 Staffing Organizations 3
 MGT 484 Management-Union Relations 3

Electives 2, 5, 7
 (depending on concentration)

Total 124

INDUSTRIAL DISTRIBUTION CURRICULUM

The industrial distribution program is designed to provide the background necessary for graduates to find employment in wholesale sales, sales management, and operation management with suppliers of durable and non-durable goods and with wholesale distributors who purchase, warehouse, sell, and distribute these goods.

Students completing this curriculum have met the major and minor requirements for graduation.

Area	Sem hours
Symbolics and communication	14-15
ENG 121 English Composition	3
CTA 121/124 Fundamentals of Speech	2-3
An upper level course in speech communication	3
MTH 118 Mathematical Analysis for Social Sciences I or MTH 270 Elementary Statistics	3
IDT 201 Microcomputer Applications in Technology ...	3
Science and technology	10-11
Physical science elective	4
Life science elective	3
IDT 150 Understanding Technology	3
Social science	12
PLS 112 American Government	3
A course in History	3
ECO 201-202 Principles of Economics I-II	6
Arts and humanities	12
A course in literature	3
A course in cross-cultural or international studies	3
A course in philosophy or religion	3
A course in art, dance, music, or theatre arts	3
Major requirements	66
Business	24
ACC 240 Principles of Accounting I	3
MGT 202 Business Communication	3
MGT 386 Organizational Behavior and Theory	3
MKT 261 Contemporary Selling	3
MKT 360 Principles of Marketing	3
MKT 368 Marketing Strategy	3
MKT 374 Business to Business Marketing	3
MKT 461 Sales Management	3
Technology	24
IT 122 Engineering Graphics I	3
IT 123 Manufacturing Processes and Methods I	3
IT 200 Industrial Electricity and Controls I	3
IT 314 Integrated Circuits: Digital	3
IT 318 Fluid Power	3
IT 417 Industrial Robotics	3
IT 218 Industrial Electricity and Controls II	3
IDT 310 Polymers for Engineers and Technologists	3
Industrial distribution	18
IDT 240 Introduction to Industrial Distribution	3
IDT 340 The Industrial Climate and its Effects Upon Distribution	3
IDT 387 Cooperative Education for Industrial Distribution	3
IDT 440 Industrial Distributor Operations	3
IDT 444 Industrial Distribution	3
ECO 460 Industrial Organization	3
Concentrations	11-13
Students may select concentrations from below to meet their career plans with approval of adviser. Other concentrations may be selected with adviser approval.	
Mechanical/manufacturing	13
IT 215 Machine Tool Metalworking	3
IT 251 Material Analysis and Testing	3
IT 420 Industrial Quality Control	3
Electives	4
Electronics	13
IT 415 Communication Circuits	3
IT 414 Integrated Circuits: Linear	3
IT 434 Microcomputer Circuits	3
Electives	4
Energy management	11
IDT 300 Energy Management Controls	3
IDT 312 Heating, Ventilating, and Air Conditioning	4
IDT 316 Lighting for Energy Management	2

IDT 412 Energy Measurement	2
Recommended Electives	0-2
(No more than six semester hours can be taken from the College of Business)	
IDT 121 Graphic Communication	3
IDT 300 Energy Management Controls	3
IT 316 Manufacturing Tooling	3
FIN 350 Principles of Finance	3
FIN 358 Analysis of Financial Statements	3
IT 361 Computer Numerical Control	3
MGT 402 Business Report Writing	3
MKT 470 Marketing Research	3
BE 396 Records Administration	2
Physical education and health	2
Two semester hours of military science may be substituted for physical education.	
Total	124

POLYMERS AND COATINGS TECHNOLOGY CURRICULUM

The polymers and coatings curriculum is designed to provide the background necessary for graduates to find employment in research and development laboratories of companies that manufacture paints, coatings, rubber, plastics, polymers, adhesives, and inks, or in companies that manufacture raw materials for these industries.

Students completing this curriculum have met the major and minor requirements for graduation. No outside minor is needed.

Area	Sem hours
Symbolics and communication	15
ENG 121 English Composition	3
CTA 121 Fundamentals of Speech	2
ENG 324 Principles of Technical Communication	3
MTH 120 Calculus I	4
IDT 201 Microcomputer Applications in Technology ...	3
Science and technology	13
CHM 121-122 General Chemistry I with lab	5
BIO 105 Biology and the Human Species	4
PHY 221 Mechanics, Sound, and Heat	4
Social science	12
PLS 112 American Government	3
A course in history	3
ECO 201-202 Principles of Economics I-II	6
Arts and humanities	12
A course in literature	3
A second course in literature	3
A course in philosophy or religion	3
A course in art, dance, music, or theatre arts	3
Science and mathematics	16
CHM 123-124 General Chemistry II with lab	5
MTH 105 College Algebra	3
MTH 107 Plane Trigonometry	2
PHY 222 Electricity and Light	4
CHM 381 Instrumentation for Chemical Technology	2
Academic major in polymers and coatings technology	
Required courses	44
CHM 261 Introduction to Physical Chemistry	3
CHM 281 Quantitative Analysis	4
IDT 310 Polymers for Engineers and Technologists	3
CHM 371-373 Organic Chemistry I-II with lab	8
IDT 387 Cooperative Education in Interdisciplinary Technology	3
IDT 400 Polymers and Coatings Technology I	3
IDT 401 Polymers and Coatings Technology I Laboratory	3
IDT 402 Polymers and Coatings Technology II	3

IDT 403 Polymers and Coatings Technology II Laboratory	3
IDT 405 Coating Processes I	3
IDT 460 Advanced Coatings Topics	3
IDT 479 Special Topics: Statistical Process Control in Coatings	3
Electives	10-11
Choose 10-11 credits from the following:	
CHM 241 Materials Science, CHM 340 Introduction to In- dustrial Chemistry, CHM 415 Environmental Chemis- try, CHM 478 Special Topics in Chemistry, IDT 487 Cooperative Education in Interdisciplinary Technology	
Physical education and health	2
Physical education activity courses (any two courses in military science may be applied)	
Electives	5-6
Total	124

MINORS OFFERED IN THE INTERDISCIPLINARY TECHNOLOGY DEPARTMENT

AVIATION FLIGHT TECHNOLOGY MINOR

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 license and their commercial pilot license with an instrument rating, will be certified for flying for personal and business interests and will be prepared for entry into the professional and career pilot field if they so choose.

	Sem hours
Academic minor in aviation flight technology	24
1. Required courses	21
IDT 170 Aviation Ground Instruction.....	3
IDT 251 Basic Flight I	2
IDT 261 Basic Flight II	2
IDT 271 Basic Flight III	2
IDT 341 Instrument Flight/IFR Operations	3
IDT 351 Advanced Flight I	2
IDT 361 Advanced Flight II	2
IDT 371 Advanced Flight III	2
IDT 320 Aviation Safety, Accident Investigation, and Training	3
2. Electives	3
Select one course from the following:	
IDT 110 Aircraft Maintenance I	3
IDT 120 Flight Operations I	3
IDT 303 Aviation Law and Insurance	3
IDT 315 Airport Management	3

GRAPHIC COMMUNICATION MINOR

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.

	Sem hours
Minor in graphic communication	23
1. Required courses	11
IDT 104 Introduction to Communication Technology ...	2
IDT 121 Graphic Communication	3
IDT 204 Photographic Communication	3
IDT 207 Photographic Reproduction	3
2. Electives	12
IDT 201 Microcomputer Applications in Technology ...	3

IDT 304 Advanced Photographic Communication	3
IDT 318 Graphic Arts Workshop	3
IDT 404 Photo Communication Workshop	3
IT 231 Industrial Computer Graphics	3
FA 165 Graphic Design for Non-Majors	3
Electives selected from journalism, marketing, or management	

TECHNOLOGY AND SOCIETY MINOR

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.

	Sem hours
Minor in technology and society	24-26
1. Required courses	15
CSC 136 Computers for the Non-Specialist or CSC 137 Introduction to FORTRAN Programming	3
IDT 150 Understanding Technology	3
HIS 290 Introduction to the History of Technology	3
IDT 308 Seminar in Technological Impacts	3
IDT 495 Technology, Values, and the Future	3
2. Restricted Electives	9
Choose three courses (with at least one course from each subgroup, A and B) from the following:	
<i>Subgroup A:</i>	
BIO 224 Principles of Conservation, BIO 314 Energy Analysis and Environmental-Decision-Making	
CHM 415 Environmental Chemistry	
ECO 337 Energy Economics and Policies	
GEO 215 Introduction to Urban and Regional Planning, GEO 310 Energy Awareness, GEO 440 World Food Systems	
SOC 334 Population	
<i>Subgroup B:</i>	
CTA 446 Contemporary Problems in Telecommunications	
ECO 386 Technology and Economic Growth	
GEO 100 Future Worlds, GEO 235 Economic Geography, GES 495 Environmental Assessment and Planning	
IDT 420 Women and Technology	
IDT 201 Microcomputer Applications in Technology	
PHI 380 Philosophy of Science	
PLS 381 Public Policy Analysis, PLS 382 Politics and the 21st Century	
PSY 350 Environmental Psychology, PSY 351 Industrial Psychology	
SOC/ANT 336 Social and Cultural Change, ANT 378 Special Topics: Contemporary Issues in Developing and Modern Technological Societies, SOC 307 Industrial Sociology	

INTERDISCIPLINARY TECHNOLOGY COURSES

IDT-100 Introduction to General Aviation. 1 hr
The role of general aviation in the total framework of air transportation; the general structure of the industry including regulatory agencies, ground service equipment, and aircraft refueling. Lecture: one hour per week.

IDT 104 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.

- IDT 110 Aircraft Maintenance I.** 3 hrs
The functions and roles of maintenance personnel in an aviation maintenance organization structure. Lecture: three hours per week.
- IDT 120 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.
- IDT 121 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: two hours per week. Laboratory: two hours per week.
- IDT 150 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.
- IDT 170 Aviation Ground Instruction.** 3 hrs
Basic flight training ground instruction and practice in aircraft theory, aerial navigation, civil air regulations, meteorology, and radio. Directed toward preparation for the private pilot written examination.
- IDT 201 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.
Prereq: Basic keyboard skill is recommended; BE 119 is suggested.
- IDT 202 Introduction to Facility Management.** 3 hrs
The student will be introduced to the major fields of facility management: building operation, construction management, space allocation, and budget preparation.
- IDT 204 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.
- IDT 205 Photo-Technology.** 2 hrs
The applications of light sensitive materials used in industry to include photo-drafting, photofabrication. Lecture: one hour per week. Laboratory: two hours per week.
Prereq: IDT 121 and a chemistry course.
- IDT 207 Photographic Reproduction.** 3 hrs
Study and laboratory work in photomechanics, stripping, and platemaking as applied to offset presswork. Includes the preparation of layout materials for printing. Lecture: one hour per week. Laboratory: two hours per week.
Prereq: IDT 104 or IDT 121.
- IDT 210 Aircraft Maintenance II.** 3 hrs
The functions and organization of an aircraft maintenance facility and role of the supervisors within that structure. Lecture: three hours per week.
Prereq: IDT 110.
- IDT 214 Rubber Technology I.** 2 hrs
Lectures and laboratory experiments on the fundamentals of rubber chemistry, compounds and processing technology, and rubber testing methods.
Prereq: High school or college course in chemistry, or approval of instructor.
- IDT 220 Flight Operations II.** 3 hrs
In-depth study of the functions and organization of operations and the relationship with the other departments within an aviation organization.
Prereq: IDT 120.
- IDT 240 Introduction to Industrial Distribution.** 3 hrs
Definitions, history, types of distribution, range of products, lines of distribution, function of and services provided by distributors; employment and professional advancement opportunities with industrial distributors and suppliers.
- IDT 250 Wire Technology I.** 3 hrs
The fundamentals of wire manufacturing, steel production, wire joining, cleaning, descaling, coating, drawing, cooling, and lubrication. Lecture and demonstration. No previous wire manufacturing knowledge required.
- IDT 251 Basic Flight.** 2 hrs
The student will receive dual instruction in pre-flight procedures, ground reference maneuvers, take-off, and landings, power off and power-on stalls, local flight operations, and precision flight maneuvers. Remaining hours will be solo flight.
Prereq: IDT Student Pilot Certificate and Class II or III Medical.
- IDT 255 Emergency Preparedness Planning.** 3 hrs
An introduction to emergency planning, including assessment of community hazards and resources, for students responsible for civil defense or emergency preparedness tasks. Provides a planning and analytical framework, hazard/vulnerability analysis, that can be applied to the local comprehensive emergency management context.
- IDT 261 Basic Flight II.** 2 hrs
The student will receive dual instruction and solo practice in extended cross-country flight operations, flight proficiency maneuvers, and all phases of flight specified by the Federal Aviation Administration. The student will be prepared to take the oral and flight examination for the Private Pilot Certificate.
Prereq: IDT 251.
- IDT 271 Basic Flight III.** 2 hrs
The student will receive an introduction to commercial maneuvers and instrument flying techniques, including dual instruction and solo practice in areas of ground reference maneuvers, flight precision maneuvers, radio navigation, and special cross-country flight operations.
Prereq: IDT 261.
- IDT 277/278/279 Special Topics in Interdisciplinary Technology.** 1/2/3 hrs
An examination of topics in interdisciplinary technology not covered in other departmental offerings. Students may elect these courses more than once as long as different topics are studied.
- IDT 300 Energy Management Controls.** 3 hrs
Classroom activity combined with site visitations. Automatic controls ranging from infrared motion sensors to computer based energy management systems; savings calculation techniques.
Prereq: IDT 312.
- IDT 303 Aviation Law and Insurance.** 3 hrs
Overview of legal considerations in general aviation, government agencies exercising control, regulations, laws, advisory information, and insurance requirements and considerations.
- IDT 304 Advanced Photographic Communication.** 3 hrs
Photographic theory and techniques, with particular emphasis upon commercial and industrial applications. Lecture: two hours

per week. Laboratory: two hours per week. The student must furnish a camera and photo materials.

Prereq: IDT 204.

IDT 305 Communication Transmission Systems. 3 hrs

Consideration of source, encoder (transmitter), channel, and receiver functions. Principles of line communication, a study of various systems, and future developments in communication transmission systems.

IDT 308 Seminar in Technological Impacts. 3 hrs

An undergraduate level introduction to technology assessment. Development of skills related to forecasting technological inventions and assessing their effect if adopted by society.

IDT 310 Polymers for Engineers and Technologists. 3 hrs

Introduction to polymer science, polymerization, polymer modifications, size and weight of polymer molecules, plastics, adhesives, silicones, foams, surface coatings, fibers, elastomers, transitions, and relaxations in polymers, theology, polymer fabrication techniques.

IDT 312 Heating, Ventilating, and Air Conditioning. 4 hrs

Commercial systems will be studied with an emphasis on which energy saving strategies are appropriate to each and how to calculate potential savings.

Prereq: IT 125, IT 228.

IDT 313 Aviation Industry Regulations. 3 hrs

The major significance of aviation regulations and policies including the development and enforcement of federal aviation regulations will be presented. The major elements of managing 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.

IDT 314 Utility Rates and Building Codes. 2 hrs

Understanding utility rates to compute savings from reduced usage. Utility rates for residential, commercial, and industrial users; building codes related to ventilation, construction, and fire safety.

Prereq: IDT 201.

IDT 315 Airport Management. 3 hrs

The major elements in the process of planning and managing airports are presented, including federal airport policy, the airport master planning 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.

IDT 316 Lighting for Energy Management. 2 hrs

Light sources such as high intensity discharge, fluorescent, incandescent, and day light compared for efficiency, color, maintenance, initial cost, and life cycle cost. Appropriate retrofit opportunities identified and savings calculations methods evaluated.

Prereq: IDT 201.

IDT 318 Graphic Arts Workshop. 3 hrs

Selected topics in the field of graphic arts technology, such as composition, press work, screen process, and advanced photo-mechanics. May be repeated for additional credit.

Prereq: IDT 207 or department permission.

IDT 320 Aviation Safety, Accident Investigation, and Training. 3 hrs

In-depth study of aviation safety (flight and ground); accident prevention, accident investigation, and personnel training.

Prereq: IDT 170.

IDT 340 The Industrial Climate and Its Effects Upon

Distribution. 3 hrs

Historical development and current factors influencing industrial products and their usage, including financial and geographical factors, machinery, power, raw materials, markets and labor, which have direct influence upon the development, distribution, and use of industrial goods. Specific studies of representative industries including steel and other metals, machine tool, automobile, and transportation.

IDT 341 Instrument Flight/IFR Operations. 3 hrs

The factors affecting operation of aircraft in instrument meteorological conditions (IMC); the impact upon scheduling and related considerations.

Prereq: IDT 170.

IDT 350 Wire Technology II. 3 hrs

An intermediate course designed to study contemporary concepts and practices of wire manufacturing.

Prereq: IDT 250 or approval of instructor.

IDT 351 Advanced Flight I. 2 hrs

The student will receive dual instruction and solo practice in advanced cross-country navigation, commercial maneuvers, and an introduction to instrument flying techniques.

Prereq: IDT 271.

IDT 361 Advanced Flight II. 2 hrs

The student will receive dual instruction and solo practice in commercial flight maneuvers and instrument flight procedures, including instrument approaches, holding patterns, and partial panel procedures.

Prereq: IDT 351.

IDT 371 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.

Prereq: IDT 361.

IDT 380 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.

IDT 381 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 professionalization and accreditation movements in public safety agencies are addressed.

IDT 387 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 Department of Interdisciplinary Technology. Regular employee benefits may be received during the employment period.

Prereq: Department permission.

IDT 391 Wholesale Account Development. 3 hrs

An in depth study into the processes and techniques involved in acquiring and developing industrial accounts from the distributor's

and the manufacturer's point of view. The course will develop practical and effectual skills in the area of advanced industrial wholesale account development. Guest lectures by manufacturers representatives and from purchasing agents will augment the course.

IDT 400 Polymers and Coatings Technology I. 3 hrs
Introduction to synthesis, film formation, structure, and properties of polymers commonly used in coatings. Polymer systems to be covered include acrylic, vinyls, polyesters, alkyds, oils, epoxies, epoxyesters, aminoplasts, urethanes, phenolics, hydrocarbons, cellulotics.
Prereq: CHM 270, 271.

IDT 401 Polymers and Coatings Technology I Laboratory. 3 hrs
Synthesis, characterization, and identification of polymers used in coatings. The synthesis of solution acrylic, vinyl, acrylic emulsion, polyester, alkyd, epoxyester, melamine formaldehyde, and urethane polymers with extensive use of physical techniques such as G, I.R.T., G.P., and calorimetry.
Coreq: IDT 400.

IDT 402 Polymers and Coatings Technology II. 3 hrs
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: IDT 400.

IDT 403 Polymers and Coatings Technology II Laboratory. 3 hrs
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, epoxyester primer, two package urethane, acrylic latex, and E.D. primer).
Coreq: IDT 402.

IDT 404 Photo Communication Workshop. 3 hrs
Selected topics in photo communications, such as commercial and industrial photography, photo journalism, sensitometry and photography, photo journalism, and sensitometry and photo processing. The class schedule describes the specific topic being offered during a given semester. May be repeated for additional credit.
Prereq: IDT 304.

IDT 405 Coating Processes I. 3 hrs
Development of expertise in industrial coating processes. Substrate preparation, principles of adhesion, corrosion control, industrial coating materials, industrial coating systems, and regulatory compliance in the coatings industry.
Prereq: IDT 310 or IDT 400, or department permission.

IDT 406 Coatings Processes I Laboratory. 3 hrs
Hands-on experience in industrial coating processes. Substrate preparation, coatings application, and industrial coating systems design and operational control.
Coreq: IDT 405.

IDT 407 Coating Processes II. 3 hrs
Processes and equipment for coatings application, economic analysis of coating operations, paint defects, and line design for productivity and energy conservation.
Prereq: IDT 405 or department permission.

IDT 409 Emerging Technologies in Storage and Retrieval. 3 hrs
Conventional as well as emerging technologies of information storage and retrieval. Lecture and laboratory.

IDT 410 Mechanical and Physical Properties of Polymers. 3 hrs
Detailed study of the mechanical and physical properties of polymers from both theoretical and practical viewpoints. Polymer

morphology, transitions and relaxations in polymers, mechanical properties of high polymers, theology and their relationship to polymer fabrication processes.

Prereq: IDT 310 or department permission.

IDT 411 Mechanical and Physical Properties of Polymers Laboratory. 1 hr
A laboratory course designed to supplement lecture material from IDT 410. Hands-on exposure to a variety of experimental techniques commonly encountered in the polymers industry; glass transitions in polymers, melt-flow characteristics, measurement of Newtonian and non-Newtonian flow, mechanical behavior of polymers, and plastic deformation.
Coreq: IDT 410.

IDT 412 Energy Measurement. 2 hrs
Present energy use patterns and locations of potential energy savings as well as follow-up studies to determine program effectiveness. Submetering, infrared scanning, sonic detection, and seasonal adjustment.
Prereq: Senior standing, IDT 201.

IDT 413 Computers in Aviation. 3 hrs
Applications of computers in aviation at various levels of hardware and software complexity. Basic programs appropriate to aviation operations and maintenance control.
Prereq: ORI 215.

IDT 414 Rubber Technology II. 2 hrs
Special topics related to rubber compounding, processing and testing, and problems in specific applications of rubber products. Guest lecturers, students and staff will cover topics.
Prereq: IDT 214 or department permission.

IDT 415 Computer Programming for Energy Management. 3 hrs
The use of existing energy auditing programs as well as creation of programs for specialized use.
Prereq: IDT 201.

IDT 420 Women and Technology. 3 hrs
An interdisciplinary course designed to familiarize students with various concepts of technology, technological change, and technological society; probe the problems and advantages women face in technological society or technology-based professions; explore women's roles in several specific technology professions.

IDT 421 Photographic Typesetting. 3 hrs
Study of the fundamentals of phototypesetting technology. Document preparation, keyboard entry, file manipulation, and typeset copy output will be covered as well as word processor interfacing. Two hour lecture, two hour lab.

IDT 422 Aviation Maintenance, Operations, and Management. 3 hrs
Utilization of information covered in other courses to solve functional problems using simulation and real data.
Prereq: IDT 100, IDT 110, IDT 120, IDT 170, IDT 210, IDT 303, IDT 320, IDT 341, and IDT 413.

IDT 425 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.

IDT 430 Senior Seminar in Energy Management Technology. 3 hrs
Projects coordinated with local firms to give the student practical experience. Selected topics not covered in previous courses.

IDT 432 Senior Seminar in Facility Management. 3 hrs
Ties together previous experiences and training and deals with specific topics in facility management. Advanced projects of simulations will be used.

Prereq: Senior standing, majors only.

IDT 433 Arson 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 own 35mm camera, safety shoes, gloves, and hard hat.

Prereq: CHM 119 or PHY 221.

IDT 434 Hazardous Materials. 3 hrs

An examination of hazardous material incidents from the perspective of the public safety officer/manager charged with protecting people and property; identifying hazardous materials, assessing hazardous material accidents, planning and tactics for addressing hazardous material problems.

Prereq: CHM 119 or PHY 221.

IDT 435 Incident Command. 3 hrs

The study of complex fire situations, including analysis of pre-fire planning, establishing and managing the command post, and effective management of complex fireground operations. Emphasizes the study of multiple company response and the efficient utilization of available and prospective resources in handling major fires.

Prereq: PLS 450 or department permission.

IDT 436 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.

IDT 440 Industrial Distributor Operations. 3 hrs

Industrial distributors' operations, concepts of value added, organizational structure, time and space use, systems contracting, profitability, efficiency, distributor-supplier relations, and trends in industrial distribution. Case studies and industrial speakers.

Prereq: IDT 240, junior standing, and approval of instructor.

IDT 444 Industrial Distribution. 3 hrs

Seminar approach to study of problems of industrial distribution with assistance of representative from industrial distributor organizations in the geographical area.

Prereq: IDT 440, senior standing.

IDT 450 Advanced Coatings Topics III. 3 hrs

Advanced wire technology; in-depth study of wire in manufactured products.

Prereq: IDT 350 or permission of instructor.

IDT 460 Advanced Coatings Topics. 3 hrs

Development of in-depth formulating skills; new technology areas in coatings and polymers.

Prereq: IDT 402, IDT 403, or department permission.

IDT 470 Senior Seminar in Communication Technology. 2 hrs

Guest speakers and/or site visitations will be used to illustrate the application of new communication technologies common to business, industrial, or governmental environments.

IDT 475 Managing Correctional Agencies and Facilities. 3 hrs

A study of administrative practices in correctional agencies and facilities, including attention to organization structure, manage-

ment problems, financing, rights of offenders, intervention strategies, and community-based programs.

Prereq: PLS 450 or department permission.

IDT 477/478/479 Special Topics in Interdisciplinary Technology. 1/2/3 hrs

An examination of topics in interdisciplinary technology not covered in other departmental offerings. Students may elect these courses more than once as long as different topics are studied.

Prereq: Department permission.

IDT 487 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 Department of Interdisciplinary Technology. Regular employee benefits may be received during the employment period.

Prereq: Department permission.

IDT 495 Technology, Values, and the Future. 3 hrs

The development of modern technological society; 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. Interrelationships between technology and political, socioeconomic, and environmental systems; the relationship between technology and values.

IDT 497/498/499 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 selected more than once, after resubmission and approval.

Prereq: Department permission.

MILITARY SCIENCE

Lt. Col. David R. Klubeck
Department Head
18 Roosevelt Building
487-1020

Assistant Professors: Capt. Mark A. Gaston, Maj. Donald D. Guthrie

The military science program provides men and women training that permits entry into the active Army, Army Reserve, or National Guard as commissioned officers. Emphasis is given to the development of the student as a leader and a manager, capable of organizing and motivating others.

The program is of either four or two years' duration and is pursued as a complement to the student's academic major. If the program is successfully completed, the student may be commissioned a second lieutenant upon graduation.

Students must complete all of the military science courses unless granted advanced placement for the 100- and 200-level classes.

ROTC scholarships for three or two years' duration are available and are 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 \$100 per month subsistence allowance is paid for each school month during the period of the scholarship. Application can be made by contacting the Department of Military Science in January of the school year preceding the effective semester of the award.

The two-year program is designed for students transferring from community colleges and other students who were not enrolled in military science courses during their first two years of college. Applicants complete a six-week training program during the summer months, which takes the place of the on-campus MS 100 and 200 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 semester hours credit upon the recommendation of the Military Science Department and may apply for entry into the MS 300-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 approximately \$240 per month. SMP is an excellent opportunity to learn applied management skills.

Veterans and JROTC programs offer advanced placement credit to individuals who have completed basic training or three years JROTC in high school and have completed a minimum of 54 college credits. Credit may be given for MS 100 and 200 courses. Applicants should contact the department for acceptance into MS 300 or 301 at the earliest possible time before the next full semester.

All uniforms and texts are provided to the student without cost. Additionally, MS 300 and 400 participants receive \$100 per month during the school year and are paid at one-half the rate of a second lieutenant while attending a summer field course. Armed forces veterans may receive the \$100 per month pay in addition to any other veterans benefits they are receiving.

Programs of Study

Minor:

Military Science

Advising requirements specify that each year-level of students report to an assigned instructor. All students, prior to entry into the advanced program, must be processed by the enrollment officer.

Advising Coordinator: Lt. Col. David R. Klubeck

Special Requirements

Admission into the advanced program requires that all students successfully complete the Officer Selection Battery Test (OSB), undergo a complete physical examination at the Snow Health Center, and have completed the basic course or its equivalent.

The criteria for continuance is that all students maintain a 2.0 GPA or better.

The field work criteria is that all members of the advanced program participate in a field training exercise (FTX) each semester.

CREDIT TOWARD GRADUATION

The 12 semester hours 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 124 hours credit for graduation. When finalizing their undergraduate program, students should consult their academic advisers or the Academic Advising Center.

MINORS OFFERED IN THE MILITARY SCIENCE DEPARTMENT

MILITARY SCIENCE

Sem hours

Minor in military science 20
Required courses

- MS 100 Fundamentals of Leadership and Management I 2
- MS 101 Fundamentals of Leadership and Management II ... 2
- MS 200 Applied Leadership and Management I 2
- MS 201 Applied Leadership and Management II 2
- MS 300 Advanced Military Leadership and Management I 3
- MS 301 Fundamentals and Dynamics of the Military Team I 3
- MS 400 Fundamentals and Dynamics of the Military Team II 3
- MS 401 Advanced Military Leadership and Management II 3

Students must take all of the above courses unless granted advanced placement. Students electing a minor in military science may not use this minor to fulfill the state secondary provisional certificate requirement of a teaching minor.

AEROSPACE STUDIES

The Air Force officer education program at the University of Michigan provides Eastern Michigan University students the opportunity to earn a commission as a second lieutenant in the U.S. Air Force through the Air Force ROTC (AFROTC). Four- and two-year programs are offered and aerospace studies classes are conducted on the University of Michigan campus. Class registration is handled by AFROTC. Interested students should contact AFROTC at 747-4093 or visit Room 154 in North Hall on the University of Michigan campus. This is not a concentration program.

Students who enroll as cadets in the Air Force officer education program, successfully complete the program, and receive a university degree, are commissioned as second lieutenants in the United States Air Force.

NAVAL SCIENCE STUDIES

The Navy officer education program at the University of Michigan provides Eastern Michigan University students the opportunity to earn a commission as an ensign in the U.S. Navy or a second lieutenant in the U.S. Marine Corps through the Naval ROTC program (NROTC). Four and two-year programs are offered and naval science classes are conducted on the University of Michigan central campus. Registration for naval science classes is handled by the NROTC. Interested students should contact the NROTC Unit at 764-1498 or visit Room 103 in North Hall on the University of Michigan campus.

Students who enroll as midshipmen (officer candidates) in the Navy officer education program, successfully complete the program, and receive a university degree, are commissioned as ensigns in the U.S. Navy or second lieutenants in the U.S. Marine Corps.

MILITARY SCIENCE COURSES

Any two military science courses may be applied in fulfillment of the physical education activity requirement, unless a specified activity course is required in a program of study.

MS 100 Fundamentals of Leadership and Management I. 2 hrs
An introduction to the U.S. defense establishment with emphasis on the role and structure of the U.S. Army. Students also participate in adventure mini-courses (rappelling, rifle marksmanship, etc.)

MS 101 Fundamentals of Leadership and Management II. 2 hrs
An introduction to the role of the army officer, ethics, professionalism, leadership traits, and principles. As a part of the course, students receive a mini-course in first aid and land navigation.

MS 200 Applied Leadership and Management I. 2 hrs
An introduction to basic military leadership skills to include: map reading, communications, military briefings, physical training, and individual leadership skills.

MS 201 Applied Leadership and Management II. 2 hrs
A continuation of MS 200 in the study of military leadership and management skills. Included in this course are: individual leadership skills, applied management skills, terrain analysis, and platoon offense/defense operations.

MS 300 Advanced Military Leadership and Management I. 3 hrs
Techniques of leadership and management with emphasis on the role of the small unit leader as a teacher. Theory and application of basic military skills: topography, close order drill, and weaponry.

MS 301 Fundamentals and Dynamics of the Military Team I. 3 hrs
An examination of the leader's role as an organizer, decision-maker, and leader of a military team. Small unit leadership studied from the perspective of mission, capabilities, and management. Prepares students for the advanced summer camp experience.

MS 302 Leadership Laboratory.
Conducted for both semesters of the 300-level courses. Field application of classroom theories and studies. Physical abilities strengthened and tested. All areas of classroom instruction, drill, military skills, leadership, and physical aptitude.

MS 400 Fundamentals and Dynamics of the Military Team II. 3 hrs
The organization and functioning of command and staff in army organizations. The essentials of military correspondence, communications, and training.

MS 401 Advanced Military Leadership and Management II. 3 hrs
The essentials of the army personnel and logistics management systems. An in-depth examination of ethics and professionalism as they apply to the military officer. Case study of small unit combat leadership.

MS 402 Leadership Laboratory
A two-semester practicum conducted concurrently with 400-level courses. Exercise of organizational and leadership theory to which the student has been exposed. The cadet battalion command and staff structure is used as a vehicle to provide practical experience in the processes of leadership.

MS 497/498/499 Independent Study. 1/2/3 hrs
Intensive study or project approved by the department head. Study or project is directly related to a military subject.
Prereq: Department permission.



**THE
UNDERGRADUATE
PROFESSIONAL
EDUCATION
PROGRAMS OF
EASTERN MICHIGAN
UNIVERSITY**

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THE PROFESSIONAL EDUCATION PROGRAMS OF EASTERN MICHIGAN UNIVERSITY

MODEL

EMU teacher educators produce:

Knowledgeable professionals who are caring, reflective decision-makers in a culturally diverse society.

APPLICABILITY

The curricula and academic policies contained in this portion of the catalog are applicable to students who were admitted to the professional education program for the initial preparation of teachers (the teacher education program) on or after July 1, 1992; and

Persons admitted to the teacher education program under the provisions of an earlier catalog may continue to follow the curriculum and academic policies of the earlier catalog, except in such cases as a state-imposed policy (e.g., testing), expiration of a time limit, courses/programs no longer being offered, etc. However, students falling under the provisions of an earlier catalog are encouraged to change to and to follow the provisions of this catalog or its successors.

AUTHORITY

The curricula and academic policies contained in this catalog have been established under the EMU procedures for faculty input and administrative action. Extensive effort has been made to insure that the curricula and academic policies contained herein are in conformity with requirements of the National Council for the Accreditation of Teacher Education, the state of Michigan, the Michigan Department of Education, the Board of Regents of Eastern Michigan University, policies and processes of Eastern Michigan University, and, in a number of instances, discipline-based accrediting bodies and professional associations.

It is not necessarily the case that other EMU materials (e.g., older catalogs, departmental/program handout materials) are in conformity with the curricula and academic policies described in the previous paragraph. Therefore students subject to the provisions of this catalog must consider this portion of the catalog as the authoritative source of information.

AMENDMENT

As this document is used, technical errors may be found and corrected. It is possible that substantive changes may be made and implemented before the next editions of either or both the Undergraduate Catalog or Graduate Catalog are issued.

The University reserves the right to change fees, courses, policies, programs, services, and personnel as required. The official, amended edition of the curriculum and academic policy portions of this catalog is maintained in the Office of the Dean of the College of Education. An informational copy, accessible to students, faculty, and staff, is maintained in the Office of Student Teaching, College of Education.

TRANSFER STUDENTS

Many of the curricular and academic policy provisions of this catalog are stated as though the student took all work at Eastern Michigan University. It is recognized that many students have course work from other institutions. Inquiries about the possible application of some or all work from other institutions to an undergraduate program of study at Eastern Michigan University should be directed to the Office of Records and Registration, where they will be addressed in conformity with EMU policies on transfer work. Inquiries about the possible application of some or all work from other institutions to a graduate program of study at EMU should be directed to the graduate coordinator in the department in which the program is housed.

EXCEPTIONS

By policy of the College of Education Council, covering matters related to all professional education programs and, in addition, all other programs offered by the College of Education, requests for exceptions to academic policy (e.g., admission, retention, exit requirements) and for exceptions to curricular requirements are to be processed through administrative channels.

In particular, a request for an exception should be discussed with the academic adviser, reviewed and approved by the appropriate department head, and reviewed and approved by the Dean of the College of Education (or his designee). From there, depending on the nature of the request for exception, it may be reviewed as necessary by other administrators, and, if approved at all levels, transmitted to the appropriate office for use at the time of graduation audit and/or request for recommendation for certification.

In general, there are few appropriate opportunities for exceptions to be made. Each component of a program is carefully designed to accomplish some particular purpose. Where options are available, they are identified in this document. Where options are not available, it is generally because requirements (local or external) do not permit other approaches.

INTERPRETATION

Any student, staff member, faculty member, or administrator may request an official interpretation of the provisions of this portion of the catalog. Such a request must be made, in writing, to the Dean of the College of Education. The Dean will advise the requester of the source of the policy or curriculum requirement in question. If the source is an authority other than EMU governance structure for professional education (e.g., Michigan Department of Education), the requester will be advised from whom the interpretation should be sought. If the source is the EMU governance structure for professional education, the Dean, in consultation with appropriate parties, will obtain and provide the requested interpretation.

RELATIONSHIP OF THIS DOCUMENT TO OTHER MODES OF WRITTEN AND ORAL ADVICE

Students to whom the provisions of this catalog are applicable (see above) must understand that, in the event of inconsistency between (a) oral advice (e.g., conversation with a faculty or staff member) or informal written advice (e.g., an advising form, a brochure, a letter) and (b) the provisions of this catalog, the provisions of this catalog are the ones that govern the situation.

Given the size and complexities 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 programming 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 the 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.

University Council on Teacher Education

The University Council on Teacher Education (UCTE) is charged, under its governing document, with the coordination of initial teacher preparation. The UCTE is composed of elected faculty members from four 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 UCTE are made as recommendations to the dean of the College of Education.

The College of Education Council

The College of Education Council (COE Council) is composed of elected members of the faculty of the College of Education. UCTE recommendations are forwarded by the dean of the College of Education, usually with his independent recommendation, 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/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 submitted directly to the COE Council for its review. Its 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 coursework necessary for eligibility for the additional early childhood education endorsement. See for 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 fields: biology, business education, chemistry, computer science, earth science, economics, English, French, general science, geography, German, history, industrial arts, industrial-vocational education, mathematics, physics, political science, psychology, social science, sociology, Spanish, and speech. 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: art, Japanese language and culture, music, and physical 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 emotionally impaired, hearing impaired, mentally impaired, physically and otherwise health impaired, and visually impaired. The speech and language impaired 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, coursework leading to eligibility for recommendation for a certification endorsement is available in such fields as astronomy, bilingual Spanish, health, vocational business education, and vocational home economics.

Employment Opportunities

The demand for certain kinds of teachers is much greater, both 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 adviser at an early point so as to optimize ultimate employment opportunities through careful selection of a course of study.

ADMISSION TO AND RETENTION IN THE TEACHER EDUCATION 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 education program. Admission requirements are common for all teacher education programs.

Application for admission to the teacher education program should occur immediately after the semester in which the student has earned 56 semester hours of credit. Transfer students with more than 56 semester hours should apply immediately after the semester in which they have earned 12 semester hours at EMU.

Admission to the teacher education program is not automatic. Only those persons who have formally applied are considered for admission. Not all persons who apply become eligible for admission.

Application forms and additional information are available in the Office of Student Teaching, 101 Boone Hall.

Criteria

Criteria for admission to and continuance in the teacher education program are:

1. A minimum EMU overall grade point average of at least 2.50 and at least 2.50 in the major (secondary and where applicable, elementary) or three minors (elementary). As an alter-

native to the overall 2.50 GPA requirement, an applicant may substitute either of the following:

- a. Complete 24 credit hours of undergraduate work in Michigan-approved substantive fields at Eastern Michigan University and earn a GPA of 2.50 or better. At least one half of the credits must be in the student's major or minor(s) which he/she expects to teach. Students may not enroll in courses for which admission to the teacher education program is a prerequisite before the 24 hours are completed. Courses to be included in the 24 hours must either: (i) be taken after submission of the application for entrance to the teacher education program or (ii) be completed no earlier than 12 months prior to the approval for admission.
 - b. Complete a master's degree in a Michigan substantive field he/she expects to teach. Students may not enroll in courses for which admission to the teacher education program is a prerequisite before the master's degree is completed.
2. Demonstrated competence in:
 - a. speaking effectiveness as determined by successful completion of the required course(s) in speech;
 - b. reading ability as determined by EMU admission policies, successful completion of basic studies requirements; and successful completion of the state-mandated basic skills test.
 - c. written expression as determined by successful completion of all basic studies requirements, a review of an autobiography submitted as a part of the teacher education program admission process; and successful completion of the state-mandated basic skills test.
 - d. mathematical computation as determined by EMU admissions policies, completion of basic studies requirements in science and mathematics with a C or better, and successful completion of the state-mandated basic skills test.
 3. Satisfactory health status, including tuberculosis and speech and hearing screenings.
 4. Social and emotional adjustment: account is taken of standards of conduct expected on Eastern's campus; the degree to which students meet their academic, financial, moral, social, and other obligations; and the practice of good citizenship among fellow students.
 5. Freedom from any kind of probation—administrative or academic. While on academic probation, students may not register for, remain in, or receive credit for a professional education course. This includes all methods classes taught in departments outside of the College of Education.

Undergraduate students on academic probation may not earn credit for any graduate level on-campus or off-campus courses (500 level and above).

PRE-STUDENT TEACHING FIELD EXPERIENCES

Robbie A. Johnson
Director

The pre-student teaching field experience requires prospective teachers to work with children or youth in an actual classroom setting. It is designed to help prospective teachers evaluate their own abilities as teachers and to affirm their decision about choosing teaching as a career. It also enables 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 are required of all candidates for a recommendation for a teaching certificate. See the program descriptions for the exact requirement in each program. *At least 50 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.* By the end of the pre-student teaching field experience, the student should be able to:

1. describe some of the major issues confronting the school in society;
2. describe the organization and operation of a public school;
3. explain some classroom management skills;
4. understand how students in the public schools behave and learn;
5. describe some teaching methods and teaching behaviors;
6. make a valid decision concerning teaching as a career.

Students may and should complete the pre-student teaching experience early in their college career. Students should identify a pre-student teaching field assignment that includes a wide range of experiences with students from different socio-economic levels and cultures. The teaching activity selected must be approved by the instructor of CUR 304, CUR 305, EDP 322, SFD 328, or RDG 314.

Majors in special education should consult their advisers or the pre-student teaching director concerning overlapping preclinical requirements.

STUDENT TEACHING

Robbie A. Johnson
Director

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 twelve semester hours of student teaching.

Students in special education areas (emotionally impaired, hearing impaired, mentally impaired, physically or otherwise health impaired, visually impaired) are required to fulfill six semester hours of student teaching with non-impaired children and an additional ten semester hours of student teaching in their area of specialization.

Students desiring certification in bilingual education are required to fulfill six semester hours of student teaching with English-speaking children and an additional six semester hours of student teaching in bilingual education.

Application Deadlines

Applications for student teaching may be obtained from the Student Teaching Office, 101 Boone Hall, and should be completed and returned to the Student Teaching Office in accordance with the following schedule:

- Fall student teaching:
previous January 15
- Summer student teaching:
previous January 15
(By special permission only)
- Winter student teaching:
previous June 15
- Spring student teaching:
previous January 15
(By special permission 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 hours. To be considered by the director of student teaching for more than 15 semester 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. CUR 304 Curriculum and Methods (Elementary) or CUR 305 Curriculum and Methods (Secondary and K-12)
2. EDP 322 Human Development and Learning (all except Special Education) or EDP 325 Life Span Human Growth and Development (Special Education)
3. SFD 328 Social Aspects of Teaching
4. Secondary and K-12: the appropriate special methods course in the major or minor field.
5. Elementary: RDG 314 Teaching Reading in the Elementary School and MTH 381 The Teaching of Mathematics K-6
6. All state-mandated tests.

No student shall be assigned to student teaching whose grade point average is less than 2.50 in work completed at Eastern Michigan University or less than 2.50 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" in any professional education course. Students enrolled in the elementary education program, if taking the three minors option, must attain a minimum GPA of 2.50 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 cannot arrange their own student teaching assignments. Prior arrangements will not be honored by the Student Teaching Office. Placement could be delayed a full semester in these cases.

A preferred student teaching placement will be accommodated by the Student Teaching Office 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.

Students enrolled at another institution in Michigan or in another state, who wish to do their student teaching through Eastern Michigan University, are advised to consult the director of student teaching on their campus prior to submitting the request to this University. Students granted guest student status for student teaching are expected to have fulfilled all prerequisites required for student teaching at the home institution.

Spring student teaching is available only under very specialized circumstances involving special education teachers.

When students are doing student teaching, they should arrange their daily schedule so that teaching will take precedence over other interests and duties.

Students requesting placements beyond a 40-mile radius from Eastern Michigan may be assessed a mileage fee.

Courses

All student teaching courses (EDU 491 through EDU 499) provide practical experience in the appropriate classroom under the guidance of mentor supervising teachers. The student teacher's role as an instructional decision-maker is reflected in planning for teaching, managing the classroom, and directing the learning activities of pupils. Student teachers are given increasing tasks for directing the activities of the classroom, gradually assuming full responsibility.

All student teaching courses have as prerequisites the following requirements, with additional prerequisites given, as applicable, with each course:

Elementary—Completion of EDP 322 or EDP 325, RDG 314, CUR 304, SFD 328, and MTH 381 (or appropriate substitutions).

Secondary—Completion of EDP 322, CUR 305, SFD 328, and completion of the special methods course in the major or minor (or appropriate substitutions).

EDU 491 Student Teaching.	10 hrs.
EDU 492 Student Teaching.	12 hrs.
EDU 493 Student Teaching. For experienced, certified teachers. <i>Prereq: Permission from student teaching office.</i>	2 hrs.
EDU 494 Student Teaching. For experienced, certified teachers. <i>Prereq: Permission from student teaching office.</i>	3 hrs.
EDU 495 Student Teaching. <i>Prereq: Permission from student teaching office.</i>	4 hrs.
EDU 496 Student Teaching. <i>Prereq: Permission from student teaching office.</i>	6 hrs.
EDU 497 Student Teaching. <i>Prereq: Credit toward certification in either EDU 496 or EDU 499.</i>	6 hrs.
EDU 498 Student Teaching. <i>Prereq: Credit toward certification in either EDU 496 or EDU 499.</i>	5 hrs.
EDU 499 Student Teaching. <i>Prereq: Permission from student teaching office.</i>	6 hrs.

ELEMENTARY AND EARLY CHILDHOOD

The curricula for the elementary education programs (including early childhood with the selection of the appropriate minor) consist of (1) an appropriately selected group of courses in Basic Studies, (2) an appropriately chosen major and minor (or three minors), and (3) a required group of professional education courses. See page 281 for requirements having to do with admission to, retention in, and exit from the teacher education program. Satisfactory completion of these courses and requirements will satisfy requirements for a baccalaureate degree and for eligibility for recommendation for the State of Michigan Provisional Elementary Certificate.

Ordinarily, the degree earned is the Bachelor of Science. The Bachelor of Arts degree requires completion of 75 hours in the liberal arts and one year of college credit in foreign language. In any event, the student must complete a minimum of 124-128 appropriate semester hours to satisfy graduation requirements.

The State Elementary Provisional Certificate is valid for teaching all subjects kindergarten through grade 5, for teaching in self-contained classrooms in grades 6-8, and for teaching in one's major or minor areas of concentration in grades 6-8. The certification test for elementary education is #83, "Elementary Education."

APPROVED MAJORS FOR THE ELEMENTARY PROGRAM

Art	p. 289
Arts Group	p. 361
Biology	p. 291
Children's Literature and Drama/Theatre for the Young, Interdisciplinary Major in Communication	p. 303
Earth Science	p. 311
Elementary Science Group	p. 362
English and American Literature and Language, Group Major in	p. 302
French	p. 305
Geography	p. 312
Geology	p. 312
German Language and Literature	p. 306
History	p. 315
Japanese Language and Culture Teaching	p. 307
Literature, Language, Communication, and Theatre Arts	p. 363
Mathematics for the Elementary Teaching Certificate	p. 319
Music	p. 323
Political Science	p. 336
Social Science Group Major for Elementary Education	p. 364
Spanish	p. 308

APPROVED MINORS FOR THE ELEMENTARY PROGRAM AND THE SPECIAL EDUCATION-ELEMENTARY PROGRAMS

Art	p. 289
Arts Group (not available with art major or with music major)	p. 364
Bilingual-Bicultural Education Spanish-English	p. 308
Biology	p. 291
Children's Literature	p. 303
Communication Minor for Elementary and Special Education Students	p. 296
Drama/Theatre for the Young	p. 296
Early Childhood Education	p. 365
Earth Science	p. 313
Elementary Music Education	p. 323

Elementary Science Group	p. 365
English Language and Literature	p. 302
French Language	p. 366
Geography	p. 313
Geology	p. 313
German Language	p. 366
Health	p. 343
History	p. 315
Mathematics for the Elementary Teaching Certificate	p. 320
Physical Education for Special Education	p. 343
Political Science	p. 336
Social Science Group (Elementary)	p. 366
Sociology	p. 341
Spanish Language	p. 366
Technology Education	p. 376

CURRICULA FOR SECONDARY (JUNIOR-SENIOR HIGH SCHOOL) AND K-12 TEACHERS

The curricula for the secondary/K-12 teacher education programs consist of (1) an appropriately selected group of courses in Basic Studies, (2) an appropriately chosen major and (except where noted below) minor, (3) and a required group of professional education courses. See page 281 for requirements having to do with admission to, retention in, and exit from the teacher education program. Satisfactory completion of these courses and requirements will satisfy requirements for a baccalaureate degree and for eligibility for recommendation for the State of Michigan Provisional Secondary Certificate. The student must complete a minimum of 124-128 appropriate semester hours to satisfy graduation requirements.

Ordinarily, the degree earned is the Bachelor of Science; however, the Bachelor of Arts degree may be obtained by completion of 75 hours in the liberal arts and one year of college credit in foreign language.

The teaching majors offered by Eastern Michigan University consist of:

Secondary Programs

Biology	p. 290
Business Services and Technology Education	p. 370
Chemistry	p. 292
Communication	p. 294
Computer Science	p. 297
Earth Science	p. 310
Economics	p. 299
English	p. 301
French	p. 304
General Science—Biology	p. 324
General Science—Chemistry	p. 325
General Science—Earth Science	p. 326
General Science—Mathematics	p. 327
General Science—Physics	p. 329
Geography	p. 311
German	p. 305
History	p. 314
Industrial-Vocational Education	p. 371
Marketing Education	p. 372
Mathematics	p. 318
Physics	p. 330
Political Science	p. 334
Psychology	p. 337
Social Studies (Social Science)	p. 315
Sociology	p. 339
Spanish	p. 307
Technology Education	p. 374

K-12 Programs

Art	p. 288
Japanese Language and Culture	p. 306
Music (Instrumental)	p. 321
Music (Vocal)	p. 322
Physical Education	p. 342

APPROVED MINORS FOR SECONDARY, K-12, AND SPECIAL EDUCATION-SECONDARY PROGRAMS

Art	p. 289
Astronomy	p. 331
Bilingual-Bicultural Education Spanish-English	p. 308
Biology	p. 291
Chemistry	p. 293
Comprehensive Minor in Communication and Theatre Arts	p. 295
Computer Science	p. 298
Earth Science	p. 313
Economics	p. 300
English Language and Literature	p. 302
French Language	p. 309
General Science (available only to majors in one of the sciences)	p. 331
Geography	p. 313
Geology	p. 313
German Language	p. 309
Group Minor in Social Science (not available with the social science major)	p. 315
Health	p. 343
History	p. 315
Mathematics	p. 319
Occupational Foods (available only to Business Education and Technology Education majors)	p. 368
Physical Education	p. 343
Physical Education for Special Education Majors (available only to special education majors)	p. 343
Physics	p. 332
Political Science	p. 336
Psychology	p. 338
Sociology	p. 341
Spanish Language	p. 309

SPECIAL EDUCATION PROGRAMS**Admission**

Admission requirements to the University, the teacher education program, and the Department of Special Education must be met by students intending to major in the programs listed below. However, students may 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 letter of recommendation from a faculty member in the Department of Special Education and following acceptance into the teacher education program. Program area faculty will determine admission.

Admission criteria

1. Completion of 56 semester hours of college credit and with an EMU grade point average of 2.50 or better.
2. Completion of SGN 251 Education of Exceptional Children and the introductory course in the major area of study with a grade of "C" or better (except SLI; see below). These introductory courses are:
 - a. Emotionally impaired: SEI 301 Emotionally Impaired Children and Adolescents.
 - b. Hearing impaired: (see statement under Hearing Impaired).

- c. Mentally impaired: SMI 350 Introduction to Mental Retardation.
 - d. Physically and otherwise health impaired: SPI 310 Developmental Sciences for Teachers of the Physically and Health Impaired.
 - e. Speech and language impaired: SLI 334 Applied Phonetics, SLI 335 Communication Disorders, SLI 316 Speech Science and SLI 337 Language Acquisition with "B" or better. (See also Speech and Language Impaired section.)
 - f. Visually impaired: Demonstrate proficiency in typing.
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 a letter of recommendation from a faculty member in the Department of Special Education.

Criteria for continuance in a program of study in the Department of Special Education is dependent upon:

1. Maintenance of a 2.50 cumulative grade point average.
2. Maintenance of a 2.50 cumulative grade point average in major courses in program of study (3.0 in speech and language impaired).
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.

Students who do not meet all of the above criteria will be identified by the department as special help students. Students so identified will be required to confer with their adviser to jointly develop a written plan for correction of any deficiency. Opportunity for correction of the deficiency usually will not be extended beyond two semesters of full-time enrollment. Students who do not correct their deficiencies to the satisfaction of the program area faculty within the prescribed time limits will be subject to termination from that program of study.

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 them of any extenuating circumstances that may aid them in arriving at a fair and equitable decision. The faculty decision will be final and will be transmitted to the student in 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.

Field work in both regular and special education is required. Pre-student teaching experiences are required of all candidates pursuing a teaching certificate. (See Pre-Student Teaching, page 282.) Majors should consult with their advisers 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 in either elementary or secondary (regular) education is required for all programs of study in special education except speech and language impaired (see SLI program description). Successful completion of any program of study leads to either an elementary or secondary special education endorsement except in the area of speech and language impaired. The speech and language impaired program is a 5-year M.A. degree program in which K-12 endorsement is granted.

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 advisers in speech and language impairment.

National 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 advisers in this area.

Special Education Programs

Emotionally Impaired (Elementary)	p. 345
Emotionally Impaired (Secondary)	p. 346
Hearing Impaired (Elementary)	p. 347
Hearing Impaired (Secondary)	p. 348
Mentally Impaired (Elementary)	p. 349
Mentally Impaired (Secondary)	p. 350
Physically and Otherwise Health Impaired (Elementary) ...	p. 351
Physically and Otherwise Health Impaired (Secondary)	p. 352
Speech and Language Impaired (All Grade Levels)	p. 353
Visually Impaired (Elementary)	p. 354
Visually Impaired (Secondary)	p. 355

SPECIAL METHODS COURSES FOR SPECIAL EDUCATION/SECONDARY PROGRAMS

MINOR/METHOD COURSE(S)

- Art—FA 317 (2) and FA 416 (2)
- Astronomy—PHY 325 (3)
- Bilingual-Bicultural Education Spanish-English—FLA 422 (3)
- Biology—BIO 403 (3)
- Chemistry—PHY 325 (3)
- Communication Minor for Elementary and Special Education Students—CTA 307 (3)
- Computer Science—CSC 346 (3)
- Earth Science—GES 347 (3)
- Economics—HIS 481 (3)
- English Language and Literature—ENG 308 (3)
- French Language—FLA 411 (3)
- German Language—FLA 411 (3)
- Geography—HIS 481 (3)
- Geology—GES 347 (3)
- Group Minor in Social Science—HIS 481 (3)
- Health—PED 367 (3)
- History—HIS 481 (3)
- Mathematics—MTH 304 or MTH 306 (3)
- Physical Education—PED 367 (3)
- Physical Education for Special Education Majors (available only to special education majors)—PED 367 (3)
- Physics—PHY 325 (3)
- Political Science—HIS 481 (3)
- Psychology—HIS 481 (3)
- Sociology—HIS 481 (3)
- Spanish Language—FLA 411 (3)



COLLEGE OF ARTS AND SCIENCES

Barry Fish, Dean
Barbara Richardson, Associate Dean
James Waltz, Acting Associate Dean
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DEPARTMENTS

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
Physics and Astronomy
Political Science
Psychology
Sociology, Anthropology and Criminology

ART

John E. Van Haren
Department Head
114 Ford Hall
487-1268

See the Art department listings on pp. 53-57 for further information.

ART EDUCATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in art, certification code "LX." The certification test covering this field is #41, "Art Education."

ART EDUCATION AND BACHELOR OF FINE ARTS PLUS TEACHER CERTIFICATION K-12 TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. See inside back cover
- I-B-3. See inside back cover
- I-B-4. See inside back cover
- I-B-5. See inside back cover
- II-B-1. See inside back cover
- II-B-2. See inside back cover
- II-B-3. See inside back cover
- III-B-1. See inside back cover
- III-B-2. See inside back cover
- III-B-3. See inside back cover
- III-B-4. See inside back cover
- IV-B-1. See inside back cover
- IV-B-2. See inside back cover
- IV-B-3. See inside back cover
- IV-B-4. FA 107 Art History Survey I (3)*

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:50

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Art, art education (or B.F.A plus teacher certification), for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- FA 108 Art History Survey II (3)
- FA 122 Two-Dimensional Design (3)
- FA 123 Drawing I (3)
- FA 124 Drawing II (3)
- FA 210 Life Drawing (3)
- FA 215 History of 19th-Century Art (3)
- FA 216 History of Contemporary Art I (3)
- FA 231 Three-Dimensional Design (3)

Twenty-seven credits from the following list of courses:

If following the B.A.E. curriculum, *nine courses:*

If following the B.F.A. plus teacher certification, *six courses* plus a sequence of *three* advanced courses from one of the areas (e.g., FA 355 Textiles, FA 356 Textiles, FA 455 Textiles):

- FA 201 Graphic Design (3)
- FA 235 Textiles (3)
- FA 304 Beginning Photographic Imagery (3)
- FA 305 Printmaking (3)
- FA 307 Ceramics (3)
- FA 310 Sculpture (3)
- FA 313 Painting (3)
- FA 314 Watercolor I (3)
- FA 320 Jewelry (3)
- FA 432 Drawing III (3)

Credit hours in Specialty Studies:51

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)
- FA 317 Teaching of Art (2)

*NOTES:

K-12

^aCourse required for and applicable to major.

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- FA 416 Art Methods and Materials (2)
- EDU 496 Student Teaching (6)
- EDU 497 Student Teaching (6)

Credit hours in Professional Studies:35

Total credit hours required: 136

ART MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in art, certification code "LX." The certification test covering this field is #41, "Art Education."

The curriculum for this major is that which is listed above under "teaching major" in the K-12 art program, plus the IV-B-4 requirement from that program's Basic Studies requirements. No minor is required.

51 hours, not including course work applicable to Basic Studies.

ART MINOR

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 art, certification code "LX." The certification test covering this field is #41, "Art Education."

One of:

- #FA 101 Introduction to Art (3)
- FA 123 Drawing I (3)
- FA 122 Two-Dimensional Design (3)

One art history course (FA 108 suggested) (3)

12 hours in studio art and/or art history, of which at least 6 hours must be in courses numbered 300 or above. FA 100; FA 101; FA 165, FA 166, FA 167; and **FA 300 may be used to meet this requirement.

FA 317 Teaching of Art (2)

**FA 416 Art Methods and Materials (2)

22 hours, not including hours satisfied in Basic Studies or professional studies.

*NOTES:

<— Art Minor

**Prereq: Admission to the teacher education program. Required in professional studies for elementary program.

#May be satisfied in Basic Studies.

BIOLOGY

Douglas Y. Shapiro
Department Head
316 Mark Jefferson
487-4242

See the Biology department listings on pp. 58-67 for further information.

BIOLOGY

Successful completion of this course of studies 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 studies meets requirements of the National Science Teachers Association. The certification test covering this field is #17, "Biology."

BIOLOGY

SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. See inside back cover
- I-B-3. See inside back cover
- I-B-4. See inside back cover
- I-B-5. See inside back cover
- II-B-1. CHM 121-122 General Chemistry I with lab (4)*
- II-B-2. See inside back cover
- II-B-3. PHY 221 Mechanics, Sound, and Heat (4)*
- III-B-1. See inside back cover
- III-B-2. See inside back cover
- III-B-3. See inside back cover
- III-B-4. See inside back cover
- IV-B-1. See inside back cover
- IV-B-2. See inside back cover
- IV-B-3. See inside back cover
- IV-B-4. See inside back cover

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 50

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Biology for additional applicable information. Hours must be distributed such as to include at least seven hours in botany (may include microbiology) and seven hours in zoology. See note "a" above for courses applicable to both Basic Studies and the major.

- CHM 123-124 General Chemistry II with lab (4)
- BOT 221 General Botany (4)
- PHY 222 Electricity and Light (4)
- ZOO 222 General Zoology (4)
- BIO 301 Genetics (3)
- BIO 320 Introduction to Cell Physiology (4)
- BIO 420 General Ecology (4)

One of:

- CHM 270, 271 Organic Chemistry with lab (5)
- CHM 371-373 Organic Chemistry with labs (8)

One of:

- ZOO 300 Natural History of Invertebrates (3)
- ZOO 310 Natural History of Vertebrates (3)
- BOT 354 Trees and Shrubs (3)
- ZOO 421 Entomology (3)
- ZOO 422 Ichthyology (3)
- ZOO 425 Ornithology (3)
- BOT 450 Aquatic Tracheophyta (3)
- BOT 451 Freshwater Algae (3)
- BOT 453 Taxonomy and Ecology of Diatoms (3)
- BOT 455 Systematic Botany (3)
- ZOO 474 Herpetology (3)
- ZOO 480 Protozoology (3)
- ZOO 482 Aquatic Entomology (3)
- ZOO 485 Mammalogy (3)

Eight credits in biology, botany, microbiology, or zoology except BIO 205, BIO 207, ZOO 326, ESC 302, ESC 303, and BIO 403 (8)

Credit hours in major and related areas: 43

Minor

Select a minor from the approved list (see p. 285)

Credit hours in minor: 20'

*NOTES:

Secondary

^aCourse required for and applicable to major.

ⁱCould be less, depending on the minor and the possible application of Basic Studies courses to the minor.

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- BIO 403 Methods and Materials for Teaching Biology (3)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: 147

BIOLOGY MAJOR**ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in biology, certification code "DA." The certification test covering this field is #17, "Biology."

The curriculum for this major is that which is listed under "Major" in the secondary biology program given above, plus the "science" requirements from that program's Basic Studies requirements. Approved minors are those for the elementary program as given on page 284.

51 hours, not including the minor or course work applicable to Basic Studies.

BIOLOGY MINOR**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 biology, certification code "DA." The certification test covering this field is #17, "Biology."

- BOT 221 General Botany (4)
- ZOO 222 General Zoology (4)
- BIO 301 Genetics (3)

Nine hours from biology, botany, microbiology, or zoology except ESC 302, ESC 303, BIO 205, BIO 403. Either BIO 204 or BIO 239 may be used, but not both.

No more than two hours may be taken in any combination of BIO/BOT/ZOO 497/498. BIO/BOT/MIC/ZOO 387/487 will not count.

Strongly advised: CHM 119; or CHM 121-122 and CHM 123-124.

An additional four cognate hours of science must be completed to meet NCA requirements (24 hours) for teaching this minor at the junior-senior high school level. BIO 403 may be included in these additional hours. Students with no previous biology in high school must start with BIO 105, which does not count toward the minor.

In some programs ZOO 200 may be satisfied through Basic Studies.

20 hours

CHEMISTRY

Judith T. Levy
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225 Mark Jefferson
487-0106

See the Chemistry department listings on pp. 68-74 for further information.

CHEMISTRY

SECONDARY TEACHER CERTIFICATION

CHEMISTRY

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in chemistry, certification code "DC," and, depending on the minor selected, an additional endorsement. This program of studies meets requirements of the National Science Teacher Association. The certification test covering this field is #18, "Chemistry."

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. *See inside back cover*
 - I-B-3. *See inside back cover*
 - I-B-4. MTH 120 Calculus I (4)^b
 - I-B-5. *See inside back cover*
 - II-B-1. PHY 223 Mechanics, Sound, and Heat (5)^b
 - II-B-2. *See inside back cover*
 - II-B-3. CHM 121-122 General Chemistry I with lab (4)^{*}
 - III-B-1. *See inside back cover*
 - III-B-2. *See inside back cover*
 - III-B-3. *See inside back cover*
 - III-B-4. *See inside back cover*
 - IV-B-1. *See inside back cover*
 - IV-B-2. *See inside back cover*
 - IV-B-3. *See inside back cover*
 - IV-B-4. *See inside back cover*
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 52

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Chemistry for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- CHM 123-124 General Chemistry II with lab (4)
- CHM 261 Introduction to Physical Chemistry (3)
- CHM 281 Quantitative Analysis (4)
- CHM 351 Introductory Biochemistry (3)
- CHM 371-373 Organic Chemistry with labs (8)
- CHM 381 Instrumentation for Chemical Technology (2)
- Four credits from 300- and 400-level courses in chemistry

One of:

- PHY 222 Electricity and Light (4)
- PHY 224 Electricity and Light (5)

Additional hours, such as to total 16 taken in physics, biology, and earth science and including at least one course from each of physics, biology, and earth science (7)

Minor

Select a minor from the approved list (see p. 285)

Credit hours in minor: 20¹

Subtotal, Major and minor: 59

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

*NOTES:

Secondary

^aCourse required for and applicable to major.

^bPrerequisite for another course in program.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- PHY 325 Methods of Teaching the Physical Sciences (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: 145

CHEMISTRY MINOR

SECONDARY, K-12, AND SPECIAL EDUCATION-SECONDARY CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in chemistry, certification code "DC." The certification test covering this field is #18, "Chemistry."

CHM 121-124 General Chemistry I-II with labs (8)

CHM 270-271 Organic Chemistry with lab (5)

CHM 281 Quantitative Analysis (4)

(The CHM 371-373 Organic Chemistry sequence may be substituted for CHM 270-271 Organic Chemistry with lab if a stronger background is desired.)

7 hours in chemistry from courses numbered above 200.

In some programs, CHM 121-122 may be satisfied through Basic Studies.

24 hours

COMMUNICATION AND THEATRE ARTS

Dennis M. Beagen
Department Head
124 Quirk Building
487-3131

See the Communication and Theatre Arts department listings on pp. 74-85 for further information.

COMMUNICATION

Successful completion of this course of studies 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 certification test covering this field is #04, "Speech."

*NOTES:

Secondary

^aCourse required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

COMMUNICATION MAJOR SECONDARY TEACHER CERTIFICATION

Successful completion of this course of studies 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 certification test covering this field is #04, "Speech."

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. One of:^a
 - CTA 224 Public Speaking (3)
 - CTA 225 Listening Behavior (3)
 - CTA 226 Non-Verbal Communication (3)
 - CTA 227 Interpersonal Communication (3)
 - I-B-4. See inside back cover
 - I-B-5. See inside back cover
 - II-B-1. See inside back cover
 - II-B-2. See inside back cover
 - II-B-3. See inside back cover
 - III-B-1. See inside back cover
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1. See inside back cover
 - IV-B-2. See inside back cover
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:49

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Communication and Theatre Arts Speech Communication option for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

One of: (not taken under I-B-3 in Basic Studies)

- CTA 224 Public Speaking (3)
- CTA 225 Listening Behavior (3)
- CTA 226 Non-Verbal Communication (3)
- CTA 227 Interpersonal Communication (3)

Two of:

- CTA 350 Persuasion (3)
- CTA 354 Organizational Communication (3)
- CTA 356 Argumentation and Debate (3)
- CTA 359 Small Group Communication (3)

Two of:

- CTA 440 Survey of Public Address (3)
- CTA 460 Theories of Speech Criticism (3)
- CTA 475 Research in Speech Communication (3)
- CTA 485 Theories of Speech Communication Behavior (3)

15 hours from:

- CTA 224 Public Speaking (3)
- CTA 226 Non-Verbal Communication (3)
- CTA 227 Interpersonal Communication (3)
- CTA 227 Interpersonal Communication (3)
- CTA 321 Parliamentary Procedure and Meeting Management (3)
- CTA 350 Persuasion (3)

- CTA 356 Argumentation and Debate (3)
- CTA 357 Interviewing as Communication (3)
- CTA 359 Small Group Communication (3)
- CTA 440 Survey of Public Address (3)
- CTA 460 Theories of Speech Criticism (3)
- CTA 387 Cooperative Education in Communication (1)
- CTA 388 Cooperative Education in Communication (2)
- CTA 389 Cooperative Education in Communication (3)
- CTA 487 Internship in Communication (1)
- CTA 488 Internship in Communication (2)
- CTA 489 Internship in Communication (3)
- CTA 166/266/366/466 Forensics (1 each)

Minor

A minor from the approved list (see p. 285)

Subtotal, Major and minor:50

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- CTA 307 The Teaching of Speech (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies:34

Total credit hours required, with 20-hour minor: 133

**COMMUNICATION MAJOR
ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in speech, certification code "BD." The certification test covering this field is #04, "Speech."

The curriculum for this major is that which is listed under "Teaching Major" in the secondary speech program given above, plus the requirements under I-B-3 in that program's Basic Studies requirements. Approved minors are those for the elementary program as given on page 284.

30 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

**COMPREHENSIVE MINOR IN COMMUNICATION AND
THEATRE ARTS**

**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 certification test covering this field is #04, "Speech."

One of:

- *CTA 121 Fundamentals of Speech (2)
- *CTA 124 Fundamentals of Speech (3)

Choose at least three credits in four of the six areas of concentration (communication, interpretation/performance studies, speech improvement, telecommunications and film, theatre arts, drama/theatre for the young).

6-9 hours additional hours from speech communication or theatre arts

0-4 hours in department courses outside of speech communication or theatre arts

20 hours

***NOTES:**

**← Comprehensive
Minor in Communica-
tion and Theatre Arts**

***May be satisfied in Basic Studies.**

NOTES:*Communication —>**

*Included in Basic Studies.

NOTES:*Drama/Theatre for the Young —>**

*Included in Basic Studies for the elementary program and the special education programs.

**Included in Basic Studies for the elementary program.

COMMUNICATION MINOR**ELEMENTARY AND SPECIAL EDUCATION-ELEMENTARY 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 certification test covering this field is #04, "Speech."

***One of:**

- CTA 121 Fundamentals of Speech (2)
- CTA 124 Fundamentals of Speech (3)

One of:

- CTA 205 Voice and Articulation (3)
- CTA 210 Interpretative Reading (3)
- CTA 301 Speech Science (3)
- CTA 400 Phonetics and Dialects of Spoken English (3)

One of:

- CTA 155 Play Production (3)
- CTA 222 Drama and Play in Human Experience (3)
- CTA 252 Stagecraft (3)
- CTA 323 Improvising and Role-Play (3)

One of:

- *CTA 224 Public Speaking (3)
- CTA 350 Persuasion (3)
- CTA 356 Argumentation and Debate (3)
- CTA 359 Small Group Communication (3)

If CTA 121 is in the program, choose 9 hours; if CTA 124 is in the program, choose 8 hours; from courses listed above or from the following:

- CTA 141 Introduction to Radio-TV-Film Production (3)
- CTA 165 Television Laboratory (1)
- CTA 166 Forensics (1)
- CTA 167 Theatre Practice (1)
- CTA 168 Interpretation (1)
- CTA 169 Radio Station WQBR (1)
- CTA 322 Theatre for the Young (3)
- CTA 497 Independent Study in Drama/Theatre for the Young (1)

15 hours, not including hours that could be taken to satisfy Basic Studies requirements.

DRAMA/THEATRE FOR THE YOUNG MINOR**ELEMENTARY AND SPECIAL EDUCATION-ELEMENTARY 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 certification test covering this field is #04, "Speech."

***One of:**

- CTA 121 Fundamentals of Speech (2)
- CTA 124 Fundamentals of Speech (3)
- CTA 222 Drama and Play in Human Experience (3)
- CTA 322 Theatre for the Young (3)
- CTA 323 Improvising and Role-Play (3)
- CTA 324 Oral Interpretation of Literature for the Young (3)

If CTA 121 is in the program, choose 6 hours; if CTA 124 is in the program, choose 5 hours; from the following:

- CTA 326 Developmental Drama/Theatre with the Handicapped (2)
- CTA 327 Plays for the Young (3)
- CTA 429 History and Theory of Developmental Drama/Theatre (3)
- CTA 504, CTA 522, CTA 523, CTA 524, CTA 525, CTA 528, CTA 565 (graduate courses open to qualified seniors)
- CTA 168/268/368/468 Interpretation (1 each)
- CTA 377/378/379 Special Topics in Drama/Theatre for the Young (1/2/3)
- CTA 497/498/499 Independent Study in Drama/Theatre for the Young (1/2/3)
- **LIT 207 Introduction to Children's Literature (3)

Any course in dramatic literature

Any communication course

Any theatre arts course

15 hours for elementary program; 18 hours for special education programs.

COMPUTER SCIENCE

George E. Haynam
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511 Pray-Harroid
487-1063

See the Computer Science department listings on pp. 86-89 for further information.

COMPUTER SCIENCE MAJOR SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. See inside back cover
 - I-B-4. MTH 122 Elementary Linear Algebra (3)
 - I-B-5. CSC 136 Computers for the Non-Specialist (3)*
 - II-B-1. See inside back cover
 - II-B-2. See inside back cover
 - II-B-3. See inside back cover
 - III-B-1. See inside back cover
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1. See inside back cover
 - IV-B-2. See inside back cover
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:49

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Computer Science for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- CSC 138 Computer Science I (3)
- CSC 238 Computer Science II (3)
- CSC 239 Assembly and Machine Language Programming (3)
- CSC 330 Discrete Mathematical Structures (3)
- CSC 334 Data Structures (3)
- CSC 336 Programming Languages for Educators (3)
- CSC 340 Applications in Computer Science (3)
- CSC 490 Seminar and Project Design for Educators (3)

One of:

- HIS 290 Introduction to the History of Technology (3)
- PLS 382 Politics and the 21st Century (3)
- ANT 378 Current Topics in Anthropology: (Contemporary Issues in Developing and Modern Technological Societies) (3)
- ECO 386 Technology and Economic Growth (3)
- SOC 462 Complex Organizations (3)
- IDT 495 Technology, Values, and the Future (3)

Minor

Select a minor from the approved list (see p. 285)

Credit hours in minor:20'

Credit hours in major and related areas:47

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)

COMPUTER SCIENCE

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in computer science; certification code "NR," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #50, "Computer Science."

*NOTES:

Secondary

^aCourse required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

SFD 328 Social Aspects of Teaching (3)
 EDP 340 Introduction to Assessment and Evaluation (3)
 EDM 345 Media for the Classroom Teacher (1)
 CSC 346 Methods of Teaching Computer Science in the Secondary Schools (3)
 EDU 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: 130

COMPUTER SCIENCE MINOR SECONDARY TEACHER CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in computer science, certification code "NR." The certification test covering this field is #50, "Computer Science."

*CSC 136 Computers for the Non-Specialist (3)
 *CSC 138 Computer Science I (3)
 CSC 238 Computer Science II (3)
 CSC 239 Assembly and Machine Language Programming (3)
 CSC 334 Data Structures (3)
 CSC 336 Programming Languages for Educators (3)
 CSC 340 Applications in Computer Science (3)
 CSC 346 Methods of Teaching Computer Science in the Secondary Schools (3)

21 hours

***NOTES:**

Computer Science —>

*May be satisfied in Basic Studies.

ECONOMICS

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487-3395

See the Economics department listings on pp. 89-93 for further information.

ECONOMICS MAJOR SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
I-B-2. See inside back cover
I-B-3. See inside back cover
I-B-4. One of:^a
MTH 119 Mathematical Analysis for Social Sciences II (3)
MTH 120 Calculus I (4)
I-B-5. See inside back cover
II-B-1. See inside back cover
II-B-2. See inside back cover
II-B-3. See inside back cover
III-B-1. See inside back cover
III-B-2. HIS 102 Western Civilization, 1648 to World War I (3)
III-B-3. One of:
GEO 107 Introduction to Geography (3)
GEO 110 World Regions (3)
III-B-4. HIS 103 Twentieth Century Civilization (3)
IV-B-1. See inside back cover
IV-B-2. See inside back cover
IV-B-3. See inside back cover
IV-B-4. See inside back cover
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 49

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Economics for additional applicable information.

- ECO 201-202 Principles of Economics I-II (6)
ECO 301 Intermediate Macroeconomic Analysis (3)
ECO 302 Intermediate Microeconomic Analysis (3)
One of:
ECO 310 Economic Statistics (3)
ECO 415 Introduction to Econometrics (3)
Fifteen hours of electives in economics

Minor

Minor in one of geography, history, political science, psychology, sociology, or social science

Subtotal, Major and minor: 50¹

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
EDT 300 Introduction to Computer Applications in Education (1)
SGN 300 Exceptional Children in the Regular Classroom (1)
EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
RDG 311 Teaching Reading in the Secondary School (3)
SFD 328 Social Aspects of Teaching (3)
EDP 340 Introduction to Assessment and Evaluation (3)
EDM 345 Media for the Classroom Teacher (1)
HIS 481 The Teaching of Social Studies (3)
EDU 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: 133

ECONOMICS

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in economics, certification code "CA" and, depending on the minor selected, endorsement in geography ("CB"), history ("CC"), political science ("CD"), psychology ("CE"), sociology ("CF"), or social science ("CX"). This program of studies meets requirements of the National Council for Social Studies. The certification test covering this field is #07, "Economics."

*NOTES:

Secondary

^b Prerequisite for another course in program.

¹ Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

***NOTES:**

Economics →

***Could be satisfied in Basic Studies in some programs.**

**ECONOMICS MINOR
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 certification test covering this field is #07, "Economics."

*ECO 201 Principles of Economics I (3)

ECO 202 Principles of Economics II (3)

14 credits from any economics courses (ECO 301 and 302 highly recommended)

20 hours

ENGLISH LANGUAGE AND LITERATURE

Marcia A. Dalbey
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487-4220

See the English Language and Literature department listings on pp. 94-103 for further information.

ENGLISH AND AMERICAN LANGUAGE AND LITERATURE GROUP MAJOR SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
I-B-2. See inside back cover
I-B-3. See inside back cover
I-B-4. See inside back cover
I-B-5. See inside back cover
II-B-1. See inside back cover
II-B-2. See inside back cover
II-B-3. See inside back cover
III-B-1. See inside back cover
III-B-2. See inside back cover
III-B-3. See inside back cover
III-B-4. See inside back cover
IV-B-1. See inside back cover
IV-B-2. One of:^a
*LIT 204 Native American Literature (3)
*LIT 260 African American Literature (3)
IV-B-3. See inside back cover
IV-B-4. See inside back cover
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:49

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of English for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- LIN 201 An Introduction to Linguistics (3)
LIT 210 Introduction to Shakespeare (3)
ENG 227 Writing about Literature (3)
ENG 408 Writing for Writing Teachers (3)
One of:
ENG 328 Writing: Style and Language (3)
ENG 417 Writing about Controversies (3)
One of:
LIN 401 Introduction to Linguistic Science (3)
LIN 402 Modern English Grammar (3)
LIN 421 The History of the English Language (3)
One of:
LIT 305 Shakespeare: The Major Comedies and Histories (3)
LIT 340 The Rise of British Drama to 1642 (3)
LIT 341 English Drama 1660-1779 (3)
LIT 411 Medieval Epic and Romance (3)
LIT 412 English Literature in the Middle Ages (3)
LIT 413 The Poetry of Chaucer (3)
LIT 414 English Renaissance Prose and Poetry 1500-1660 (3)
LIT 415 Literature of the Neo-Classical Period 1660-1798 (3)
One of:
LIT 330 The Rise of the British Novel 1720-1832 (3)
LIT 331 The Development of the British Novel 1832-1914 (3)
LIT 416 Romantic Rebellion in Britain 1798-1832 (3)
LIT 417 Victorian and Edwardian Literature 1832-1914 (3)

ENGLISH AND AMERICAN LANGUAGE AND LITERATURE

Successful completion of this course of studies 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 requirements of the National Council of Teachers of English. The certification test covering this field is #02, "English."

*NOTES:

Secondary

^aCourse required for and applicable to major.

^{*}At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk (*).

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

***NOTES:**

Secondary

^aCourse required for and applicable to major.

^{*}At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk (*).

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

One of:

- LIT 333 Modern British and European Novel 1914 to Present (3)
- LIT 342 The Development of Modern Drama (3)
- LIT 401 Modern British and American Poetry 1914 to Present (3)
- LIT 460 Recent Trends in British and American Literature (3)

One of:

- LIT 328 The Rise of the American Novel to 1920 (3)
- LIT 332 The Modern American Novel 1920 to Present (3)
- LIT 409 The Development of American Literature (3)
- LIT 410 Modern American Literature (3)

One of:

- Any course listed above but not taken
- ENG 324 Principles of Technical Communication (3)
- ENG 335 Imaginative Writing (3)
- JRN 215 News Writing and Reporting (3)
- LIN 205 English Words (3)
- LIN 310 African American Language (3)
- LIN 340 Language and Culture (3)

Minor

Select a minor from the approved list (see p. 285)

Subtotal, Major and minor:53¹

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- ENG 308 Teaching English in the Secondary Schools (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies:34

Total credit hours required, with 20-hour minor: 136

ENGLISH AND AMERICAN LANGUAGE AND LITERATURE GROUP MAJOR
ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in English, certification code "BA." The certification test covering this field is #02, "English."

The curriculum for this major is that which is listed under "Teaching Major" in the secondary English program above, plus the requirements under IV-B-2 in that program's Basic Studies requirements. Approved minors are those for the elementary program as given on page 284.

33 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

ENGLISH AND AMERICAN LANGUAGE AND LITERATURE GROUP MINOR

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 "BA." The certification test covering this field is #02, "English."

Two of:

- *LIT 100 The Reading of Literature (3)
- *LIT 101 The Reading of Literature: Fiction (3)
- *LIT 102 The Reading of Literature: Poetry (3)
- *LIT 103 The Reading of Literature: Drama (3)
- LIT 251 The Bible as Literature (3)

***NOTES:**

English and American Language and Literature --->

*May be satisfied in Basic Studies in some programs.

#Satisfies cross-cultural/international studies requirement.

- *#LIT 260 African American Literature (3)
- LIT 210 Introduction to Shakespeare (3)
- Any 300- or 400-level LIT course for which the prerequisites have been met, except LIT 351 and LIT 352 (3)

One of:

- *ENG 225 Intermediate English Composition (3)
- ENG 326 Research Writing (3)
- ENG 328 Writing: Style and Language (3)
(Prereq: an advanced writing course or permission)
- ENG 335 Imaginative Writing (3)
- ENG 417 Writing about Controversies (3)
(Prereq: two writing courses at 200-level or above or permission)
- ENG 422 Writer's Workshop: Fiction or Poetry (3)
- ENG 424 Technical Writing (3)
(Prereq: ENG 324 or permission)

Not more than one of:

- JRN 215 News Writing and Reporting (3)
- JRN 306 Feature Writing (3)
(Prereq: JRN 215)
- JRN 307 Copy Editing (3)
(Prereq: JRN 215 and JRN 306)
- JRN 314 Writing for Public Relations (3)
(Prereq: JRN 215 and either CTA 121 or CTA 124)

One of:

- LIN 201 An Introduction to Linguistics (3)
- LIN 402 Modern English Grammar (3)
- LIN 421 The History of the English Language (3)
(Prereq: LIN 201 or LIN 401)

One of:

- Courses in literature, composition, or English language except ENG 120, LIT 207, LIT 352, ENG 451.

21 hours

CHILDREN'S LITERATURE MINOR ELEMENTARY AND SPECIAL EDUCATION-ELEMENTARY TEACHER CERTIFICATION

Note: Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in English, certification code "BA." The certification test for "English" is #02, "English." However, the student is advised that there is no test in children's literature and that the test in English covers material not included in this curriculum.

- *LIT 207 Introduction to Children's Literature (3)
- ENG 450 Children's Literature: Criticism and Response (3)

Two of:

- **LIT 100 The Reading of Literature (3)
- **LIT 101 The Reading of Literature: Fiction (3)
- **LIT 102 The Reading of Literature: Poetry (3)
- **LIT 103 The Reading of Literature: Drama (3)
- LIT 251 The Bible as Literature (3)
- **LIT 260 African American Literature (3)

Three of:

- ***LIT 204 Native American Literature (3)
- LIT 210 Introduction to Shakespeare (3)
- LIT 251 The Bible as Literature (3)
- LIT 351 World Mythology (3)
- LIT 352 Folk Literature: Ballads and Folk Tales (3)
- ENG 451 Writing about Controversy in Literature for the Young (3)

12 hours for elementary, not counting hours satisfied in Basic Studies; 15 hours for special education programs, not counting hours satisfied in Basic Studies.

*NOTES:

← Children's Literature.

*In Basic Studies for elementary program.

**In Basic Studies for both elementary and special education programs.

*Satisfies cross-cultural/international studies requirement.

FOREIGN LANGUAGE AND BILINGUAL STUDIES

Steven D. Kirby
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See the Foreign Language and Bilingual Studies department listings on pp. 103-116 for further information.

FRENCH

Successful completion of this course of studies 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 certification test covering this field is #23, "French."

*NOTES:

Secondary

*Course required for and applicable to major.

¹ Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

FRENCH MAJOR SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. FRN 234 Intermediate French (Reading) (3)*
 - I-B-4. See inside back cover
 - I-B-5. See inside back cover
 - II-B-1. See inside back cover
 - II-B-2. See inside back cover
 - II-B-3. See inside back cover
 - III-B-1. See inside back cover
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1. FRN 341 Survey of French Literature (3)*
 - IV-B-2. FRN 342 Survey of French Literature (3)*
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 49

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Foreign Languages and Bilingual Studies for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- FRN 343 French Composition (3)
- FRN 344 French Conversation (3)
- FRN 443 Advanced French Grammar and Composition (3)
- FRN 444 Advanced French Conversation (3)
- Six credits in French at the 400-level
- Six credits in French at any level

Minor

A minor from the approved list (see p. 285)

Subtotal, Major and minor: 44¹

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- FLA 411 Theory and Methods of Modern Language Teaching (3)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: 127

**FRENCH MAJOR
ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in French, certification code "FA." The certification test covering this field is #23, "French."

The curriculum for this major is that which is listed under "Teaching Major" in the secondary French program, plus the requirements under I-B-3, IV-B-1, and IV-B-2 in that program's Basic Studies requirements. Approved minors are those for the elementary program as given on page 284.

24 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

**GERMAN LANGUAGE AND LITERATURE MAJOR
SECONDARY TEACHER CERTIFICATION**

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. GER 233/234 Intermediate German Reading (3)^a
 - I-B-4. See inside back cover
 - I-B-5. See inside back cover
 - II-B-1. See inside back cover
 - II-B-2. See inside back cover
 - II-B-3. See inside back cover
 - III-B-1. See inside back cover
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1. GER 341 Survey of German Literature (3)^a
 - IV-B-2. GER 342 Survey of German Literature (3)^a
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:49

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Foreign Languages and Bilingual Studies for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- GER 343 German Composition (3)
- GER 344 German Conversation (3)
- GER 443 German Syntax and Advanced Composition (3)
- GER 444 Advanced German Conversation (3)
- Six credits in German at the 400-level (3)
- Six credits in German at any level (3)

Minor

A minor from the approved list (see p. 285)

Subtotal, Major and minor:44¹

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- FLA 411 Theory and Methods of Modern Language Teaching (3)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies:34

Total credit hours required, with 20-hour minor:127

GERMAN

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in German, certification code "FB," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #24, "German."

***NOTES:**

Secondary

^aCourse required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

GERMAN LANGUAGE AND LITERATURE MAJOR ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in German, certification code "FB." The certification test covering this field is #24, "German."

The curriculum for this major is that which is listed under "Teaching Major" in the secondary German program, plus the requirements under I-B-3, IV-B-1, and IV-B-2 in that program's Basic Studies requirements. Approved minors are those for the elementary program as given on page 284.

24 hours, not including the minor and not counting course work that may be satisfied through Basic Studies.

JAPANESE LANGUAGE AND CULTURE

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in Japanese, certification code "FL." The certification test covering this field has not yet been developed.

JAPANESE LANGUAGE AND CULTURE MAJOR K-12 TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. See inside back cover
- I-B-3. JPN 211 Intermediate Japanese (5)^a
- I-B-4. See inside back cover
- I-B-5. See inside back cover
- II-B-1. See inside back cover
- II-B-2. See inside back cover
- II-B-3. See inside back cover
- III-B-1. See inside back cover
- III-B-2. One of:^b
 - HIS 103 Twentieth Century Civilization (3)
 - HIS 106 Asian and African Civilizations (3)
- III-B-3. GEO 110 World Regions (3)^b
 - ANT 135 Introduction to Cultural Anthropology (3)^b
 - A course in economics (3)^b
- III-B-4. See inside back cover
- IV-B-3. See inside back cover
- IV-B-1. See inside back cover
- IV-B-2. See inside back cover
- IV-B-4. See inside back cover

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 57

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Foreign Languages and Bilingual Studies, Major in Japanese Language and Culture Teaching, for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- LNG 223 Introduction to Language (3)
- JPN 212 Intermediate Japanese (3)
- JPN 344 Japanese Conversation (3)
- JPN 361 Japanese for International Trade (3)
- JPN 444 Advanced Japanese Conversation (3)
- HIS 326 History and Geography of Modern Asia (3)
- GEO 326 History and Geography of Modern Asia (3)
- JPN 494 Seminar in Japanese Studies (3)
- ANT 245 Culture of Japan (3)
- One of:
 - ANT 340 Language and Culture (3)
 - (Note: has prerequisites of ANT 135 or LIN 201)
 - CTA 374 Intercultural Communication (3)
- One of:
 - ECO 370 Comparative Economic Systems (3)
 - (Note: has prerequisite of a course in economics; see general education)
 - ECO 480 International Economics (3)
 - (Note: has prerequisites of ECO 201 and 202; one course in economics provided for in general education)
- One of:
 - PLS 374 Asian Political Systems (3)
 - PLS 412 Comparative Legal Systems (3)
- A minor from the approved list (see p. 285)

Subtotal, Major and minor: 58¹

*NOTES:

K-12

^aCourse required for and applicable to major.

^bPrerequisite for another course in program.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- FLA 411 Theory and Methods of Modern Language Teaching (3)
- EDU 496 Student Teaching (6)
- EDU 497 Student Teaching (6)

Credit hours in Professional Studies:34

Total credit hours required: 149

JAPANESE LANGUAGE AND CULTURE TEACHING MAJOR ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in Japanese language and culture, certification code "FL."

The curriculum for this major is that which is listed under "Teaching Major" in the K-12 Japanese language and culture teaching program, plus the requirements under I-B-3, III-B-2, and III-B-3 in that program's Basic Studies requirements. Approved minors are those for the elementary program as given on page 284.

54 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

SPANISH MAJOR SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. SPN 201/202 Intermediate Spanish (3)*
 - I-B-4. See inside back cover
 - I-B-5. See inside back cover
 - II-B-1. See inside back cover
 - II-B-2. See inside back cover
 - II-B-3. See inside back cover
 - III-B-1. See inside back cover
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1 and IV-B-2. Either:^a
 - SPN 221-222 Intermediate Spanish Reading (6)
 - or
 - SPN 341-342 Survey of Spanish Literature (6)
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:49

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Foreign Languages and Bilingual Studies for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- SPN 343 Spanish Grammar and Composition (3)
- SPN 344 Spanish Conversation and Composition (3)
- SPN 443 Advanced Spanish Grammar and Composition (3)
- SPN 444 Advanced Spanish Conversation and Composition (3)
- Twelve credits in Spanish at the 300-level or above
- Six credits in Spanish at any level, in consultation with an adviser

SPANISH

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in Spanish, certification code "FF," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #28, "Spanish."

NOTES:*Secondary**

^aCourse required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

NOTES:*Secondary**

^aCourse required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

Minor

A minor from the approved list (see p. 285)

Subtotal, Major and minor:50^a

Professional Studies

100 clock hours of approved pre-student teaching field experiences (0)
EDT 300 Introduction to Computer Applications in Education (1)
SGN 300 Exceptional Children in the Regular Classroom (1)
EDP 322 Human Development and Learning (4)

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

CUR 305 Curriculum and Methods: Secondary (3)
RDG 311 Teaching Reading in the Secondary School (3)
SFD 328 Social Aspects of Teaching (3)
EDP 340 Introduction to Assessment and Evaluation (3)
EDM 345 Media for the Classroom Teacher (1)
FLA 411 Theory and Methods of Modern Language Teaching (3)
EDU 492 Student Teaching (12)

Credit hours in Professional Studies:34

Total credit hours required, with 20-hour minor: 133

SPANISH MAJOR**ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in Spanish, certification code "FF." The certification test covering this field is #28, "Spanish."

The curriculum for this major is that which is listed under "Major" in the secondary Spanish program, plus the requirements under I-B-3, IV-B-1, and IV-B-2 in that program's Basic Studies requirements. Approved minors are those for the elementary program as given on page 284.

30 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

BILINGUAL-BICULTURAL EDUCATION SPANISH-ENGLISH MINOR**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 certification test covering this field is #70, "Bilingual Spanish."

Language proficiency in both Spanish and English as determined by examination
FLA 421 History and Theory of Bilingual Education (3)
FLA 422 Teaching Hispanic Culture and Language (3)
TSL 410 TESOL Methods (3)
SPN 471 Culture and Literature of the Hispanic Groups in the United States (3)
SPN 482 Language of the Hispanic Groups in the United States (3)

Nine hours from:

ANT 233 Peoples and Cultures of Mexico (3)
FLA 215 The Culture of the Latino Groups in the United States (3)
LNG 223 Introduction to Language (3)
LIN 201 An Introduction to Linguistics (3)
LIN 401 Introduction to Linguistic Science (3)
LIN 402 Modern English Grammar (3)
GEO 321 Geography of Latin America (3)
HIS 457 History of Mexico (3)
PSY 340 Psychological Perspectives on Prejudice and Discrimination (3)
SOC 214 Racial and Cultural Minorities (3)
SPN 443 Advanced Spanish Grammar and Composition (3)
SPN 444 Advanced Spanish Conversation and Composition (3)

Four semester hours of student teaching must be with English-speaking pupils and four semester hours of student teaching must be in bilingual education.

24 hours

FRENCH LANGUAGE MINOR
SECONDARY, K-12, AND SPECIAL EDUCATION-SECONDARY
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 certification test covering this field is #23, "French."

- FRN 343 French Composition (3)
- FRN 344 French Conversation (3)
- FRN 443 Advanced French Grammar and Composition (3)
- FRN 444 Advanced French Conversation (3)
- 8 credits in French at any level.

20 hours

GERMAN LANGUAGE MINOR
SECONDARY, K-12, AND SPECIAL EDUCATION-SECONDARY
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 certification test covering this field is #24, "German."

- GER 343 German Composition (3)
- GER 344 German Conversation (3)
- GER 443 German Syntax and Advanced Composition (3)
- GER 444 Advanced German Conversation (3)
- 8 credits in German at any level.

20 hours

SPANISH LANGUAGE MINOR
SECONDARY, K-12, AND SPECIAL EDUCATION-SECONDARY
CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in Spanish, certification code "FF." The certification test covering this field is #28, "Spanish."

- SPN 343 Spanish Grammar and Composition (3)
- SPN 344 Spanish Conversation and Composition (3)

One of:

- Either* SPN 443 Advanced Spanish Grammar and Composition (3) and SPN 444 Advanced Spanish Conversation and Composition (3)
- or* additional courses (6 hours) in Spanish at the 300 level or above.

Eight credits in Spanish at any level in consultation with the advising coordinator.

20 hours

GEOGRAPHY AND GEOLOGY

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See the Geography and Geology department listings on pp. 117-127 for further information.

EARTH SCIENCE

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in earth science/geology, certification code "DH." The program includes a structured general science minor. The student following this program is also qualified for recommendation for endorsement in science, certification code "DX." This program of studies meets requirements of the National Science Teachers Association. The certification test covering this field is #16, "Science."

*NOTES:

Secondary

*Course required for and applicable to major.

EARTH SCIENCE MAJOR SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. See inside back cover
 - I-B-4. See inside back cover
 - I-B-5. See inside back cover
 - II-B-1. CHM 121-122 General Chemistry I with lab (4)*
 - II-B-2. See inside back cover
 - II-B-3. PHY 221 Mechanics, Sound, and Heat (4)*
 - III-B-1. See inside back cover
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1. See inside back cover
 - IV-B-2. See inside back cover
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:50

Teaching Major/Minor

See the 1993-94 Undergraduate Catalog under Department of Geography and Geology for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major/minor.

- AST 205 Principles of Astronomy (4)
- GES 108 Earth Science (4)
- GES 114 National Parks and Monuments (2)
- GES 200 The Oceans (3)
- GES 309 Plate Tectonics (3)
- GES 324 Weather (3)

One of:

- GLG 228 Mineralogy (3)
- GLG 229 Rocks of Michigan (2)

One of:

- GLG 120 The Fossil Record (3)
- GLG 161 Historical Geology (4)

One of:

- GLG 325 Geomorphology (3)
- GLG 331 Paleontology (4)

Enough additional hours from the following group to complete 32 hours in teaching-major requirements stated to this point.

- AST 204 Astronomical Investigations (1)
- GES 208 Natural Environmental Hazards (3)
- GES 227 Topographic Maps (2)
- GES 250 Introduction to Coastal Processes (3)
- GES 325 Severe and Unusual Weather (3)
- GES 327 Soil Science (3)
- GES 424 Climatology (3)
- GLG 160 Physical Geology (4)
- GLG 228 or GLG 229 (the one not taken above) (2-3)
- GLG 331 or GLG 325 (the one not taken above) (3-4)
- GLG 370 Glacial Geology (3)

BIO 105 Biology and the Human Species (4)

MTH 105 College Algebra (3)

MTH 107 Plane Trigonometry (2)

Seven hours of approved electives in biology, chemistry, mathematics, or physics

Subtotal, Major/Minor and related areas:48

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
 EDT 300 Introduction to Computer Applications in Education (1)
 SGN 300 Exceptional Children in the Regular Classroom (1)
 EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
 RDG 311 Teaching Reading in the Secondary School (3)
 SFD 328 Social Aspects of Teaching (3)
 EDP 340 Introduction to Assessment and Evaluation (3)
 EDM 345 Media for the Classroom Teacher (1)
 GES 347 Teaching Earth Science and Physical Geography (3)
 EDU 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required: 132

EARTH SCIENCE MAJOR**ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for reconunendation for endorsement in geology/earth science, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science." The student is also qualified for reconunendation for endorsement in science, certification code "DX." The certification test covering this field is #16, "Science."

The curriculum for this major is that which is listed under "Teaching Major/Minor" in the secondary earth science program, plus the requirements under I-B-1 and II-B-3 in that program's Basic Studies requirements. The program includes a structured general science minor.

56 hours, not including course work that may be satisfied through Basic Studies.

GEOGRAPHY MAJOR**SECONDARY TEACHER CERTIFICATION****Basic Studies**

- I-B-1. ENG 121 English Composition (3)
 I-B-2. See inside back cover
 I-B-3. See inside back cover
 I-B-4. See inside back cover
 I-B-5. See inside back cover
 II-B-1. See inside back cover
 II-B-2. See inside back cover
 II-B-3. GES 108 Earth Science (4)^a
 III-B-1. See inside back cover
 III-B-2. HIS 102 Western Civilization, 1648 to World War I (3)
 III-B-3. GEO 110 World Regions (3)^a
 III-B-4. HIS 103 Twentieth Century Civilization (3)
 IV-B-1. See inside back cover
 IV-B-2. See inside back cover
 IV-B-3. See inside back cover
 IV-B-4. See inside back cover

Physical education, military science, or equivalent (2)

A course in economics, if not included in the minor (3)

Credit hours in Basic Studies: 52

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Geography and Geology for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

GEO 235 Economic Geography (3)

Two of:

- GEO 300 Location and Site Analysis (3)
 GES 401 Cartography (3)
 GES 303 Field Geography (3)
 GES 305 Aerial Photograph Interpretation (3)
 GES 470 Quantitative Methods in Geography and Geology (3)

One of:

- GES 200 The Oceans (3)
 GES 324 Weather (3)
 GLG 325 Geomorphology (3)

GEOGRAPHY

Successful completion of this course of studies qualifies the student for recommendation for certification for 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 science ("CX"). This program of studies meets requirements of the National Council for Social Studies. The certification test covering this field is #08, "Geography."

NOTES:*Secondary**

^aCourse required for and applicable to major.

^bPrerequisite for another course in program.

^{*}At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk (*).

^{**}Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

NOTES:*Secondary**

^aCourse required for and applicable to major.

^bPrerequisite for another course in program.

At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk ().

**Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

GES 327 Soil Science (3)
GLG 448 Hydrogeology (3)

Two of:

GEO 310 Energy Awareness (3)
GEO 332 Urban Geography (3)
GEO 360 Cultural Geography (3)
GEO 361 Geography of Population (3)
GEO 431 Historical Geography of the United States (3)
GEO 438 Industrial Location and Development (3)

One of:

GEO 314 Geography of Russia and Neighboring States (3)
GEO 318 Geography of Asia (3)
GEO 319 Geography of Europe (3)
GEO 320 Geography of the United States and Canada (3)
GEO 321 Geography of Latin America (3)
GEO 322 Geography of Africa (3)
GEO 323 Geography of Australia and Pacific Islands (3)
GEO 328 Geography of Canada (2)

Two hours of electives chosen in consultation with an adviser

Minor

A minor in one of economics, history, political science, psychology, sociology, or social science

Subtotal, Major and minor:42¹

Professional Studies

100 clock hours of approved pre-student teaching field experiences (0)
EDT 300 Introduction to Computer Applications in Education (1)
SGN 300 Exceptional Children in the Regular Classroom (1)
EDP 322 Human Development and Learning (4)

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

CUR 305 Curriculum and Methods: Secondary (3)
RDG 311 Teaching Reading in the Secondary School (3)
SFD 328 Social Aspects of Teaching (3)
EDP 340 Introduction to Assessment and Evaluation (3)
EDM 345 Media for the Classroom Teacher (1)
HIS 481 The Teaching of Social Studies (3)
EDU 492 Student Teaching (12)

Credit hours in Professional Studies:34

Total credit hours required, with 20-hour minor: 128

GEOGRAPHY MAJOR**ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in geography, certification code "CB." The certification test covering this field is #08, "Geography."

The curriculum for this major is that which is listed under "Teaching Major" in the secondary geography program, plus the requirements under II-B-3, III-B-2, III-B-3, and III-B-4 in that program's Basic Studies requirements. Approved minors are history, political science, sociology, and social science group for elementary teachers.

29 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

GEOLOGY MAJOR**ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in geology/earth science, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science."

GLG 160 Physical Geology (4)
GLG 161 Historical Geology (4)
GLG 228 Mineralogy (3)
GLG 326 Structural Geology (3)
GLG 329 Petrology (3)
GLG 330 Sedimentation and Stratigraphy (4)
5-8 hours from field geology
Additional electives in geology to total 30 hours

Approved minors are those for the elementary program as given on page 284.
30 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

EARTH SCIENCE MINOR

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 geology/earth science, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science."

- *GES 108 Earth Science (4)
- GES 200 The Oceans (3)
- GES 309 Plate Tectonics (3)
- GES 324 Weather (3)
- GLG 229 Rocks of Michigan (2)
- #AST 203 Exploration of the Universe (3)

One of:

- GLG 161 Historical Geology (4)
(Prereq: GLG 160 or permission)
- GLG 228 Mineralogy (3)
(Prereq: CHM 121)
- GLG 325 Geomorphology (3)
- GLG 331 Paleontology (4)
(Prereq: GLG 161 or BIO 105 or permission)
- GLG 370 Glacial Geology (3)
(Prereq: GLG 161, 330 or permission)

Others, chosen in consultation with advising coordinator

21 hours for elementary and secondary programs; 17 hours in special education programs.

GEOGRAPHY MINOR

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 geography, certification code "CB." The certification test covering this field is #08, "Geography."

- **GES 108 Earth Science (4)
- **GEO 110 World Regions (3)

13 hours chosen in consultation with the advising coordinator to include five hours from:

- GEO 313 Geography of Michigan (2)
- GEO 314 Geography of Russia and Neighboring States (3)
- GEO 318 Geography of Asia (3)
- GEO 319 Geography of Europe (3)
- GEO 320 Geography of the United States and Canada (3)
- GEO 321 Geography of Latin America (3)
- GEO 322 Geography of Africa (3)
- GEO 328 Geography of Canada (2)

20 hours for secondary programs; 17 hours for elementary program; 13 hours for special education programs.

GEOLOGY MINOR

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 geology/earth science, certification code "DH." The certification test covering this field is #20, "Geology/Earth Science."

- GLG 160 Physical Geology (4)
- GLG 161 Historical Geology (4)
- GLG 228 Mineralogy (3)
- GLG 326 Structural Geology (3)
- GLG 329 Petrology (3)

Four credits chosen in consultation with advising coordinator.

21 hours

*NOTES:

← Earth Science

*Could be satisfied in Basic Studies in special education programs.

#Could be satisfied in Basic Studies in some programs.

*NOTES:

← Geography

*Included in Basic Studies for some programs.

**Included in Basic Studies for elementary program.

*May be included in Basic Studies in special education programs.

HISTORY AND PHILOSOPHY

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See the History and Philosophy department listings on pp. 128-137 for further information.

HISTORY MAJOR SECONDARY TEACHER CERTIFICATION

HISTORY

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in history, certification code "CC" and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), political science ("CD"), psychology ("CE"), sociology ("CF"), or social science ("CX"). This program of studies meets requirements of the National Council for Social Studies. The certification test covering this field is #09, "History."

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. See inside back cover
- I-B-3. See inside back cover
- I-B-4. See inside back cover
- I-B-5. See inside back cover
- II-B-1. See inside back cover
- II-B-2. See inside back cover
- II-B-3. See inside back cover
- III-B-1. See inside back cover
- III-B-2. HIS 102 Western Civilization, 1648 to World War I (3)*
- III-B-3. One of:
GEO 107 Introduction to Geography (3)
GEO 110 World Regions (3)
- III-B-4. HIS 103 Twentieth Century Civilization (3)*
- IV-B-1. See inside back cover
- IV-B-2. See inside back cover
- IV-B-3. See inside back cover
- IV-B-4. See inside back cover

Physical education, military science, or equivalent (2)

A course in economics, if not included in the minor (3)

Credit hours in Basic Studies: 52

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of History and Philosophy for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

One of:

- HIS 123 The United States to 1877 (3)
 - HIS 124 The United States, 1877 to the Present (3)
 - HIS 300 Historical Research and Writing (3)
- Choose six hours of history courses 300-level or above in two of the following areas and three hours in the remaining area:
- United States and Canada
 - Europe
 - Latin America, Africa, Asia, History of Religions
- Electives in history; not more than one course at the 100-level; not including HIS 100 or HIS 481; electives should include at least five hours of U.S. history

Minor

A minor in economics, geography, political science, psychology, sociology, or social science.

Subtotal, Major and minor: 47'

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)

*NOTES:

Secondary

*Course required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- HIS 481 The Teaching of Social Studies (3)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: 133

HISTORY MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, 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 #09, "History."

The curriculum for this major is that which is listed under "Teaching Major" in the secondary history program, plus the III-B-2, III-B-3, and III-B-4 in that program's Basic Studies requirements. Approved minors are geography, political science, sociology, and social science group for elementary teachers.

30 hours, not including the minor and not including course work that may be satisfied through Basic Studies.

SOCIAL SCIENCE

SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. *See inside back cover*
- I-B-3. *See inside back cover*
- I-B-4. *See inside back cover*
- I-B-5. *See inside back cover*
- II-B-1. *See inside back cover*
- II-B-2. *See inside back cover*
- II-B-3. *See inside back cover*
- III-B-1. *See inside back cover*
- III-B-2. HIS 102 Western Civilization, 1648 to World War I (3)*
- III-B-3. *Both:*
GEO 107 Introduction to Geography (3)
GEO 110 World Regions (3)
- III-B-4. HIS 103 Twentieth Century Civilization (3)*
- IV-B-1. *See inside back cover*
- IV-B-2. *See inside back cover*
- IV-B-3. *See inside back cover*
- IV-B-4. *See inside back cover*

Physical education, military science, or equivalent (2)

A course in economics, if not included in the minor (3)

Credit hours in Basic Studies: 52

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of History and Philosophy, Major in Social Science, for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

The social science major requires a total of 36 semester hours, including electives, chosen from history, anthropology, sociology, economics, geography, and political science. The major must include at least eight semester hours each in three of the areas listed below. Of the 36 semester hours, at least 14 must be in courses at the 300-level or above. Students minoring in any of the fields listed above may not choose any courses from that field for this major.

Unless students are minoring in history, it is strongly recommended that they choose both the United States and world history concentrations, in order to qualify to teach all high school history courses. Students should be aware of the following North Central Association minimum semester hour standards: (a) at least eight hours: economics, political science, sociology, United States history, world history; (b) at least five hours: geography, anthropology.

The program of studies given below assumes selection of the United States history and world history concentrations, in order to qualify to teach all high school history courses, and the political science concentration.

SOCIAL SCIENCE

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in social science, certification code "CX," and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), history ("CC"), political science ("CD"), psychology ("CE"), or sociology ("CF"). The certification test covering this field is #06, "Social Studies."

*NOTES:

Secondary

^aCourse required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

***NOTES:**

Secondary

²Course required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

- HIS 123 The United States to 1877 (3)
- HIS 124 The United States, 1877 to the Present (3)
- A United States history course at the 300-level or above (3)
- A 300-level world history course (2)
- A political science course at the 300-level
- Any other political science course (2)
- (Suggested: at 300-level or above; see below)
- Fourteen credits in 300-level and above social science hours beyond the minima defined above.

Minor

A minor in one of economics, geography, psychology, or sociology
 (Note: this group of minors is based on the assumption given above; history and political science are the only other acceptable minors under any circumstance)

Subtotal, Major and minor:43¹

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- HIS 481 The Teaching of Social Studies (3)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies:34

Total credit hours required, with 20-hour minor: 129

HISTORY MINOR

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 history, certification code "CC." The certification test covering this field is #09, "History."

One of:

- *HIS 101 Western Civilization to 1648 (3)
- *HIS 102 Western Civilization, 1648 to World War I (3)
- *HIS 103 Twentieth Century Civilization (3)

One of:

- HIS 123 The United States to 1877 (3)
- *HIS 124 The United States, 1877 to the Present (3)

Choose six hours of courses at the 300-level or above in one of the following areas and three hours in each of the other two areas:

- United States and Canada
- Europe
- Africa, Asia, History of Religions, Latin America

Two hours of unrestricted elective(s)

No more than three 100-level courses may be counted toward the minor. HIS 100 and HIS 481 may not be counted. Secondary education certification requires at least eight hours of United States history.

14 hours

SOCIAL SCIENCE GROUP MINOR (NOT AVAILABLE WITH THE SOCIAL SCIENCE MAJOR)

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 social science, certification code "CX." The certification test covering this field is #06, "Social Sciences."

***NOTES:**

History —>

* May be satisfied in Basic Studies requirements.

Total of 24 hours from history, anthropology, sociology, economics, geography, and political science. Must include at least 8 semester hours each in two of the areas listed below. The remaining 8 hours may be from any of the areas. Students majoring in any of the fields listed above may not choose any courses from that field for this minor.

North Central Association minimum semester hour standards for teaching a subject at the secondary level: at least eight hours for each of economics, political science, sociology, United States history, world history; at least five hours for each of geography and anthropology.

World History

Two of:

- HIS 101 Western Civilization to 1648 (3)
- HIS 102 Western Civilization, 1648 to World War I (3)
- HIS 103 Twentieth Century Civilization (3)
- HIS 106 Asian and African Civilizations (3)

United States History

- HIS 123 The United States to 1877 (3)
- HIS 124 The United States, 1877 to the Present (3)
- One United States history course at the 300-level or above (2)

Anthropology

- ANT 135 Introduction to Cultural Anthropology (3)
- An anthropology course at the 300-level or above (3)
- Any other anthropology course (2)

Sociology

- SOC 105 Introductory Sociology (3)
- A sociology course at the 300-level or above (3)
- Any other sociology course (2)

Economics

- ECO 201 Principles of Economics I (3)
- ECO 202 Principles of Economics II (3)
- An economics course at the 300-level or above (2)

Geography

- GEO 110 World Regions (3)
- A geography course at the 300-level or above (3)
- Any other geography course (2)

Political Science

One of:

- i. PLS 112 American Government (3)
PLS 113 American Government Honors (3)
- ii. A political science course at the 300-level or above (3)
- iii. Any other political science course (2)

24 hours. Depending on the major, various courses from Basic Studies may be applicable to this minor.

MATHEMATICS

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Department Head
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487-1444

See the Mathematics department listings on pp. 138-143 for further information.

MATHEMATICS

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in mathematics, certification code "EX," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #22, "Mathematics."

*NOTES:

Secondary

^aCourse required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

MATHEMATICS MAJOR SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. See inside back cover
- I-B-3. See inside back cover
- I-B-4. MTH 120 Calculus I (4)^a
- I-B-5. One of:^a
 - CSC 137 Introduction to FORTRAN Programming (3)
 - CSC 138 Computer Science I (3)
 - CSC 237 Computer Programming and Numeric Methods (3)
- II-B-1. See inside back cover
- II-B-2. See inside back cover
- II-B-3. See inside back cover
- III-B-1. See inside back cover
- III-B-2. See inside back cover
- III-B-3. See inside back cover
- III-B-4. See inside back cover
- IV-B-1. See inside back cover
- IV-B-2. See inside back cover
- IV-B-3. See inside back cover
- IV-B-4. See inside back cover

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 50

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Mathematics, major in Mathematics, for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- MTH 121 Calculus II (4)
- MTH 122 Elementary Linear Algebra (3)
- MTH 211 Discrete Mathematics (3)
- MTH 223 Multivariable Calculus (4)
- One of:
 - MTH 341 College Geometry (3)
 - MTH 342 Elementary Space-Time Geometry (2)
- MTH 370 Probability and Statistics I (4)
(MTH 360 may be used with permission)
- MTH 411 Modern Algebra with Applications (3)

Seven credits from:

- MTH 307 Elementary Number Theory (3)
- MTH 319 Mathematical Modeling (3)
- MTH 325 Differential Equations (3)
- MTH 341 College Geometry (3)
- MTH 342 Elementary Space-Time Geometry (2)
- MTH 372 Problems in Actuarial Studies (3)
- MTH 400 History and Development of Mathematics (3)
- MTH 416 Linear Algebra (3)
- MTH 420 Introduction to Analysis (3)
- MTH 424 Introduction to Complex Variables (3)
- MTH 425 Mathematics for Scientists (3)
- MTH 471 Probability and Statistics II (3)

Minor

A minor from the approved list (see p. 285)

Subtotal, Major and minor: 50¹

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- MTH 306 Teaching of High School Mathematics (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: 134

MATHEMATICS MAJOR FOR THE ELEMENTARY TEACHING CERTIFICATE 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." The certification test covering this field is #22, "Mathematics."

- *MTH 108-109 Functional Mathematics I-II (6)
- MTH 120 Calculus I (4)
- MTH 240 Geometry for Elementary Teachers (3)
- MTH 301 Advanced Topics in Elementary Mathematics (3)
- MTH 403 Current Research in Elementary School Mathematics (3)

11 hours from:

- *CSC 136 Computers for the Non-Specialist (3)
- *CSC 137 Introduction to FORTRAN Programming (3)
- *CSC 237 Computer Programming and Numeric Methods (3)
- MTH 105 College Algebra (3)
- MTH 107 Plane Trigonometry (2)
- MTH 118 Mathematical Analysis for Social Sciences I (3)
- MTH 119 Mathematical Analysis for Social Sciences II (3)
- MTH 121 Calculus II (4)
- MTH 122 Elementary Linear Algebra (3)
- MTH 210 Algebra for Elementary Teachers (3)
- MTH 223 Multivariable Calculus (4)
- MTH 319 Mathematical Modeling (3)
- MTH 370 Probability and Statistics I (4)
- Any other mathematics or computer science courses approved by the advising coordinator
- *MTH 381 The Teaching of Mathematics K-6 (3)

Approved minors are those for the elementary program as given on page 284.

21 hours, not including the minor and not including requirements that may be satisfied through Basic Studies (*) or the professional studies (*).

MATHEMATICS MINOR 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 mathematics, certification code "EX." The certification test covering this field is #22, "Mathematics."

- *MTH 120-121 Calculus I-II (8)

One of:

- MTH 211 Discrete Mathematics (3)
- *MTH 270 Elementary Statistics (3)
- MTH 370 Probability and Statistics I (4)

One of:

- *MTH 341 College Geometry (3)
- MTH 342 Elementary Space-Time Geometry (2)

Sufficient credits from the following list to total 21 hours:

*NOTES:

<— Mathematics for
the Elementary Teach-
ing Certificate

*Satisfied in Basic Studies.

*Satisfied in professional studies.

*NOTES:

<— Mathematics

*Could be satisfied in Basic Stud-
les.

MTH 223 Multivariable Calculus (4)
 MTH 307 Elementary Number Theory (3)
 MTH 319 Mathematical Modeling (3)
 MTH 325 Differential Equations (3)
 MTH 341 College Geometry (3)
 MTH 342 Elementary Space-Time Geometry (2)
 MTH 360 Statistical Methods (3) (if MTH 370 not taken)
 MTH 370 Probability and Statistics I (4) (if MTH 360 not taken)
 MTH 400 History and Development of Mathematics (3)
 MTH 411 Modern Algebra with Applications (3)
 MTH 416 Linear Algebra (3)
 MTH 420 Introduction to Analysis (3)
 MTH 424 Introduction to Complex Variables (3)

One of:

MTH 304 Middle School Mathematics Methods and Content (3)
 MTH 306 Teaching of High School Mathematics (3)

One of:

*CSC 137 Introduction to FORTRAN Programming (3)
 *CSC 138 Computer Science I (3)
 *CSC 237 Computer Programming and Numeric Methods (3)

20 hours

MATHEMATICS MINOR FOR THE ELEMENTARY TEACHING CERTIFICATE

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 certification test covering this field is #22, "Mathematics."

*MTH 108-109 Functional Mathematics I-II (6)

MTH 240 Geometry for Elementary Teachers (3)

MTH 301 Advanced Topics in Elementary Mathematics (3)

One of:

Either MTH 206 College Algebra and Trigonometry for Elementary Teachers (4) and MTH 120 Calculus I (4)

or MTH 210 Algebra for Elementary Teachers (3) and 5 hours of electives chosen in consultation with the advising coordinator for elementary mathematics education.

*MTH 381 The Teaching of Mathematics K-6 (3)

One of:

*CSC 137 Introduction to FORTRAN Programming (3)

*CSC 138 Computer Science I (3)

*CSC 237 Computer Programming and Numeric Methods (3)

14 hours

*NOTES:

**Mathematics for the
Elementary Teaching
Certificate —>**

*Satisfied in Basic Studies.

*Satisfied in professional studies.

MUSIC

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See the Music department listings on pp. 144-150 for further information.

MUSIC EDUCATION MAJOR (INSTRUMENTAL) K-12 TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. See inside back cover
- I-B-3. See inside back cover
- I-B-4. See inside back cover
- I-B-5. See inside back cover
- II-B-1. See inside back cover
- II-B-2. See inside back cover
- II-B-3. See inside back cover
- III-B-1. See inside back cover
- III-B-2. See inside back cover
- III-B-3. See inside back cover
- III-B-4. See inside back cover
- IV-B-1. See inside back cover
- IV-B-2. See inside back cover
- IV-B-3. See inside back cover
- IV-B-4. Arts
Included in the teaching major.

Physical education, military science, or equivalent
PEG 140 Marching Band (2)

Credit hours in Basic Studies: 47

Teaching Major/Minor

See the 1993-94 Undergraduate Catalog under Department of Music, instrumental music, for additional applicable information.

- MUS 101-102 Music Theory I-II (6)
- MUS 118, 128 Music Literature I-II (2)
- MUS 119, 129 Aural Skills I-II (2)
- MUS 201-202 Music Theory III-IV (6)
- MUS 218, 228 Music Literature III-IV (2)
- MUS 219, 229 Aural Skills III-IV (2)
- MUS 232 Voice Class (1)
- MUS 301 History of Music (3)
- MUS 302 History of Music (3)
- MUS 413 Orchestration (2)
- MUS 414 Band Arranging (2)
- MUS 211 Basic Brass Class (1)
- MUS 241 Percussion (1)
- MUS 261 Basic String Class: Violin (1)
- MUS 281 Basic Woodwind Class (1)
- Two of:
 - MUS 212 Brass Class (1)
 - MUS 262 String Class: Viola (1)
 - MUS 263 String Class: Cello and Double Bass (1)
 - MUS 282 Woodwind Class (1)
 - MUS 283 Woodwind Class (1)
- MUS 251-254 Functional Piano (4)
- AMU 100-300 Applied Music (principal instrument) (16)
- MUS 326 Conducting (2)
- MUS 327 Instrumental Conducting (2)
- Ensembles (8)
- Electives (4)

Subtotal, Major and minor: 73

MUSIC EDUCATION (Instrumental)

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in music education, certification code "JX." This program of studies meets requirements of the National Association of Schools of Music. The certification test covering this field is #39, "Music Education."

MUSIC EDUCATION**(Vocal)**

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in music education, certification code "JX." This program of studies meets requirements of the National Association of Schools of Music. The certification test covering this field is #39, "Music Education."

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- MUS 332 Instrumental Music in the Public Schools (3)

One of:

- MUS 333 Orchestral Methods (3)
- MUS 334 Band Methods (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- EDU 496 Student Teaching (6)
- EDU 497 Student Teaching (6)

Credit hours in Professional Studies: 32

Total credit hours required: 152

MUSIC EDUCATION**(VOCAL)****K-12 TEACHER CERTIFICATION****Basic Studies**

- I-B-1. ENG 121 English Composition (3)
- I-B-2. *See inside back cover*
- I-B-3. *See inside back cover*
- I-B-4. *See inside back cover*
- I-B-5. *See inside back cover*
- II-B-1. *See inside back cover*
- II-B-2. *See inside back cover*
- II-B-3. *See inside back cover*
- III-B-1. *See inside back cover*
- III-B-2. *See inside back cover*
- III-B-3. *See inside back cover*
- III-B-4. *See inside back cover*
- IV-B-1. *See inside back cover*
- IV-B-2. *See inside back cover*
- IV-B-3. *See inside back cover*
- IV-B-4. **Arts**
Included in the teaching major.

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 47

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Music, vocal music, for additional applicable information.

- MUS 101-102 Music Theory I-II (6)
- MUS 118, 128 Music Literature I-II (2)
- MUS 119, 129 Aural Skills I-II (2)
- MUS 201-202 Music Theory III-IV (6)
- MUS 218, 228 Music Literature III-IV (2)
- MUS 219, 229 Aural Skills III-IV (2)
- MUS 301 History of Music (3)
- MUS 302 History of Music (3)
- MUS 413 Orchestration (2)
- MUS 274 Functional Guitar (2)

Two of:

- MUS 212 Brass Class (1)
- MUS 241 Percussion (1)
- MUS 261 Basic String Class: Violin (1)
- MUS 281 Basic Woodwind Class (1)

AMU 100-300 Applied Music (principal instrument) (16)

One of:

AMU 251-4 B11-12 Applied Music (if keyboard is secondary instrument)
 AMU A01-A12 Applied Music in Voice (if secondary instrument)
 MUS 326 Conducting (2)
 MUS 328 Choral Conducting (2)
 Ensembles (8)

Subtotal, Major and minor:66

Professional Studies

100 clock hours of approved pre-student teaching field experiences (0)
 EDT 300 Introduction to Computer Applications in Education (1)
 SGN 300 Exceptional Children in the Regular Classroom (1)
 EDP 322 Human Development and Learning (4)

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

CUR 305 Curriculum and Methods: Secondary (3)
 RDG 311 Teaching Reading in the Secondary School (3)
 SFD 328 Social Aspects of Teaching (3)
 MUS 330 Music Education in the Elementary School (3)
 MUS 331 Music Education in the Secondary School (3)
 EDP 340 Introduction to Assessment and Evaluation (3)
 EDM 345 Media for the Classroom Teacher (1)
 EDU 496 Student Teaching (6)
 EDU 497 Student Teaching (6)

Credit hours in Professional Studies:32

Total credit hours required: 145

MUSIC MAJOR

ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in music education, certification code "JX." The certification test covering this field is #39, "Music Education."

The curriculum for this major is that which is listed under "Teaching Major" in the K-12 music (instrumental) or K-12 music (vocal) program. No minor is required.

65 hours for instrumental, 58 hours for vocal.

ELEMENTARY MUSIC EDUCATION MINOR

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 music education, certification code "JX." The certification test covering this field is #39, "Music Education."

24 hours in music theory, music literature, music education, applied music, conducting, and piano. Three or four semester hours of student teaching also are required. The methods course must be taken in the area of teaching desired. All courses in the minor must be completed before student teaching in the minor field.

PHYSICS AND ASTRONOMY

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487-4144

See the Physics department listings on pp. 151-158 for further information.

GENERAL SCIENCE MAJOR—BIOLOGY MINOR SECONDARY TEACHER CERTIFICATION

GENERAL SCIENCE— BIOLOGY

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and biology, certification code "DA." The certification tests covering this field are #16, "Science," and #17, "Biology."

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. See inside back cover
 - I-B-4. See inside back cover
 - I-B-5. See inside back cover
 - II-B-1. CHM 121-122 General Chemistry I with lab (4)*
 - II-B-2. See inside back cover
 - II-B-3. PHY 221 Mechanics, Sound, and Heat (4)*
 - III-B-1. See inside back cover
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1. See inside back cover
 - IV-B-2. See inside back cover
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:50

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Physics and Astronomy, and under Department of Biology for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- BOT 221 General Botany (4)
- ZOO 222 General Zoology (4)
- BIO 301 Genetics (3)

Nine hours of electives from biology, botany, microbiology, or zoology.

Restrictions: May not include ESC 302, ESC 303, BIO 205, and BIO 403. No more than two hours may be taken in any combination of BIO, BOT, or ZOO 497/498/499. Special Problems/Topics courses or BIO/BOT/MIC/ZOO 387/487 Cooperative Education courses will not count.

- MTH 105 College Algebra (3)
- MTH 107 Plane Trigonometry (2)
- GES 108 Earth Science (4)
- AST 205 Principles of Astronomy (4)
- PHY 222 Electricity and Light (4)
- GES 324 Weather (3)

Eight hours of electives from among:

- AST 204 Astronomical Investigations (1)
- CHM 123, 124 General Chemistry II with lab (4)
- CHM 270 Organic Chemistry (4)
- CHM 271 Organic Chemistry Laboratory (1)
- CSC 137 Introduction to FORTRAN Programming (3)
- GES 114 National Parks and Monuments (2)
- GES 200 The Oceans (3)
- GES 309 Plate Tectonics (3)
- GLG 228 Mineralogy (3)
- GLG 229 Rocks of Michigan (2)
- MTH 120 Calculus I (4)
- MTH 121 Calculus II (4)
- MTH 122 Elementary Linear Algebra (3)
- MTH 223 Multivariable Calculus (4)
- PHY 330 Intermediate Mechanics I (3)
- PHY 370 Introduction to Modern Physics (3)
- PHY 372 Modern Physics Laboratory (1)

Others selected in consultation with general science adviser

Subtotal, Major and related areas:48

*NOTES:

Secondary

*Course required for and applicable to major.

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- BIO 403 Methods and Materials for Teaching Biology (3)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies:34

Total credit hours required: 132

GENERAL SCIENCE MAJOR—CHEMISTRY MINOR SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. See inside back cover
 - I-B-4. See inside back cover
 - I-B-5. See inside back cover
 - II-B-1. CHM 121-122 General Chemistry I with lab (4)*
 - II-B-2. See inside back cover
 - II-B-3. PHY 221 Mechanics, Sound, and Heat (4)*
 - III-B-1. See inside back cover
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1. See inside back cover
 - IV-B-2. See inside back cover
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:50

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Physics and Astronomy, and under Department of Chemistry for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- CHM 123-124 General Chemistry II with lab (4)
- CHM 281 Quantitative Analysis (4)

One of:

- CHM 270-271 Organic Chemistry with lab (5)
- CHM 371-373 Organic Chemistry with lab (8)

Seven hours of electives chosen from courses numbered above 200 in chemistry

- BIO 105 Biology and the Human Species (4)
- MTH 105 College Algebra (3)
- MTH 107 Plane Trigonometry (2)
- GES 108 Earth Science (4)
- AST 205 Principles of Astronomy (4)
- PHY 222 Electricity and Light (4)
- BIO 224 Principles of Conservation (4)
- GES 324 Weather (3)

Four hours of electives from among:

- AST 204 Astronomical Investigations (1)
- BIO 205 Field Biology (4)
- BIO 207 Elements of Ecology (2)
- BOT 221 General Botany (4)
- CSC 137 Introduction to FORTRAN Programming (3)
- GES 114 National Parks and Monuments (2)
- GES 200 The Oceans (3)

GENERAL SCIENCE— CHEMISTRY

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and chemistry, certification code "DC." The certification tests covering this field are #16, "Science," and #18, "Chemistry."

*NOTES:

Secondary

*Course required for and applicable to major.

NOTES:*Secondary**

^aCourse required for and applicable to major.

- GES 309 Plate Tectonics (3)
- GLG 228 Mineralogy (3)
- GLG 229 Rocks of Michigan (2)
- MTH 120 Calculus I (4)
- MTH 121 Calculus II (4)
- MTH 122 Elementary Linear Algebra (3)
- MTH 223 Multivariable Calculus (4)
- PHY 330 Intermediate Mechanics I (3)
- PHY 370 Introduction to Modern Physics (3)
- PHY 372 Modern Physics Laboratory (1)
- ZOO 222 General Zoology (4)
- Others selected in consultation with general science adviser

Subtotal, Major and related areas:52

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- PHY 325 Methods of Teaching the Physical Sciences (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM345 Media for the Classroom Teacher (1)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies:34

Total credit hours required: 136

GENERAL SCIENCE MAJOR—EARTH SCIENCE MINOR**SECONDARY TEACHER CERTIFICATION****Basic Studies**

- I-B-1. ENG 121 English Composition (3)
- I-B-2. See inside back cover
- I-B-3. See inside back cover
- I-B-4. See inside back cover
- I-B-5. See inside back cover
- II-B-1. CHM 121-122 General Chemistry I with lab (4)^a
- II-B-2. See inside back cover
- II-B-3. PHY 221 Mechanics, Sound, and Heat (4)^a
- III-B-1. See inside back cover
- III-B-2. See inside back cover
- III-B-3. See inside back cover
- III-B-4. See inside back cover
- IV-B-1. See inside back cover
- IV-B-2. See inside back cover
- IV-B-3. See inside back cover
- IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:50

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Physics and Astronomy, and under Department of Geography and Geology for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- BIO 105 Biology and the Human Species (4)
- MTH 105 College Algebra (3)
- MTH 107 Plane Trigonometry (2)
- GES 108 Earth Science (4)
- GES 200 The Oceans (3)
- AST 205 Principles of Astronomy (4)
- PHY 222 Electricity and Light (4)

**GENERAL SCIENCE—
EARTH SCIENCE**

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and geology/earth science, certification code "DH." The certification tests covering this field are #16, "Science," and #20, "Geology/Earth Science."

- BIO 224 Principles of Conservation (4)
- GLG 229 Rocks of Michigan (2)
- GES 309 Plate Tectonics (3)
- GES 324 Weather (3)

One of:

- GLG 228 Mineralogy (3)
- GLG 161 Historical Geology (4)
- GLG 325 Geomorphology (3)
- GLG 331 Paleontology (4)
- GLG 370 Glacial Geology (3)

Seven hours of electives from among:

- AST 204 Astronomical Investigations (1)
- BIO 205 Field Biology (4)
- BIO 207 Elements of Ecology (2)
- BOT 221 General Botany (4)
- ZOO 222 General Zoology (4)
- CHM 123, 124 General Chemistry II (4)
- CHM 270 Organic Chemistry (4)
- CHM 271 Organic Chemistry Laboratory (1)
- CSC 137 Introduction to FORTRAN Programming (3)
- MTH 120 Calculus I (4)
- MTH 121 Calculus II (4)
- MTH 122 Elementary Linear Algebra (3)
- MTH 223 Multivariable Calculus (4)
- PHY 330 Intermediate Mechanics I (3)
- PHY 370 Introduction to Modern Physics (3)
- PHY 372 Modern Physics Laboratory (1)
- Others selected in consultation with general science adviser

Subtotal, Major and related areas:46

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- GES 347 Teaching Earth Science and Physical Geography (3)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies:34

Total credit hours required: 130

**GENERAL SCIENCE MAJOR—MATHEMATICS MINOR
SECONDARY TEACHER CERTIFICATION**

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. See inside back cover
- I-B-3. See inside back cover
- I-B-4. MTH 120 Calculus I (4)*
- I-B-5. One of:^a
 - CSC 137 Introduction to FORTRAN Programming (3)
 - CSC 138 Computer Science I (3)
 - CSC 237 Computer Programming and Numeric Methods (3)
- II-B-1. CHM 121-122 General Chemistry I with lab (4)*
- II-B-2. See inside back cover
- II-B-3. PHY 221 Mechanics, Sound, and Heat (4)*
- III-B-1. See inside back cover
- III-B-2. See inside back cover
- III-B-3. See inside back cover
- III-B-4. See inside back cover

***NOTES:**

Secondary

^aCourse required for and applicable to major.

**GENERAL SCIENCE—
MATHEMATICS**

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and mathematics, certification code "EX." The certification tests covering this field are #16, "Science," and #22, "Mathematics."

IV-B-1. See inside back cover

IV-B-2. See inside back cover

IV-B-3. See inside back cover

IV-B-4. See inside back cover

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:51

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Physics and Astronomy, and under Department of Mathematics for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

BIO 105 Biology and the Human Species (4)

GES 108 Earth Science (4)

MTH 121 Calculus II (4)

MTH 122 Elementary Linear Algebra (3)

AST 205 Principles of Astronomy (4)

PHY 222 Electricity and Light (4)

BIO 224 Principles of Conservation (4)

GES 324 Weather (3)

One of:

MTH 211 Discrete Mathematics (3)

MTH 270 Elementary Statistics (3)

MTH 370 Probability and Statistics I (4)

One of:

MTH 341 College Geometry (3)

MTH 342 Elementary Space-Time Geometry (2)

One of:

MTH 360 Statistical Methods (3)

MTH 370 Probability and Statistics I (4)

MTH 400 History and Development of Mathematics (3)

MTH 411 Modern Algebra with Applications (3)

MTH 416 Linear Algebra (3)

MTH 418 Applied Linear Algebra (3)

MTH 420 Introduction to Analysis (3)

MTH 424 Introduction to Complex Variables (3)

Five hours from among:

MTH 223 Multivariable Calculus (4)

MTH 307 Elementary Number Theory (3)

MTH 319 Mathematical Modeling (3)

MTH 325 Differential Equations (3)

MTH 341 College Geometry (3)

MTH 342 Elementary Space-Time Geometry (2)

Five hours of electives from among:

AST 204 Astronomical Investigations (1)

BIO 205 Field Biology (4)

BIO 207 Elements of Ecology (2)

BOT 221 General Botany (4)

ZOO 222 General Zoology (4)

CHM 123, 124 General Chemistry II (4)

CHM 270 Organic Chemistry (4)

CHM 271 Organic Chemistry Laboratory (1)

CSC 137 Introduction to FORTRAN Programming (3)

GES 114 National Parks and Monuments (2)

GES 200 The Oceans (3)

GES 309 Plate Tectonics (3)

GLG 228 Mineralogy (3)

GLG 229 Rocks of Michigan (2)

PHY 330 Intermediate Mechanics I (3)

PHY 370 Introduction to Modern Physics (3)

PHY 372 Modern Physics Laboratory (1)

Subtotal, Major and related areas:45

Professional Studies

100 clock hours of approved pre-student teaching field experiences (0)

EDT 300 Introduction to Computer Applications in Education (1)

SGN 300 Exceptional Children in the Regular Classroom (1)

EDP 322 Human Development and Learning (4)

*NOTES:

Secondary

^aCourse required for and applicable to major.

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

- CUR 305 Curriculum and Methods: Secondary (3)
- MTH 306 Teaching of High School Mathematics (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies:34

Total credit hours required: 130

GENERAL SCIENCE MAJOR—PHYSICS MINOR SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. See inside back cover
 - I-B-4. MTH 120 Calculus I (4)*
 - I-B-5. See inside back cover
 - II-B-1. CHM 121-122 General Chemistry I with lab (4)*
 - II-B-2. See inside back cover
 - II-B-3. PHY 223 Mechanics, Sound, and Heat (5)*
 - III-B-1. See inside back cover
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1. See inside back cover
 - IV-B-2. See inside back cover
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:52

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Physics and Astronomy, and under Department of Physics and Astronomy for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- BIO 105 Biology and the Human Species (4)
- GES 108 Earth Science (4)
- GES 324 Weather (3)
- MTH 121 Calculus II (4)
- AST 205 Principles of Astronomy (4)
- BIO 224 Principles of Conservation (4)
- PHY 224 Electricity and Light (5)
- PHY 370 Introduction to Modern Physics (3)

One of:

- PHY 332 Mechanics Laboratory (1)
- PHY 372 Modern Physics Laboratory (1)
- PHY 442 Optics Laboratory (1)
- PHY 452 Electrical Measurements (4)
- PHY 456 Electronics for Scientists (4)
- PHY 471 Nuclear Physics (4)

Six hours of electives in physics (300 and above, no astronomy)

Five hours of electives from among:

- BIO 205 Field Biology (4)
- BIO 207 Elements of Ecology (2)
- BOT 221 General Botany (4)
- CHM 123, 124 General Chemistry II (4)
- CHM 270 Organic Chemistry (4)
- CHM 271 Organic Chemistry Laboratory (1)
- CSC 137 Introductionⁿ to FORTRAN Programming (3)
- GES 114 National Parks and Monuments (2)
- GES 200 The Oceans (3)
- GES 309 Plate Tectonics (3)
- GLG 228 Mineralogy (3)

GENERAL SCIENCE-- PHYSICS

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in general science, certification code "DX," and physics, certification code "DE." The certification tests covering this field are #16, "Science," and #19, "Physics."

*NOTES:

Secondary

*Course required for and applicable to major.

GLG 229 Rocks of Michigan (2)
 MTH 122 Elementary Linear Algebra (3)
 MTH 223 Multivariable Calculus (4)
 ZOO 222 General Zoology (4)

Subtotal, Major and minor: 43

Professional Studies

100 clock hours of approved pre-student teaching field experiences (0)
 EDT 300 Introduction to Computer Applications in Education (1)
 SGN 300 Exceptional Children in the Regular Classroom (1)
 EDP 322 Human Development and Learning (4)

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

CUR 305 Curriculum and Methods: Secondary (3)
 RDG 311 Teaching Reading in the Secondary School (3)
 PHY 325 Methods of Teaching the Physical Sciences (3)
 SFD 328 Social Aspects of Teaching (3)
 EDP 340 Introduction to Assessment and Evaluation (3)
 EDM 345 Media for the Classroom Teacher (1)
 EDU 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required: 129

PHYSICS

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in physics, certification code "DE," and, depending on the minor selected, an additional endorsement. This program of studies meets requirements of the National Science Teachers Association. The certification test covering this field is #19, "Physics."

*NOTES:

Secondary

^aCourse required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

PHYSICS MAJOR SECONDARY TEACHER CERTIFICATION

Basic Studies

I-B-1. ENG 121 English Composition (3)
 I-B-2. See inside back cover
 I-B-3. See inside back cover
 I-B-4. MTH 120 Calculus I (4)^a
 I-B-5. CSC 237 Computer Programing and Numeric Methods (3)^a
 II-B-1. One of:^b

BIO 105 Biology and the Human Species (4)
 BOT 221 General Botany (4)
 CHM 105 Survey of Chemistry (5)
 CHM 115 Chemistry and Society (3)
 CHM 116 Chemistry and Society Laboratory (1)
 CHM 119 Fundamentals of Chemistry (4)
 CHM 120 Fundamentals of Organic and Biochemistry (4)
 CHM 121-122 General Chemistry I with lab (4)
 IDT 150 Understanding Technology (3)
 IT 240 Science, Technology, and People (3)
 ZOO 222 General Zoology (4)

b. Additional courses 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

GES 108 Earth Science (4)
 GLG 120 The Fossil Record (3)
 GLG 160 Physical Geology (4)

II-B-2. See inside back cover
 II-B-3. PHY 223 Mechanics, Sound, and Heat (5)^a
 III-B-1. See inside back cover
 III-B-2. See inside back cover
 III-B-3. See inside back cover
 III-B-4. See inside back cover
 IV-B-1. See inside back cover
 IV-B-2. See inside back cover
 IV-B-3. See inside back cover
 IV-B-4. See inside back cover
 Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 51

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Physics and Astronomy for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

AST 204 Astronomical Investigation (1)
 AST 205 Principles of Astronomy (4)

- MTH 121 Calculus II (4)
- MTH 122 Elementary Linear Algebra (3)
- MTH 223 Multivariable Calculus (4)
- PHY 224 Electricity and Light (5)
- PHY 330 Intermediate Mechanics I (3)
- PHY 350 Electricity and Magnetism I (3)
- PHY 370 Introduction to Modern Physics (3)
- PHY 406 Ethical Issues in Physics (1)

Three of:

- PHY 332 Mechanics Laboratory (1)
- PHY 372 Modern Physics Laboratory (1)
- PHY 456 Electronics for Scientists (4)
- PHY 458 Microcomputer and Digital Electronics (4)
- PHY 471 Nuclear Physics (4)

Zero to four hours of electives in physics (300-level and above)

Minor

A minor from the approved list (see p. 285)

Subtotal, Major and minor:54

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- PHY 325 Methods of Teaching the Physical Sciences (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies, with 20-hour minor:34

Total credit hours required: 139

ASTRONOMY MINOR

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 astronomy, certification code "DO." The certification test covering this field is #21, "Astronomy."

- *AST 204 Astronomical Investigations (1)
- AST 205 Principles of Astronomy (4)
- AST 315 Applied Astronomy (3)
- AST 370 Astronomical Concepts (3)

13 credits from approved courses in physics, astronomy, mathematics, or chemistry in consultation with the advising coordinator for astronomy.

Electives used to fulfill the astronomy minor cannot be used to complete any other major or minor.

24 hours

GENERAL SCIENCE MINOR (AVAILABLE ONLY TO MAJORS IN ONE OF THE SCIENCES)

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 science, certification code "DX." The certification test covering this field is #16, "Science."

With a major in *biology*, take the following courses:

- AST 205 Principles of Astronomy (4)
- *CHM 121 General Chemistry I (3)
- *CHM 122 General Chemistry I Lab (1)

***NOTES:**

Secondary

²Course required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

***NOTES:**

← Astronomy

*AST 204 may be satisfied in Basic Studies in some programs.

***NOTES:**

← General Science

*Included in Basic Studies.

**May be satisfied through Basic Studies.

#Included in specialty studies.

NOTES:*General Science —>**

*Included in Basic Studies.

**May be satisfied through Basic Studies.

#Included in specialty studies.

GES 108 Earth Science (4)

MTH 105 College Algebra (3)

*PHY 221 Mechanics, Sound, and Heat (4)

5 hours from:

#CHM 123 General Chemistry II (3)

#CHM 124 General Chemistry II Lab (1)

GES 324 Weather (3)

**CSC 137 Introduction to FORTRAN Programming (3)

#PHY 222 Electricity and Light (4)

Others as approved by general science adviser

13 hours

With a major in *chemistry*, take the following courses:

AST 205 Principles of Astronomy (4)

BIO 105 Biology and the Human Species (4)

GES 108 Earth Science (4)

MTH 105 College Algebra (3)

PHY 221 Mechanics, Sound, and Heat (4)

5 hours from:

BIO 224 Principles of Conservation (4)

GES 324 Weather (3)

**CSC 137 Introduction to FORTRAN Programming (3)

#PHY 222 Electricity and Light (4)

Others as approved by general science adviser

21 hours

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:

*AST 205 Principles of Astronomy (4)

*BIO 105 Biology and the Human Species (4)

*CHM 121-122 General Chemistry I-II with lab (4)

*GES 108 Earth Science (4)

*PHY 221 Mechanics, Sound, and Heat (4)

4 hours from:

BIO 224 Principles of Conservation (4)

CHM 123 General Chemistry II (3)

CHM 124 General Chemistry II Lab (1)

GES 324 Weather (3)

PHY 222 Electricity and Light (4)

Others as approved by general science adviser

12 hours

With a major in *physics*, take the following courses:

AST 205 Principles of Astronomy (4)

*BIO 105 Biology and the Human Species (4)

*CHM 121 General Chemistry I (3)

*CHM 122 General Chemistry I Lab (1)

*GES 108 Earth Science (4)

**MTH 120 Calculus I (4)

4 hours from:

BIO 224 Principles of Conservation (4)

CHM 123 General Chemistry II (3)

CHM 124 General Chemistry II Lab (1)

GES 324 Weather (3)

*CSC 137 Introduction to FORTRAN Programming (3)

Others as approved by general science adviser

13 hours

PHYSICS MINOR**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 physics, certification code "DE." The certification test covering this field is #19, "Physics."

*PHY 223 Mechanics, Sound, and Heat (5)

PHY 224 Electricity and Light (5)

NOTES:*Physics —>**

*Could be satisfied in Basic Studies.

A student changing to a physics minor after completing PHY 221 and/or PHY 222 may request substitution for PHY 223 and/or PHY 224. The total number of hours is not reduced by this substitution.

PHY 370 Introduction to Modern Physics (3)

One of:

PHY 332 Mechanics Laboratory (1)

(Pre- or coreq: PHY 330)

PHY 372 Modern Physics Laboratory (1)

PHY 442 Optics Laboratory (1)

(Pre- or coreq: PHY 440)

PHY 452 Electrical Measurements

PHY 456 Electronics for Scientists

PHY 458 Microcomputer and Digital Electronics

PHY 471 Nuclear Physics

(Prereq: PHY 370)

Electives in physics to total 20 hours from above. No physics courses numbered less than 300 are to be used as electives on this minor. No astronomy courses can be used on this minor.

*MTH 120-121 Calculus I-II (8)

19 hours

POLITICAL SCIENCE

Joanna V. Scott
Department Head
601 Pray-Harrold
487-3113

See the Political Science department listings on pp. 159-165 for further information.

POLITICAL SCIENCE

Successful completion of this course of studies 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"), or social science ("CX"). This program of studies meets requirements of the National Council for Social Studies. The certification test covering this field is #10, "Political Science."

***NOTES:**

Secondary

^aCourse required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

POLITICAL SCIENCE MAJOR SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. See inside back cover
- I-B-3. See inside back cover
- I-B-4. See inside back cover
- I-B-5. See inside back cover
- II-B-1. See inside back cover
- II-B-2. See inside back cover
- II-B-3. See inside back cover
- III-B-1. See inside back cover
- III-B-2. HIS 102 Western Civilization, 1648 to World War I (3)
- III-B-3. One of:
GEO 107 Introduction to Geography (3)
GEO 110 World Regions (3)
- III-B-4. HIS 103 Twentieth Century Civilization (3)
- IV-B-1. See inside back cover
- IV-B-2. See inside back cover
- IV-B-3. See inside back cover
- IV-B-4. See inside back cover

Physical education, military science, or equivalent (2)

A course in economics, if not included in the minor (3)

Credit hours in Basic Studies:52

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Political Science for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

Three of:

- PLS 210 Introduction to Political Analysis (3)
- PLS 211 Introduction to Comparative Government (3)
- PLS 212 Introduction to International Politics (3)
- PLS 213 Introduction to Political Thought (3)

Choose three courses from one of the three groups listed below. If Group I is chosen, the three concentration courses must be in Subgroup A.

Group I

Subgroup A

- PLS 202 State and Local Government (3)
- PLS 216 Municipal Government (3)
- PLS 270 Public Administration (3)
- PLS 280 The American Presidency (3)
- PLS 312 American Constitutional Law I (3)
- PLS 327 American Foreign Policy Process (3)
- PLS 330 Urban Politics (3)
- PLS 358 Parties, Elections, and Interest Groups (3)
- PLS 359 Public Opinion and Propaganda (3)
- PLS 364 The Legislative Process (3)
- PLS 381 Public Policy Analysis (3)
- PLS 385 Judicial Process and Behavior (3)
- PLS 470 Seminar in Political Science (3)

Subgroup B

- PLS 301 The American Legal System (3)
- PLS 313 American Constitutional Law II (3)
- PLS 315 Consumer Law and Politics (3)
- PLS 332 Intergovernmental Relations and Federalism (3)

- PLS 334 Personnel Administration in Government (3)
- PLS 335 Labor in American Politics (3)
- PLS 352 Politics of Government Budgeting (3)
- PLS 365 Women and Politics (3)
- PLS 387 Cooperative Education in Political Science (3)
- PLS 431 Theories of Public Organization (3)
- PLS 456 Criminal Law I (3)
- PLS 480 Field Seminar in Political Science/Public Administration (3)
- PLS 486 Internship in Political Science/Public Administration (3)
- PLS 487 Cooperative Education in Political Science (3)
- PLS 488 Internship in Political Science/Public Administration (6)
- PLS 489 Internship in Political Science/Public Administration (9)

Group II

- PLS 341 International Law (3)
- PLS 342 International Organizations (3)
- PLS 354 Government and Politics of Canada (3)
- PLS 361 Government and Politics of the U.S.S.R. (3)
- PLS 367 Contemporary Political Systems of Latin America (3)
- PLS 371 Government and Politics of the Middle East (3)
- PLS 372 Government and Politics of Sub-Saharan Africa (3)
- PLS 374 Asian Political Systems (3)
- PLS 412 Comparative Legal Systems (3)
- PLS 462 Foreign Relations of the Soviet Union (3)
- PLS 470 Seminar in Political Science (3)

Group III

- PLS 308 Political Violence and Revolution (3)
- PLS 310 Methods of Political Research (3)
- PLS 382 Politics and the 21st Century (3)
- PLS 410 Political Science in Fiction (3)
- PLS 418 20th Century Political Theory (3)
- PLS 420 Democracy and Power (3)
- PLS 422 American Political Theory (3)
- PLS 470 Seminar in Political Science (3)

Three electives. At least two of these elective courses (6) must be in one of the two groups not selected for concentration. The other elective (3) may be chosen from any of the courses offered by the Department of Political Science, including independent studies, special topics, internship/cooperative education, and courses listed under Subgroup B in Group I.

Minor

A minor in one of economics, geography, history, psychology, sociology, or social science

Subtotal, Major and minor: 47¹

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- HIS 481 The Teaching of Social Studies (3)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies: 34

Total credit hours required, with 20-hour minor: 133

***NOTES:**

Secondary

^{*}Course required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

POLITICAL SCIENCE MAJOR ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in political science, certification code "CD." The certification test covering this field is #10, "Political Science."

The curriculum for this major is that which is listed under "Teaching Major" in the secondary political science program, plus the "history" requirement and the economics course requirement under III-B-2, III-B-3, and III-B-4 in that program's Basic Studies requirements. Approved minors are geography, history, sociology, and social science group for elementary teachers.

30 hours, not including the minor, and not counting course work that may be satisfied through Basic Studies.

POLITICAL SCIENCE MINOR 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 political science, certification code "CD." The certification test covering this field is #10, "Political Science."

**One of:*

PLS 112 American Government (3)

PLS 113 American Government Honors (3)

Two of:

PLS 210 Introduction to Political Analysis (3)

PLS 211 Introduction to Comparative Government (3)

PLS 212 Introduction to International Politics (3)

PLS 213 Introduction to Political Thought (3)

Two courses from:

One of the three areas of concentration in political science (see political science, secondary)

One course from:

One of the two areas of concentration not chosen above.

Any political science course.

18 hours

*NOTES:

Political Science —>

*Satisfied in Basic Studies.

PSYCHOLOGY

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See the Psychology department listings on pp. 166-168 for further information.

PSYCHOLOGY MAJOR SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. See inside back cover
- I-B-3. See inside back cover
- I-B-4. See inside back cover
- I-B-5. See inside back cover
- II-B-1. See inside back cover
- II-B-2. See inside back cover^a
- II-B-3. See inside back cover
- III-B-1. See inside back cover
- III-B-2. HIS 102 Western Civilization, 1648 to World War I (3)
- III-B-3. One of:
 - GEO 107 Introduction to Geography (3)
 - GEO 110 World Regions (3)
- III-B-4. HIS 103 Twentieth Century Civilization (3)
- IV-B-1. See inside back cover
- IV-B-2. See inside back cover
- IV-B-3. See inside back cover
- IV-B-4. See inside back cover

Physical education, military science, or equivalent (2)

A course in economics, if not included in the minor (3)

Credit hours in Basic Studies: 52

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Psychology for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- PSY 205 Quantitative Methods in Psychology (3)
- PSY 301 Introductory Experimental Psychology (3)
- PSY 453 History and Systems of Psychology (3)

One of:

- PSY 360 Abnormal Psychology (3)
- PSY 451 Dynamics of Personality (3)

One of:

- PSY 357 Sensation and Perception (3)
- PSY 457 Physiological Psychology (3)
- PSY 458 Comparative Animal Behavior (3)

One of:

- PSY 304 Learning (3)
- PSY 356 Motivation (3)

One of:

- PSY 309 Social Psychology (3)
- PSY 321 Child Psychology (3)

Select 4-5 credits (enough to total 30 hours in psychology, including General Psychology), in consultation with an advising coordinator.

Minor

A minor in one of economics, geography, history, political science, sociology, or social science

Subtotal, Major and minor: 47¹

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

PSYCHOLOGY

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in psychology, certification code "CE," and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), history ("CC"), political science ("CD"), sociology ("CF"), or social science ("CX"). This program of studies meets requirements of the National Council for Social Studies. The certification test covering this field is #11, "Psychology."

*NOTES:

Secondary

^aCourse required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDM 345 Media for the Classroom Teacher (1)
- HIS 481 The Teaching of Social Studies (3)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies:34

Total credit hours required, with 20-hour minor: 133

***NOTES:**

Psychology —>

***Satisfied in Basic Studies requirements.**

**PSYCHOLOGY MINOR
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 psychology, certification code "CE." The certification test covering this field is #11, "Psychology."

**One of:*

- PSY 101 General Psychology (3)
- PSY 102 General Psychology (4)

Choose 16-17 credits in consultation with advising coordinator.

17 hours

SOCIOLOGY, ANTHROPOLOGY, AND CRIMINOLOGY

Gregg Barak
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712 Pray-Harroid
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See the Sociology, Anthropology, and Criminology department listings on pp. 169-175 for further information.

SOCIOLOGY MAJOR SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. See inside back cover
 - I-B-4. SOC 250 Social Statistics I (3)
 - I-B-5. See inside back cover
 - II-B-1. See inside back cover
 - II-B-2. See inside back cover
 - II-B-3. See inside back cover
 - III-B-1. See inside back cover
 - III-B-2. HIS 102 Western Civilization, 1648 to World War I (3)
 - III-B-3. One of:
GEO 107 Introduction to Geography (3)
GEO 110 World Regions (3)
 - III-B-4. HIS 103 Twentieth Century Civilization (3)
 - IV-B-1. See inside back cover
 - IV-B-2. See inside back cover
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

A course in economics, if not included in the minor (3)

Credit hours in Basic Studies:52

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Sociology, Anthropology, and Criminology for additional applicable information.

- SOC 105 Introductory Sociology (3)
- ANT 135 Introduction to Cultural Anthropology (3)
- SOC 304 Methods in Sociological Research (3)
- SOC 308 Social Psychology (3)
- SOC 403 Modern Sociological Theory (3)
- Two of:
SOC 306 The Urban Community (3)
SOC 307 Industrial Sociology (3)
SOC 310 Contemporary American Class Structure (3)
SOC 405 Honors Seminar (3)
SOC 462 Complex Organizations (3)

Two courses from sociology, anthropology (at the 300-level or above), or social work (at the 300-level or above)

Minor

A minor in one of economics, geography, history, political science, psychology, or social science

Subtotal, Major and minor:47¹

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- EDT 300 Introduction to Computer Applications in Education (1)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

SOCIOLOGY

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in sociology, certification code "CF," and, depending on the minor selected, endorsement in economics ("CA"), geography ("CB"), history ("CC"), political science ("CD"), psychology ("CE"), or social science ("CX"). The certification test covering this field is #12, "Sociology."

*NOTES:

Secondary

²Course required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

The following courses require formal admission to the teacher education program:
 CUR 305 Curriculum and Methods: Secondary (3)
 RDG 311 Teaching Reading in the Secondary School (3)
 SFD 328 Social Aspects of Teaching (3)
 EDP 340 Introduction to Assessment and Evaluation (3)
 EDM 345 Media for the Classroom Teacher (1)
 HIS 481 The Teaching of Social Studies (3)
 EDU 492 Student Teaching (12)

Credit hours in Professional Studies:34

Total credit hours required, with 20-hour minor: 133

SOCIOLOGY MINOR

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 sociology, certification code "CF." The certification test covering this field is #12, "Sociology."

#SOC 105 Introductory Sociology (3)

ANT 135 Introduction to Cultural Anthropology (3)

8 hours of sociology or criminology courses at the 300-level or above.

*6 hours of electives. Any course in anthropology must be at the 300-level or above. Social work courses may not be counted.

20 hours for secondary programs; 17 hours for elementary program; 14 hours for special education programs.

***NOTES:**

Sociology —>

#Can be satisfied in Basic Studies for some programs and for special education students.

*3 hours can be satisfied in Basic Studies for some programs.



COLLEGE OF EDUCATION

Jerry Robbins, Dean
Robbie Johnson, Associate Dean
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DEPARTMENTS

Health, Physical Education, Recreation, and Dance
Special Education
Teacher Education

HEALTH, PHYSICAL EDUCATION, RECREATION, AND DANCE

Patrick L. Cavanaugh
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 237 Warner
 487-4388

See the Health, Physical Education, Recreation, and Dance department listings on pp. 196-209 for further information.

PHYSICAL EDUCATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary-Secondary Provisional Certificate endorsed in physical education, certification code "MB," and, depending on the minor selected, an additional endorsement. The certification test covering this field is #44, "Physical Education."

PHYSICAL EDUCATION MAJOR K-12 TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. See inside back cover
- I-B-3. See inside back cover
- I-B-4. See inside back cover
- I-B-5. See inside back cover
- II-B-1. See inside back cover
- II-B-2. PSY 101 General Psychology (3)
- II-B-3. See inside back cover
- III-B-1. See inside back cover
- III-B-2. See inside back cover
- III-B-3. See inside back cover
- III-B-4. See inside back cover
- IV-B-1. See inside back cover
- IV-B-2. See inside back cover
- IV-B-3. See inside back cover
- IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 49

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Health, Physical Education, Recreation, and Dance for additional applicable information.

- PED 200 Anatomy and Physiology (5)
- PED 204 Kinesiology (Mechanics of Movement) (2)
- PED 240 History and Philosophy of Physical Education (2)
- PED 281 Motor Development (3)
- PED 300 Physiology of Exercise (3)

One of:

- PED 312 Athletic Training and Physiotherapy (2)
- HED 210 Standard American Red Cross First Aid (2)
- PED 334 Adapted Physical Education (2)
- Eleven hours of academic electives, selected in consultation with an academic adviser

Minor

Select a minor from the approved list (see p. 285)

Subtotal, Major and minor: 50¹

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- PED 150 Methods of Teaching Individual Sports (3)
- PED 151 Methods of Teaching Team Sports I (3)
- PED 152 Methods of Teaching Team Sports II (1)
- PED 153 Methods of Teaching Conditioning Activities (1)
- PED 250 Methods of Teaching Aquatics (2)
- PED 251 Methods of Teaching Gymnastics (3)
- PED 350 Methods of Teaching Rhythmic Activities (1)
- PED 351 Methods of Teaching Fundamental Movement and Movement Education (1)
- EDP 322 Human Development and Learning (4)

*NOTES:

K-12

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

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

- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- PED 352 Methods of Teaching Elementary Physical Education (2)
- PED 440 Tests and Measurements in Physical Education (2)
- EDU 496 Student Teaching (6)
- EDU 497 Student Teaching (6)

Credit hours in Professional Studies: 41

Total credit hours required: 140

HEALTH MINOR

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 health, certification code "MA." The certification test covering this field is #43, "Health."

- HED 210 Standard American Red Cross First Aid (2)
- HED 299 AIDS (1)
- HED 302 From Host to Host: The Communicable Diseases (1)
- HED 320 Health Education in the Elementary Grades (2)
- HED 350 Scientific Foundations in Health (3)
- HED 360 Concepts in School Sex Education (2)
- HED 380 Psychosocial Concepts of Health (2)
- HED 390 Drug Use and Abuse (3)
- HED 399 Teaching about AIDS (1)

Eight credits chosen in consultation with advising coordinator.

25 hours

PHYSICAL EDUCATION MINOR

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 certification test covering this field is #44, "Physical Education."

- HED 210 Standard American Red Cross First Aid (2)
- PED 200 Anatomy and Physiology (5)
- PED 204 Kinesiology (Mechanics of Movement) (2)

One of:

- PED 281 Motor Development (3)
- PED 300 Physiology of Exercise (3)
- PED 310 Physiology of Human Performance (2)
- PED 334 Adapted Physical Education (2)
- PED 367 Methods and Materials in Physical Education (3)

If PED 281 or PED 300 is in the program, select 7 hours from this list; if PED 310 is in the program, select 8 hours from this list:

- PED 150 Methods of Teaching Individual Sports (3)
- PED 151 Methods of Teaching Team Sports I (3)
- PED 152 Methods of Teaching Team Sports II (1)
- PED 153 Methods of Teaching Conditioning Activities (1)
- PED 250 Methods of Teaching Aquatics (2)
- PED 251 Methods of Teaching Gymnastics (3)

24 hours

PHYSICAL EDUCATION MINOR FOR SPECIAL EDUCATION MAJORS

SPECIAL EDUCATION-SECONDARY 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 physical education, certification code "MB." The certification test covering this field is #44, "Physical Education."

- PED 204 Kinesiology (Mechanics of Movement) (2)
- PED 281 Motor Development (3)
- PED 282 Perceptual-Motor Training (1)

NOTES:*Physical Education
for Special Education
Majors —>**

*Majors in physically or otherwise health impaired (POHI) are exempt from this requirement. You must select 5 additional hours of electives after consultation with the adapted physical education advisor.

**This course is not necessary for completion of the minor. The course is necessary for those students seeking the State of Michigan Approval as a Physical Education Teacher of the Handicapped.

- PED 334 Adapted Physical Education (2)
- PED 367 Methods and Materials in Physical Education (3)
- PED 388 Assessment in Adapted Physical Education (1)
- PED 389 Sport and Activity for the Disabled (1)
- *PED 200 Anatomy and Physiology (5)
- **PED 490 Field Experience in Adapted Physical Education (4)

Six hours from:

- PED 150 Methods of Teaching Individual Sports (3)
- PED 151 Methods of Teaching Team Sports I (3)
- PED 152 Methods of Teaching Team Sports II (1)
- PED 153 Methods of Teaching Conditioning Activities (1)
- PED 250 Methods of Teaching Aquatics (2)
- PED 251 Methods of Teaching Gymnastics (3)
- PED 350 Methods of Teaching Rhythmic Activities (1)
- PED 351 Methods of Teaching Fundamental Movement and Movement Education (1)
- PED 352 Methods of Teaching Elementary Physical Education (2)

24 hours

SPECIAL EDUCATION

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See the Special Education department listings on pp. 210-216 for further information.

EMOTIONALLY IMPAIRED (ELEMENTARY)

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. *See inside back cover*
 - I-B-4. MTH 108-109 Functional Mathematics I-II (6)
 - I-B-5. *See inside back cover*
 - II-B-1. *See inside back cover*
 - II-B-2. PSY 101 General Psychology (3)
 - II-B-3. BIO 105 Biology and the Human Species (4)
 - III-B-1. PLS 112 American Government (3)
 - III-B-2. *See inside back cover*
 - III-B-3. SOC 105 Introductory Sociology (3)
 - III-B-4. *See inside back cover*
 - IV-B-1. *See inside back cover*
 - IV-B-2. *See inside back cover*
 - IV-B-3. *See inside back cover*
 - IV-B-4. *See inside back cover*
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:52

Specialty studies

One of:

A minor from the approved list (20¹) (see p. 284)

A "planned program" (30²) (see p. 356)

SGN 271 Language Development and Speech Disorders in Special Populations (2)

**SGN 395 Special Needs Persons: School, Family, and Community Interaction (3)

SEI 301 Emotionally Impaired Children and Adolescents (4)^{*}

PSY 360 Abnormal Psychology (3)^{*}

One of:^{}*

SOC 202 Social Problems (3)

SOC 402 Group Dynamics (3)

**SEI 449 Seminar: Current Topics in Emotional Impairment (2)^{*}

**SLD 468 Education of Children with Learning Disabilities (2)^{*}

Subtotal, Specialty Studies: 39¹

Professional Studies

- Approved pre-student teaching field/clinical experiences (0)
- SEI 240 Introductory Clinical Experiences in Emotional Impairment (3)^{*}
- SGN 251 Education of Exceptional Children (3)
- IE 252 Prevocational/Vocational Special Needs Program (4)
- PED 257 Physical Education for the Classroom Teacher (2)
- EDP 325 Life Span Human Growth and Development (4)

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

- CUR 304 Curriculum and Methods: Elementary (3)
- RDG 314 Teaching Reading in the Elementary School (6)
- SFD 328 Social Aspects of Teaching (3)
- EDM 345 Media for the Classroom Teacher (1)
- MTH 381 The Teaching of Mathematics K-6 (3)
- SGN 390 Measurement and Diagnosis in Special Education (3)
- SEI 401 Programming, Methods, and Curriculum for the Elementary Emotionally Impaired Child (4)^{*}
- SGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)
- SGN 481 Adaptive Technology in Special Education (2)
- EDU 491 Student Teaching (10)^{*}

EMOTIONALLY IMPAIRED

(Elementary)

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in emotionally impaired, certification code "SE," and, depending on the minor selected, an additional endorsement. This program of studies meets requirements of the Council for Exceptional Children. The certification tests covering this field are #83, "Elementary Education," and #59, "Emotionally Impaired."

*NOTES:

Special Education- Elementary

^{*}Course required for and applicable to major.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

²The "planned program" courses overlap with other required courses by approximately 20 hours.

EMOTIONALLY IMPAIRED

(Secondary)

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in emotionally impaired, certification code "SE," and, depending on the minor selected, an additional endorsement. This program of studies meets requirements of the Council for Exceptional Children. The certification tests covering this field are #59, "Emotionally Impaired," and the minor area.

*NOTES:

Special Education— Secondary

^aCourse required for and applicable to major.

^{**}Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

EDU 499 Student Teaching (6)

SGN 491 Seminar for Teachers of Special Education (2)

Credit hours in Professional Studies: 62

Total credit hours required: 153

EMOTIONALLY IMPAIRED (SECONDARY)

Basic Studies

I-B-1. ENG 121 English Composition (3)

I-B-2. *See inside back cover*

I-B-3. ENG 326 Research Writing (3)

I-B-4. MTH 108-109 Functional Mathematics I-II (6)

I-B-5. *See inside back cover*

II-B-1. *See inside back cover*

II-B-2. PSY 101 General Psychology (3)

II-B-3. BIO 105 Biology and the Human Species (4)

III-B-1. PLS 112 American Government (3)

III-B-2. *See inside back cover*

III-B-3. SOC 105 Introductory Sociology (3)

III-B-4. *See inside back cover*

IV-B-1. *See inside back cover*

IV-B-2. *See inside back cover*

IV-B-3. *See inside back cover*

IV-B-4. *See inside back cover*

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 52

Specialty Studies

SGN 271 Language Development and Speech Disorders in Special Populations (2)

SEI 301 Emotionally Impaired Children and Adolescents (4)^a

PSY 322 Psychology of Adolescence (3)^a

CRM 354 Juvenile Delinquency (3)^a

PSY 360 Abnormal Psychology (3)^a

^{**}SGN 395 Special Needs Persons: School, Family, and Community Interaction (3)

One of:^a

SOC 202 Social Problems (3)

SOC 402 Group Dynamics (3)

^{**}SEI 449 Seminar: Current Topics in Emotional Impairment (2)^a

A minor from the approved list (*see p. 285*)

Subtotal, Specialty Studies: 43¹

Professional Studies

Approved pre-student teaching field experiences (0)

SGN 251 Education of Exceptional Children (3)

IE 252 Prevocational/Vocational Special Needs Program (4)

PED 257 Physical Education for the Classroom Teacher (2)

EDP 325 Life Span Human Growth and Development (4)

SEI 240 Introductory Clinical Experiences in Emotional Impairment (3)^a

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

CUR 305 Curriculum and Methods: Secondary (3)

RDG 311 Teaching Reading in the Secondary School (3)

SFD 328 Social Aspects of Teaching (3)

EDM 345 Media for the Classroom Teacher (1)

SGN 390 Measurement and Diagnosis in Special Education (3)

SGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)

SGN 481 Adaptive Technology in Special Education (2)

SGN 485 Methods and Curriculum: Adolescents and Young Adults with Special Needs (2)^a

SEI 488 Programming, Methods, and Curriculum for Secondary Emotionally Impaired Youth (4)^a

The appropriate secondary special methods course (*see p. 286*) (3)

EDU 491 Student Teaching (10)^a

EDU 499 Student Teaching (6)

SGN 491 Seminar for Teachers of Special Education (2)

Credit hours in Professional Studies: 61

Total credit hours required: 156

HEARING IMPAIRED (ELEMENTARY)

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. ENG 326 Research Writing (3)
 - I-B-4. MTH 108-109 Functional Mathematics I-II (6)
 - I-B-5. See inside back cover
 - II-B-1. See inside back cover
 - II-B-2. PSY 101 General Psychology (3)
 - II-B-3. BIO 105 Biology and the Human Species (4)
 - III-B-1. PLS 112 American Government (3)
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1. See inside back cover
 - IV-B-2. See inside back cover
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:52

Specialty Studies

- SHI 228 Education of the Hearing Impaired (3)*
- SLI 316 Speech Science (5)*
- SLI 337 Language Acquisition (3)*
- SHI 375 Fundamentals of Sign Communication (2)*
- SHI 376 Total Communication Practicum with Hearing Impaired (1)*
- **SHI 391 Language for the Hearing Impaired (3)*
- SHI 392 Introduction to Audiology (2)*
- **SHI 394 Auditory Training and Speechreading (3)*
- **SGN 395 Special Needs Persons: School, Family, and Community Interaction (3)
- **SHI 436 Speech for the Hearing Impaired (3)*
- **SHI 437 Adapted Curriculum for the Hearing Impaired (3)*

One of:

- A minor from the approved list (20¹) (see p. 284)
- A "planned program" (30²) (see p. 356)

Subtotal, Specialty Studies:51¹

Professional Studies

- Approved pre-student teaching field/clinical experiences (0)
- SGN 251 Education of Exceptional Children (3)
- IE 252 Prevocational/Vocational Special Needs Program (4)
- PED 257 Physical Education for the Classroom Teacher (2)
- EDP 325 Life Span Human Growth and Development (4)

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

- CUR 304 Curriculum and Methods: Elementary (3)
- RDG 314 Teaching Reading in the Elementary School (6)
- SFD 328 Social Aspects of Teaching (3)
- EDM 345 Media for the Classroom Teacher (1)
- MTH 381 The Teaching of Mathematics K-6 (3)
- SHI 387 Introductory Practicum with the Deaf I (1)*
- SGN 390 Measurement and Diagnosis in Special Education (3)
- SGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)
- SGN 481 Adaptive Technology in Special Education (2)
- SHI 487 Speech Practicum with the Hearing Impaired (2)*
- EDU 491 Student Teaching (10)*
- SGN 491 Seminar for Teachers of Special Education (2)
- EDU 499 Student Teaching (6)

Credit hours in Professional Studies:58

Total credit hours required: 161

HEARING IMPAIRED (Elementary)

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in hearing impaired, certification code "SL," and, depending on the minor selected, an additional endorsement. This program of studies meets requirements of the Council for Exceptional Children. The certification tests covering this field are #83, "Elementary Education," and #62, "Hearing Impaired."

All students are considered provisional majors until such time as they successfully complete SHI 391 and pass a language proficiency examination. The basic philosophy of the program is oral communication; however, students are exposed to manual communication during their course of study.

*NOTES:

Special Education- Elementary

*Course required for and applicable to major.

**Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

²The "planned program" courses overlap with other required courses by approximately 20 hours.

HEARING IMPAIRED**(Secondary)**

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in hearing impaired, certification code "SL," and, depending on the minor selected, an additional endorsement. This program of studies meets requirements of the Council for Exceptional Children. The certification tests covering this field are #62, "Hearing Impaired," and the minor area.

All students are considered provisional majors until such time as they successfully complete SHI 391 and pass a language proficiency examination. The basic philosophy of the program is oral communication; however, students are exposed to manual communication during their course of study.

NOTES:*Special Education—
Secondary**

*Course required for and applicable to major.

**Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

**HEARING IMPAIRED
(SECONDARY)****Basic Studies**

- I-B-1. ENG 121 English Composition (3)
 I-B-2. See inside back cover
 I-B-3. ENG 326 Research Writing (3)
 I-B-4. MTH 108-109 Functional Mathematics I-II (6)
 I-B-5. See inside back cover
 II-B-1. See inside back cover
 II-B-2. PSY 101 General Psychology (3)
 II-B-3. BIO 105 Biology and the Human Species (4)
 III-B-1. PLS 112 American Government (3)
 III-B-2. See inside back cover
 III-B-3. See inside back cover
 III-B-4. See inside back cover
 IV-B-1. See inside back cover
 IV-B-2. See inside back cover
 IV-B-3. See inside back cover
 IV-B-4. See inside back cover
 Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:52

Specialty Studies

- SHI 228 Education of the Hearing Impaired (3)*
 SLI 316 Speech Science (5)*
 SLI 337 Language Acquisition (3)*
 SHI 375 Fundamentals of Sign Communication (2)*
 SHI 376 Total Communication Practicum with Hearing Impaired (1)*
 **SHI 391 Language for the Hearing Impaired (3)*
 SHI 392 Introduction to Audiology (2)*
 **SHI 394 Auditory Training and Speechreading (3)*
 **SGN 395 Special Needs Persons: School, Family, and Community Interaction (3)
 SHI 436 Speech for the Hearing Impaired (3)
 **SHI 437 Adapted Curriculum for the Hearing Impaired (3)*
 A minor from the approved list (see p. 285)

Subtotal, Specialty Studies:51¹

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
 SGN 251 Education of Exceptional Children (3)
 IE 252 Prevocational/Vocational Special Needs Program (4)
 PED 257 Physical Education for the Classroom Teacher (2)
 EDP 325 Life Span Human Growth and Development (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
 RDG 311 Teaching Reading in the Secondary School (3)
 SFD 328 Social Aspects of Teaching (3)
 EDM 345 Media for the Classroom Teacher (1)
 SHI 387 Introductory Practicum with the Deaf I (1)*
 SGN 390 Measurement and Diagnosis in Special Education (3)
 SGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)
 SGN 481 Adaptive Technology in Special Education (2)
 SGN 485 Methods and Curriculum: Adolescents and Young Adults with Special Needs (2)*
 SGN 486 Recitation and Field Experience with Adolescents and Young Adults: Mentally Impaired, Physically Impaired, Hearing Impaired, or Visually Impaired (2)*
 SHI 487 Speech Practicum with the Hearing Impaired (2)*
 The appropriate secondary special methods course (see p. 286) (3)
 SGN 491 Seminar for Teachers of Special Education (2)
 EDU 491 Student Teaching (10)*
 EDU 499 Student Teaching (6)

Credit hours in Professional Studies:59

Total credit hours required: 162

**MENTALLY IMPAIRED
(ELEMENTARY)**

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. ENG 326 Research Writing (3)
 - I-B-4. MTH 108-109 Functional Mathematics I-II (6)
 - I-B-5. See inside back cover
 - II-B-1. See inside back cover
 - II-B-2. PSY 101 General Psychology (3)
 - II-B-3. BIO 105 Biology and the Human Species (4)
 - III-B-1. PLS 112 American Government (3)
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1. See inside back cover
 - IV-B-2. See inside back cover
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:52

Specialty Studies

- SGN 271 Language Development and Speech Disorders in Special Populations (2)
- SMI 350 Introduction to Mental Retardation (3)^a
- **SGN 395 Special Needs Persons: School, Family, and Community Interaction (3)
- **SMI 427 Educating the Elementary Student with Mild Retardation (2)^a
- **SLD 468 Education of Children with Learning Disabilities (2)^a
- **SMI 483 Education of Students with Moderate or Severe Retardation (4)^a

One of:

- A minor from the approved list (20¹) (see p. 284)
- A "planned program" (30²) (see p. 356)

Subtotal, Specialty Studies:36¹

Professional Studies

- Approved pre-student teaching field/clinical experiences (0)
- SMI 240 Preclinical: Mentally Impaired (3)^a
- SGN 251 Education of Exceptional Children (3)
- IE 252 Prevocational/Vocational Special Needs Program (4)
- PED 257 Physical Education for the Classroom Teacher (2)
- EDP 325 Life Span Human Growth and Development (4)

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

- CUR 304 Curriculum and Methods: Elementary (3)
- RDG 314 Teaching Reading in the Elementary School (6)
- SFD 328 Social Aspects of Teaching (3)
- EDM 345 Media for the Classroom Teacher (1)
- MTH 381 The Teaching of Mathematics K-6 (3)
- SGN 390 Measurement and Diagnosis in Special Education (3)
- SMI 429 Curriculum Design and Education Programs for Students with Mild Retardation (3)^a
- SGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)
- SGN 481 Adaptive Technology in Special Education (2)
- SGN 491 Seminar for Teachers of Special Education (2)
- EDU 491 Student Teaching (10)^a
- EDU 499 Student Teaching (6)

Credit hours in Professional Studies:61

Total credit hours required: 149

**MENTALLY IMPAIRED
(Elementary)**

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in mentally impaired, certification code "SA," and, depending on the minor selected, an additional endorsement. This program of studies meets requirements of the Council for Exceptional Children. The certification tests covering this field are #83, "Elementary Education," and #56, "Mentally Impaired."

***NOTES:**

**Special Education-
Elementary**

^aCourse required for and applicable to major.

**Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

²The "planned program" courses overlap with other required courses by approximately 20 hours.

MENTALLY IMPAIRED**(Secondary)**

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in mentally impaired, certification code "SA," and, depending on the minor selected, an additional endorsement. This program of studies meets requirements of the Council for Exceptional Children. The certification tests covering this field are #56, "Mentally Impaired," and the minor area.

NOTES:*Special Education—
Secondary**

^aCourse required for and applicable to major.

^{**}Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

MENTALLY IMPAIRED**(SECONDARY)****Basic Studies**

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. ENG 326 Research Writing (3)
 - I-B-4. MTH 108-109 Functional Mathematics I-II (6)
 - I-B-5. See inside back cover
 - II-B-1. See inside back cover
 - II-B-2. PSY 101 General Psychology (3)
 - II-B-3. BIO 105 Biology and the Human Species (4)
 - III-B-1. PLS 112 American Government (3)
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1. See inside back cover
 - IV-B-2. See inside back cover
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:52

Specialty Studies

- SGN 271 Language Development and Speech Disorders in Special Populations (2)
- SMI 350 Introduction to Mental Retardation (3)^a
- ^{**}SGN 395 Special Needs Persons: School, Family, and Community Interaction (3)
- ^{**}SLD 468 Education of Children with Learning Disabilities (2)^a
- ^{**}SMI 483 Education of Students with Moderate or Severe Retardation (4)^a
- A minor from the approved list (see p. 285)

Subtotal, Specialty Studies:34¹

Professional Studies

- Approved pre-student teaching field/clinical experiences (0)
- SMI 240 Preclinical: Mentally Impaired (3)^a
- SGN 251 Education of Exceptional Children (3)
- IE 252 Prevocational/Vocational Special Needs Program (4)
- PED 257 Physical Education for the Classroom Teacher (2)
- EDP 325 Life Span Human Growth and Development (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDM 345 Media for the Classroom Teacher (1)
- SGN 390 Measurement and Diagnosis in Special Education (3)
- The appropriate secondary special methods course (see p. 286) (3)
- SMI 429 Curriculum Design and Education Programs for Students with Mild Retardation (3)^a
- SGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)
- SGN 481 Adaptive Technology in Special Education (2)
- SGN 485 Methods and Curriculum: Adolescents and Young Adults with Special Needs (2)^a
- SGN 486 Recitation and Field Experience with Adolescents and Young Adults: Mentally Impaired, Physically Impaired, Hearing Impaired, or Visually Impaired (2)^a
- EDU 491 Student Teaching (10)^a
- SGN 491 Seminar for Teachers of Special Education (2)
- EDU 499 Student Teaching (6)

Credit hours in Professional Studies:62

Total credit hours required: 148

**PHYSICALLY AND OTHERWISE HEALTH IMPAIRED
(ELEMENTARY)**

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. ENG 326 Research Writing (3)
 - I-B-4. MTH 108-109 Functional Mathematics I-II (6)
 - I-B-5. See inside back cover
 - II-B-1. See inside back cover
 - II-B-2. PSY 101 General Psychology (3)
 - II-B-3. BIO 105 Biology and the Human Species (4)
 - III-B-1. PLS 112 American Government (3)
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1. See inside back cover
 - IV-B-2. See inside back cover
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:52

Specialty Studies

- SGN 271 Language Development and Speech Disorders in Special Populations (2)
 - SPI 310 Developmental Sciences for Teachers of the Physically and Health Impaired (4)^a
 - SMI 350 Introduction to Mental Retardation (3)^a
 - **SPI 360 Pathology of Physical and Health Impairments (3)^a
 - **SGN 395 Special Needs Persons: School, Family, and Community Interaction (3)
 - **SPI 412 Ancillary Services and Health Procedures for Teachers of Physically Impaired (2)^a
 - **SLD 468 Education of Children with Learning Disabilities (2)^a
- One of:
- A minor from the approved list (20¹) (see p. 284)
 - A "planned program" (30²) (see p. 356)

Subtotal, Specialty Studies:39^a

Professional Studies

- Approved pre-student teaching field/clinical experiences (0)
- SPI 240 Preclinical Experiences—POHI (3)^a
- SGN 251 Education of Exceptional Children (3)
- IE 252 Prevocational/Vocational Special Needs Program (4)
- PED 257 Physical Education for the Classroom Teacher (2)
- EDP 325 Life Span Human Growth and Development (4)

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

- CUR 304 Curriculum and Methods: Elementary (3)
- RDG 314 Teaching Reading in the Elementary School (6)
- SFD 328 Social Aspects of Teaching (3)
- EDM 345 Media for the Classroom Teacher (1)
- MTH 381 The Teaching of Mathematics K-6 (3)
- SGN 390 Measurement and Diagnosis in Special Education (3)
- SPI 414 Educational Strategies for Teachers of the Physically Impaired (4)^a
- SGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)
- SGN 481 Adaptive Technology in Special Education (2)
- EDU 491 Student Teaching (10)^a
- SGN 491 Seminar for Teachers of Special Education (2)
- EDU 499 Student Teaching (6)

Credit hours in Professional Studies:62

Total credit hours required: 153

**PHYSICALLY AND
OTHERWISE HEALTH
IMPAIRED**

(Elementary)

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in physically impaired, certification code "SC," and, depending on the minor selected, an additional endorsement.

This program of studies meets requirements of the Council for Exceptional Children. The certification tests covering this field are #83, "Elementary Education," and #58, "Physically and Otherwise Health Impaired."

***NOTES:**

**Special Education-
Elementary**

^aCourse required for and applicable to major.

^{**}Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

²The "planned program" courses overlap with other required courses by approximately 20 hours.

PHYSICALLY AND OTHERWISE HEALTH IMPAIRED**(Secondary)**

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in physically impaired, certification code "SC," and, depending on the minor selected, an additional endorsement. This program of studies meets requirements of the Council for Exceptional Children. The certification tests covering this field are #58, "Physically and Otherwise Health Impaired," and the minor area.

NOTES:*Special Education—
Secondary**

*Course required for and applicable to major.

**Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

**PHYSICALLY AND OTHERWISE HEALTH IMPAIRED
(SECONDARY)****Basic Studies**

- I-B-1. ENG 121 English Composition (3)
 I-B-2. See inside back cover
 I-B-3. ENG 326 Research Writing (3)
 I-B-4. MTH 108-109 Functional Mathematics I-II (6)
 I-B-5. See inside back cover
 II-B-1. See inside back cover
 II-B-2. PSY 101 General Psychology (3)
 II-B-3. BIO 105 Biology and the Human Species (4)
 III-B-1. PLS 112 American Government (3)
 III-B-2. See inside back cover
 III-B-3. See inside back cover
 III-B-4. See inside back cover
 IV-B-1. See inside back cover
 IV-B-2. See inside back cover
 IV-B-3. See inside back cover
 IV-B-4. See inside back cover
 Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:52

Specialty Studies

- SGN 271 Language Development and Speech Disorders in Special Populations (2)
 SPI310 Developmental Sciences for Teachers of the Physically and Health Impaired (4)*
 SMI 350 Introduction to Mental Retardation (3)*
 **SPI 360 Pathology of Physical and Health Impairments (3)*
 **SGN 395 Special Needs Persons: School, Family, and Community Interaction (3)
 **SPI 412 Ancillary Services and Health Procedures for Teachers of Physically Impaired (2)*
 **SLD 468 Education of Children with Learning Disabilities (2)*
 A minor from the approved list (see p. 285)

Subtotal, Specialty Studies:39'

Professional Studies

- Approved pre-student teaching field/clinical experiences (0)
 SPI 240 Preclinical Experiences—POHI (3)*
 SGN 251 Education of Exceptional Children (3)
 IE 252 Pre-vocational/Vocational Special Needs Program (4)
 PED 257 Physical Education for the Classroom Teacher (2)
 EDP 325 Life Span Human Growth and Development (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
 RDG 311 Teaching Reading in the Secondary School (3)
 SFD 328 Social Aspects of Teaching (3)
 EDM 345 Media for the Classroom Teacher (1)
 SGN 390 Measurement and Diagnosis in Special Education (3)
 The appropriate secondary special methods course (see p. 165) (3)
 SGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)
 SGN 481 Adaptive Technology in Special Education (2)
 SGN 485 Methods and Curriculum: Adolescents and Young Adults with Special Needs (2)*
 SGN 486 Recitation and Field Experience with Adolescents and Young Adults: Mentally Impaired, Physically Impaired, Hearing Impaired, or Visually Impaired (2)*
 EDU 491 Student Teaching (10)*
 SGN 491 Seminar for Teachers of Special Education (2)
 EDU 499 Student Teaching (6)

Credit hours in Professional Studies:59

Total credit hours required: 150

SPEECH AND LANGUAGE IMPAIRED

(ALL GRADE LEVELS)

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. ENG 326 Research Writing (3)
 - I-B-4. MTH 108-109 Functional Mathematics I-II (6)
 - I-B-5. See inside back cover
 - II-B-1. See inside back cover
 - II-B-2. PSY 101 General Psychology (3)
 - II-B-3. BIO 105 Biology and the Human Species (4)
 - III-B-1. PLS 112 American Government (3)
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1. See inside back cover
 - IV-B-2. See inside back cover
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:52

Specialty Studies

- SGN 251 Education of Exceptional Children (3)
 - SLI 316 Speech Science (5)^a
 - SLI 334 Applied Phonetics (3)^a
 - SLI 335 Communication Disorders (3)^a
 - SLI 337 Language Acquisition (3)^a
 - SLI 340 Management of Phonological Disorders (3)^a
 - SLI 342 Management of Language Disorders (3)^a
 - SHI 392 Introduction to Audiology (2)^a
 - **SHI 394 Auditory Training and Speechreading (3)^a
 - SLI 452 Voice (3)^a
 - SLI 454 Stuttering (3)^a
 - SLI 508 Multicultural/Multilingual Communication Development and Disorders (3)
 - SLI 555 Neuroanatomy and Physiology for the Speech Pathologist (2)
 - SLI 578 Audiometric Testing (3)
 - SLI 607 Colloquium in Speech-Language Pathology (2)
 - SLI 612 Motor Speech Disorders (2)
 - SLI 614 Aphasia (3)
 - SLI 616 Experiments in Speech-Language Pathology (3)
 - SLI 620 Consulting and Interviewing in Speech Pathology (3)
 - SLI 622 Augmentative Communication (2)
 - SLI 624 Neurogenic Communicative Disorders (2)
 - SLI 694 Seminar in Professional Issues in Speech-Language Pathology (2)
- Enough additional hours from the list below to complete 36 graduate hours
- SLI 652 Disorders of Voice (2)
 - SLI 654 Stuttering II: Disorders of Fluency (2)
 - SLI 697/698/699 Independent Study (1/2/3)
 - SLI 618 Language and Learning Theories (2)
 - Free elective (2)

Whichever is applicable:

If secondary:

A minor from the approved list (20¹) (see p. 285)

If elementary, one of:

A minor from the approved list (20¹) (see p. 284)

A "planned program" (30²) (see p. 356)

Subtotal, Specialty Studies:84

Professional Studies

- Approved pre-student teaching field/clinical experiences (0)
- EDP 325 Life Span Human Growth and Development (4)
- EDM 345 Media for the Classroom Teacher (1)
- SGN 630 Integrated Curriculum and Educational Programming for Special Education (3)
- SLI 341 Directed Observation in Speech Pathology (1)^a
- SLI 343 Clinical Practice in Speech Pathology I (2)^a
- SLI 344 Clinical Practice in Speech Pathology II (2)^a

SPEECH AND LANGUAGE IMPAIRED

(All Grade Levels)

Successful completion of this course of studies qualifies the student for recommendation for certification for either the Michigan Department of Education Elementary Provisional Certificate endorsed in speech/language impaired, certification code "SB" or the Michigan Department of Education Secondary Provisional Certificate endorsed in speech/language impaired, certification code "SB." For elementary, the certification tests covering this field are #83, "Elementary Education," and #57, "Speech and Language Impaired." For secondary, the certification tests covering this field are #57, "Speech and Language Impaired," and the minor area.

The program in speech and language impaired is a five and one-half to six-year course of study culminating in a master's degree that conforms to the requirements of the American Speech-Language-Hearing Association. Students may elect a teacher training or non-teacher training track, although only the teacher training track is shown here. (See the 1993-94 Undergraduate Catalog, p. 212 for the non-teacher training track.)

Upon completion of a minimum of 124 semester hours (reflecting all requirements in Basic Studies and undergraduate major and minor sequences), the student will be granted the Bachelor of Science degree without certification. For those students electing the teacher training track, certification is recommended upon completion of the master's degree. Graduate level courses are those numbered 500 and above.

Students may elect elementary or secondary certification. The endorsement is K-12 regardless of the certification level selected.

*NOTES:

Special Education

^aCourse required for and applicable to major.

^bPrerequisite for another course in program.

**Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

SLI 568 Diagnostic Methods in Speech, Language, and Hearing (3)

SLI 687 Clinical Internship (2)

SLI 689 Public School Internship (4)

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

SFD 328 Social Aspects of Teaching (3)

Either the elementary sequence (12)

CUR 304 Curriculum and Methods: Elementary (3)

RDG 314 Teaching Reading in the Elementary School (6)

MTH 381 The Teaching of Mathematics K-6 (3)

or the secondary sequence (9)

CUR 305 Curriculum and Methods: Secondary (3)

RDG 311 Teaching Reading in the Secondary School (3)

The appropriate secondary special methods course (see p. 286) (3)

SGN 390 Measurement and Diagnosis in Special Education (3)

EDU 499 Student Teaching (6)

Credit hours in Professional Studies:43

Total credit hours required: 179

VISUALLY IMPAIRED

(ELEMENTARY)

Basic Studies

I-B-1. ENG 121 English Composition (3)

I-B-2. See inside back cover

I-B-3. ENG 326 Research Writing (3)

I-B-4. MTH 108-109 Functional Mathematics I-II (6)

I-B-5. See inside back cover

II-B-1. See inside back cover

II-B-2. PSY 101 General Psychology (3)

II-B-3. BIO 105 Biology and the Human Species (4)

III-B-1. PLS 112 American Government (3)

III-B-2. See inside back cover

III-B-3. See inside back cover

III-B-4. See inside back cover

IV-B-1. See inside back cover

IV-B-2. See inside back cover

IV-B-3. See inside back cover

IV-B-4. See inside back cover

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:52

Specialty Studies

SGN 271 Language Development and Speech Disorders in Special Populations (2)

**SGN 395 Special Needs Persons: School, Family, and Community Interaction (3)

SVI 365 Braille (3)*

SVI 366 The Eye and Vision—Anatomy and Physiology (2)*

SVI 368 Mobility Training for the Visually Impaired (2)*

SVI 369 Community Considerations for the Visually Impaired (3)*

**SVI 465 Braille II: Nemeth Code (3)*

**SVI 467 Education of Children with Impaired Vision (2)*

**SVI 469 Electronic Communication for the Visually Impaired (3)*

One of:

A minor from the approved list (20¹) (see p. 284)

A "planned program" (30¹) (see p. 356)

Subtotal, Specialty Studies:43¹

Professional Studies

Approved pre-student teaching field/clinical experiences (0)

SGN 251 Education of Exceptional Children (3)

IE 252 Prevocational/Vocational Special Needs Program (4)

PED 257 Physical Education for the Classroom Teacher (2)

EDP 325 Life Span Human Growth and Development (4)

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

CUR 304 Curriculum and Methods: Elementary (3)

RDG 314 Teaching Reading in the Elementary School (6)

VISUALLY IMPAIRED

(Elementary)

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate endorsed in visually impaired, certification code "SK," and, depending on the minor selected, an additional endorsement. This program of studies meets requirements of the Council for Exceptional Children. The certification tests covering this field are #83, "Elementary Education," and #61, "Visually Impaired."

*NOTES:

Special Education-Elementary

*Course required for and applicable to major.

**Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

²The "planned program" courses overlap with other required courses by approximately 20 hours.

- SFD 328 Social Aspects of Teaching (3)
- EDM 345 Media for the Classroom Teacher (1)
- MTH 381 The Teaching of Mathematics K-6 (3)
- SGN 390 Measurement and Diagnosis in Special Education (3)
- SGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)
- SVI 464 Methods of Teaching the Blind (3)*
- SGN 481 Adaptive Technology in Special Education (2)
- EDU 491 Student Teaching (10)*
- SGN 491 Seminar for Teachers of Special Education (2)
- EDU 499 Student Teaching (6)

Credit hours in Professional Studies:58

Total credit hours required: 153

VISUALLY IMPAIRED (SECONDARY)

Basic Studies

- I-B-1. ENG 121 English Composition (3)
 - I-B-2. See inside back cover
 - I-B-3. ENG 326 Research Writing (3)
 - I-B-4. MTH 108-109 Functional Mathematics I-II (6)
 - I-B-5. See inside back cover
 - II-B-1. See inside back cover
 - II-B-2. PSY 101 General Psychology (3)
 - II-B-3. BIO 105 Biology and the Human Species (4)
 - III-B-1. PLS 112 American Government (3)
 - III-B-2. See inside back cover
 - III-B-3. See inside back cover
 - III-B-4. See inside back cover
 - IV-B-1. See inside back cover
 - IV-B-2. See inside back cover
 - IV-B-3. See inside back cover
 - IV-B-4. See inside back cover
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:52

Specialty Studies

- SGN 271 Language Development and Speech Disorders in Special Populations (2)
 - SVI 365 Braille (3)*
 - SVI 366 The Eye and Vision—Anatomy and Physiology (2)*
 - SVI 368 Mobility Training for the Visually Impaired (2)*
 - SVI 369 Community Considerations for the Visually Impaired (3)*
 - **SGN 395 Special Needs Persons: School, Family, and Community Interaction (3)
 - **SVI 465 Braille II: Nemeth Code (3)*
 - **SVI 467 Education of Children with Impaired Vision (2)*
 - **SVI 469 Electronic Communication for the Visually Impaired (3)*
- A minor from the approved list (see p. 285) 20¹

Subtotal, Specialty Studies:43

Professional Studies

- Approved pre-student teaching field/clinical experiences (0)
- SGN 251 Education of Exceptional Children (3)
- IE 252 Prevocational/Vocational Special Needs Program (4)
- PED 257 Physical Education for the Classroom Teacher (2)
- EDP 325 Life Span Human Growth and Development (4)

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

- CUR 305 Curriculum and Methods: Secondary (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDM 345 Media for the Classroom Teacher (1)
- SGN 390 Measurement and Diagnosis in Special Education (3)
- The appropriate secondary special methods course (see p. 286) (3)
- SGN 461 Classroom Management and Intervention Strategies for Handicapped Students (3)

VISUALLY IMPAIRED (Secondary)

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in visually impaired, certification code "SK," and, depending on the minor selected, an additional endorsement. This program of studies meets requirements of the Council for Exceptional Children. The certification tests covering this field are #61, "Visually Impaired," and the minor area.

*NOTES:

Special Education— Secondary

*Course required for and applicable to major.

**Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

***NOTES:**

**Special Education—
Secondary**

^aCourse required for and applicable to major.

^{**}Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of Basic Studies courses to the minor.

- SVI 464 Methods of Teaching the Blind (3)^a
- SGN 481 Adaptive Technology in Special Education (2)
- SGN 485 Methods and Curriculum: Adolescents and Young Adults with Special Needs (2)^a
- SGN 486 Recitation and Field Experience with Adolescents and Young Adults: Mentally Impaired, Physically Impaired, Hearing Impaired, or Visually Impaired (2)^a
- EDU 491 Student Teaching (10)^a
- SGN 491 Seminar for Teachers of Special Education (2)
- EDU 499 Student Teaching (6)

Credit hours in Professional Studies:59

Total credit hours required: 154

“PLANNED PROGRAM” COURSES FOR SPECIAL EDUCATION-ELEMENTARY PROGRAMS

- ESC 302 Elementary School Science (3)
- CUR 304 Curriculum and Methods: Elementary (3)
- RDG 314 Teaching Reading in the Elementary School (6)
- EDP 325 Life Span Human Growth and Development (4)
- SFD 328 Social Aspects of Teaching (3)
- EDM 345 Media for the Classroom Teacher (1)
- GEO 348 Teaching Social Studies in Elementary Schools (3)
- MTH 381 The Teaching of Mathematics K-6 (3)

Four hours from:

- LIT 207 Introduction to Children's Literature (3)
- PED 210 Lifetime Wellness and Fitness (3)
- HED 320 Health Education in the Elementary Grades (2)
- FA 300 Art Integration for the Elementary Teacher (4)
- FA 101 Introduction to Art (3)
- CTA 222 Drama and Play in Human Experience (3)
- MUS 104 Elements of Music (2)
- MUS 224 Recreational Music (2)
- MUS 103 Introduction to Music Therapy (2)

Total: 30

TEACHER EDUCATION

James D. Riley
Department Head
234 Boone Hall
487-3260

See the Teacher Education department listings on pp. 217-220 for further information.

EARLY CHILDHOOD (ELEMENTARY WITH EARLY CHILDHOOD MINOR) ELEMENTARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
I-B-2. See inside back cover
I-B-3. See inside back cover
I-B-4. MTH 108-109 Functional Mathematics I-II (6)
I-B-5. See inside back cover
II-B-1. PHY 100 Science for Elementary Teachers (3)
II-B-2. See inside back cover
II-B-3. All of:
CHM 101 Science for Elementary Teachers (3)
GES 202 Science for Elementary Teachers (3)
ESC 303 Science for the Elementary Teacher (3)
III-B-1. See inside back cover
III-B-2. See inside back cover
III-B-3. Both:
GEO 110 World Regions (3)
SOC 105 Introductory Sociology (3)
III-B-4. One of:
SOC 202 Social Problems (3)
*SOC 205 Minority Women in the United States (3)
*SOC 214 Racial and Cultural Minorities (3)
*SOC 344 Sociology of Sex Roles (3)
IV-B-1. See inside back cover
IV-B-2. See inside back cover
IV-B-3. See inside back cover
IV-B-4. MUS 104 Elements of Music (2)
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:57

Specialty Studies

One of:

- A major from the approved list (see p. 284) (30²)
Two minors other than early childhood education from the approved list
(see p. 284) (40¹)

- CUR 214 The Developing Child (3)^c
CUR 215 Child Development Lab: Preschool Child (1)^f
**CUR 373 Child Development Lab: Methods and Resources (1)^f
**CUR 401 Issues and Practices in Early Childhood Education (2)^f

Three hours from:^c

- CUR 314 The Developing Infant (3)
CUR 315 Child Development Lab: Infancy (1)
EDP 318 Uses of Play in the Helping Professions (3)
PED 281 Motor Development (3)

Subtotal, Specialty Studies:34

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
EDP 200 Human Development and Learning—Early Childhood (5)
SGN 251 Education of Exceptional Children (3)^c
PED 257 Physical Education for the Classroom Teacher (2)
EDT 300 Introduction to Computer Applications in Education (1)
MTH 381 The Teaching of Mathematics K-6 (3)
The following courses require formal admission to the teacher education program:
SFD 328 Social Aspects of Teaching (3)
CUR 302 Methods of Integrating Curriculum and Resources in Early Childhood (3)^f

EARLY CHILDHOOD

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate, which is valid for teaching all subjects kindergarten through grade 5, for teaching in self-contained classrooms in grades 6-8, and for teaching in one's major or minor subject areas of concentration in grades 6-8. In addition, the student is qualified for recommendation for endorsement in early childhood, certification code "ZA." Depending on the major selected (or two other minors selected), the individual will be eligible for an additional endorsement(s). The certification tests for this field are #81, "Early Childhood," #83, "Elementary," and those needed for subject area endorsements.

*NOTES:

Early Childhood

^aCourse required for and applicable to major.

^cIndicated courses constitute the early childhood minor.

^eAt least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk (*).

^fAdmission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of basic studies courses to the minor.

²Could be less, depending on the major and the possible application of Basic Studies courses/hours to the major.

EARLY CHILDHOOD

(Urban Teacher Program)

The Urban Teacher Program is a cooperative effort of Wayne County Community College (WCCC), Wayne State University (WSU), and Eastern Michigan. It is structured such that students may take a substantial portion of the course work necessary to become a teacher on a WCCC campus, using carefully selected courses from all three institutions. Widely recognized for its pioneering efforts to recruit prospective teachers from and to prepare teachers for the urban setting, successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate, which is valid for teaching all subjects kindergarten through grade 5, for teaching in self-contained classrooms in grades 6-8, and for teaching in one's major or minor subject areas of concentration in grades 6-8. In addition, the student is qualified for recommendation for endorsement in early childhood, certification code "ZA." Depending on the major selected (or two other minors selected), the individual will be eligible for an additional endorsement(s). The certification tests for this field are #81, "Early Childhood," #83, "Elementary," and those needed for subject area endorsements.

*NOTES:

Early Childhood

*Course required for and applicable to major.

^cIndicated courses constitute the early childhood minor.

At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk ().

**Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of basic studies courses to the minor.

²Could be less, depending on the major and the possible application of Basic Studies courses/hours to the major.

- CUR 304 Curriculum and Methods: Elementary (3)
- RDG 314 Teaching Reading in the Elementary School (6)
- FA 300 Art Integration for the Elementary Teacher (4)
- EDM 345 Media for the Classroom Teacher (1)
- EDP 341 Assessment of the Young Child (3)^a
- EDU 496 Student Teaching (6)
- EDU 497 Student Teaching (6)

Credit hours in Professional Studies:49

Total credit hours required: 152

EARLY CHILDHOOD

(URBAN TEACHER PROGRAM—ELEMENTARY WITH EARLY CHILDHOOD MINOR)

ELEMENTARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. *Both:*
 - WCCC ENG 110 Freshman Composition I (3)
 - WCCC ENG 120 Freshman Composition II (3)
 - I-B-2. WCCC SPH 101 Fundamentals of Speech (3)
 - I-B-3. WCCC ENG Intermediate Composition (3)
 - I-B-4. *Both:*
 - WCCC MAT 128 Math for the Elementary Teacher I (3)
 - WCCC MAT 129 Math for the Elementary Teacher II (3)
 - I-B-5. Taken as part of professional studies.
 - II-B-1. *All of:*
 - WCCC PHY 115 Principles of Physics (4)
 - WCCC science elective (3)
 - GES 202 Science for Elementary Teachers (3)
 - ESC 303 Science for the Elementary Teacher (3)
 - II-B-2. WCCC PSY 101 Introduction to Psychology (3)
 - II-B-3. CHM 101 Science for Elementary Teachers (3)
 - III-B-1. WCCC PS 101 American Government (3)
 - III-B-2. WCCC HIS 249 American History I (3)
 - III-B-3. *Both:*
 - WCCC GEO 202 World Geography (3)
 - SOC 105 Introductory Sociology (3)
 - III-B-4. WCCC HIS 250 American History II (3)
 - One of:*
 - SOC 202 Social Problems (3)
 - *SOC 205 Minority Women in the United States (3)
 - *SOC 214 Racial and Cultural Minorities (3)
 - *SOC 344 Sociology of Sex Roles (3)
 - IV-B-1. *Two of:*
 - WCCC ENG 231 Literature: Poetry (3)
 - WCCC ENG 232 Literature: Drama (3)
 - WCCC ENG 233 Literature: Drama (3)
 - IV-B-2. *All of:*
 - WCCC ENG 240 Shakespeare (3)
 - WCCC ENG 285 Children's Literature (3)
 - *LIT 260 African American Literature (3)
 - IV-B-3. WCCC PHI 211 Critical Thinking (3)
 - IV-B-4. WCCC MUS 101 Music Fundamentals (3)
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:72

Specialty Studies

One of:

A major from the approved list (see p. 284) (30²)

Two minors other than early childhood education from the approved list (see p. 284) (40¹)

CUR 214 The Developing Child (3)^a

CUR 215 Child Development Lab: Preschool Child (1)^a

**CUR 373 Child Development Lab: Methods and Resources (1)^a

**CUR 401 Issues and Practices in Early Childhood Education (2)^a

Three hours from.^a

- CUR 314 The Developing Infant (3)
- CUR 315 Child Development Lab: Infancy (1)
- EDP 318 Uses of Play in the Helping Professions (3)
- PED 281 Motor Development (3)

Subtotal, Specialty Studies:40

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- WCCC ED 110 Introduction to Education (4)
- EDP 200 Human Development and Learning—Early Childhood (5)
- PED 257 Physical Education for the Classroom Teacher (2)
- EDT 300 Introduction to Computer Applications in Education (1)
- WSU ELE 340 Teaching Mathematics Pre-Primary to Grade Nine (3)
- WSU ELE 360 Teaching Social Studies Pre-primary to Grade 9 (3)
- WSU SED 501 The Exceptional Child in the Regular Classroom (2)*
- WSU RDG 640 Practicum in Reading Development (1)
- WSU RDG 642 Practicum in Content Reading (1)

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

- FA 300 Art Integration for the Elementary Teacher (4)
- CUR 302 Methods of Integrating Curriculum and Resources in Early Childhood (3)*
- CUR 304 Curriculum and Methods: Elementary (3)
- RDG 314 Teaching Reading in the Elementary School (6)
- SFD 328 Social Aspects of Teaching (3)
- EDP 341 Assessment of the Young Child (3)*
- EDM 345 Media for the Classroom Teacher (1)
- EDU 496 Student Teaching (6)*
- EDU 497 Student Teaching (6)

Credit hours in Professional Studies:57

Total credit hours required: 169

ELEMENTARY EDUCATION
ELEMENTARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. See inside back cover
- I-B-3. See inside back cover
- I-B-4. Both:
MTH 108 Functional Mathematics I (3)
MTH 109 Functional Mathematics II (3)
- I-B-5. See inside back cover
- II-B-1. All of:
PHY 100 Science for Elementary Teachers (3)
GES 202 Science for Elementary Teachers (3)
ESC 303 Science for the Elementary Teacher (3)
- II-B-2. See inside back cover
- II-B-3. CHM 101 Science for Elementary Teachers (3)
- III-B-1. See inside back cover
- III-B-2. See inside back cover
- III-B-3. GEO 110 World Regions (3)
- III-B-4. Complete a course from one of the following options:
 - a. See inside back cover
 - b. GEO 111 (follows 110) Regions and Resources (3)
 - c. See inside back cover
- IV-B-1. See inside back cover
- IV-B-2. See inside back cover
- IV-B-3. See inside back cover
- IV-B-4. MUS 104 Elements of Music (2)

Physical education, military science, or equivalent (2)

Additional requirement: LIT 207 Introduction to Children's Literature (3)

Credit hours in Basic Studies:60

EDUCATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate, which is valid for teaching all subjects kindergarten through grade 5, for teaching in self-contained classrooms in grades 6-8, and for teaching in one's major or minor areas of concentration in grades 6-8. Depending on the major and minor selected (or three minors selected), the individual will be eligible for additional endorsements. The certification tests for this field are #81, "Early Childhood," #83, "Elementary," and those needed for subject area endorsements. The certification tests for this field are #83, "Elementary," and those needed for subject area endorsements.

***NOTES:**

Elementary Education

²Course required for and applicable to major.

^{*}At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk (*).

^{**}Admission to the teacher education program required.

¹Could be less, depending on the minor and the possible application of basic studies courses to the minor.

major (or two minors) and the possible application of Basic Studies courses/hours to the major (or two minors)

³Could be less, depending on the major and minor (or three minors) selected and the possible application of Basic Studies courses/hours to the major and minor (or three minors)

***NOTES:**

Elementary

and applicable

^bPrerequisite for another course in program.

At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk ().

**Admission to the teacher education program required.

³Could be less, depending on the major and minor (or three minors) selected and the possible application of Basic Studies courses/hours to the major and minor (or three minors)

ELEMENTARY EDUCATION

(Urban Teacher Program)

The Urban Teacher Program is a cooperative effort of Wayne County Community College (WCCC), Wayne State University (WSU), and Eastern Michigan. It is structured such that students may take a substantial portion of the course work necessary to become a teacher on a WCCC campus, using carefully selected courses from all three institutions. Widely recognized for its pioneering efforts to recruit prospective teachers from and to prepare teacher for the urban setting, successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Elementary Provisional Certificate, which is valid for teaching all subjects kindergarten through grade 5, for teaching in self-contained classrooms in grades 6-8, and for teaching in one's major or minor areas of concentration in grades 6-8. Depending on the major and minor selected (or three minors selected), the individual will be eligible for additional endorsements. The certification tests for this field are #83, "Elementary," and those needed for subject area endorsements.

Specialty Studies

One of:

A major from the approved list (see p. 284) (30³) and a minor from the approved list (see p. 284) (20³)

Three minors from the approved list (See p. 284) (60³)

Subtotal, Specialty Studies:50

Professional Studies

100 clock hours of approved pre-student teaching field experiences (0)

IE 253 Technology Education for Children (3)

PED 257 Physical Education for the Classroom Teacher (2)

EDT 300 Introduction to Computer Applications in Education (1)

HED 320 Health Education in the Elementary Grades (2)

MUS 320 Elementary Music Education (2)

EDP 322 Human Development and Learning (4)

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

FA 300 Art Integration for the Elementary Teacher (4)

SGN 300 Exceptional Children in the Regular Classroom (1)

CUR 304 Curriculum and Methods: Elementary (3)

RDG 314 Teaching Reading in the Elementary School (6)

SFD 328 Social Aspects of Teaching (3)

EDP 340 Introduction to Assessment and Evaluation (3)

EDM 345 Media for the Classroom Teacher (1)

MTH 381 The Teaching of Mathematics K-6 (3)

EDU 492 Student Teaching (12)

Credit hours in Professional Studies:50

Total credit hours required: 160

ELEMENTARY EDUCATION

(URBAN TEACHER PROGRAM)

ELEMENTARY TEACHER CERTIFICATION

Basic Studies

I-B-1. *Both:*

WCCC ENG 110 Freshman Composition I (3)

WCCC ENG 120 Freshman Composition II (3)

I-B-2. WCCC SPH 101 Fundamentals of Speech (3)

I-B-3. WCCC ENG Intermediate Composition (3)

I-B-4. *Both:*

WCCC MAT 128 Math for the Elementary Teacher I (3)

WCCC MAT 129 Math for the Elementary Teacher II (3)

I-B-5. Taken as part of professional studies.

II-B-1. *All of:*

WCCC PHY 115 Principles of Physics (4)

WCCC science elective (3)

GES 202 Science for Elementary Teachers (3)

ESC 303 Science for the Elementary Teacher (3)

II-B-2. WCCC PSY 101 Introduction to Psychology (3)

II-B-3. CHM 101 Science for Elementary Teachers (3)

III-B-1. WCCC PS 101 American Government (3)

III-B-2. WCCC HIS 249 American History I (3)

III-B-3. *Both:*

WCCC GEO 202 World Geography (3)

SOC 105 Introductory Sociology (3)

III-B-4. WCCC HIS 250 American History II (3)

One of:

SOC 202 Social Problems (3)

*SOC 205 Minority Women in the United States (3)

*SOC 214 Racial and Cultural Minorities (3)

*SOC 344 Sociology of Sex Roles (3)

IV-B-1. *Two of:*

WCCC ENG 231 Literature: Poetry (3)

WCCC ENG 232 Literature: Drama (3)

WCCC ENG 233 Literature: Drama (3)

IV-B-2. *All of:*

WCCC ENG 240 Shakespeare (3)

- WCCC ENG 285 Children's Literature (3)
- *LIT 260 African American Literature (3)
- IV-B-3. WCCC PHI 211 Critical Thinking (3)
- IV-B-4. WCCC MUS 101 Music Fundamentals (3)
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 72

Specialty Studies

One of:

- A major from the approved list (see p. 284) (30³) and a minor from the approved list (see p. 284) (20³)
- Three minors from the approved list (60³)

Subtotal, Specialty Studies: 50

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- WCCC ED 110 Introduction to Education (4)
- PED 257 Physical Education for the Classroom Teacher (2)
- EDT 300 Introduction to Computer Applications in Education (1)
- HED 320 Health Education in the Elementary Grades (2)
- MUS 320 Elementary Music Education (2)

One of:

- WSU EDP 331 Educational Psychology (3)
- EDP 322 Human Development and Learning (4)
- WSU ELE 340 Teaching Mathematics Pre-Primary to Grade Nine (3)
- WSU ELE 360 Teaching Social Studies Pre-primary to Grade 9 (3)
- WSU SED 501 The Exceptional Child in the Regular Classroom (2)
- WSU RDG 640 Practicum in Reading Development (1)
- WSU RDG 642 Practicum in Content Reading (1)

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

- FA 300 Art Integration for the Elementary Teacher (4)
- CUR 304 Curriculum and Methods: Elementary (3)
- RDG 314 Teaching Reading in the Elementary School (6)
- SFD 328 Social Aspects of Teaching (3)
- EDM 345 Media for the Classroom Teacher (1)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies: 53

Total credit hours required: 175

Majors and minors for prospective elementary teachers may be selected from, but are limited to, those on the approved list on p. 284. The majors and minors given below are administered by the Department of Teacher Education.

**ARTS GROUP MAJOR
ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in fine arts, certification code "OX." The certification test covering this field is #53, "Fine Arts."

- FA 101 Introduction to Art (3)
- CTA 222 Drama and Play in Human Experience (3)
- IE 354 Experiences in Technology for Children (2)
- 17 credits from fine arts, industrial education, music, drama/theatre for the young, or theatre arts courses

25 hours, not counting hours applicable to Basic Studies or professional studies.

The following courses, required in the general education or professional studies for elementary education, are considered part of this major and must be included if this major is selected:

- MUS 104 Elements of Music (2)
- IE 253 Technology Education for Children (3)
- FA 300 Art Integration for the Elementary Teacher (4)
- MUS 320 Elementary Music Education (2)

***NOTES:**

Elementary

^aCourse required for and applicable to major.

^bPrerequisite for another course in program.

^{*}At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk (*).

^{**}Admission to the teacher education program required.

³Could be less, depending on the major and minor (or three minors) selected and the possible application of Basic Studies courses/hours to the major and minor (or three minors)

***NOTES:**

**Children's Literature
and Drama/Theatre for
the Young, Interdisci-
plinary Major in—>**

*May be satisfied in Basic Studies.

**CHILDREN'S LITERATURE AND DRAMA/THEATRE FOR
THE YOUNG, INTERDISCIPLINARY MAJOR IN
ELEMENTARY TEACHER CERTIFICATION**

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in language arts, certification code "BX." The certification test covering this field is #01, "Language Arts."

Two of:

- *LIT 100 The Reading of Literature (3)
- *LIT 101 The Reading of Literature: Fiction (3)
- *LIT 102 The Reading of Literature: Poetry (3)
- *LIT 103 The Reading of Literature: Drama (3)
- *LIT 204 Native American Literature (3)
- LIT 210 Introduction to Shakespeare (3)
- LIT 251 The Bible as Literature (3)
- *LIT 260 African American Literature (3)
- *LIT 207 Introduction to Children's Literature (3)
- ENG 450 Children's Literature: Criticism and Response (3)

One of:

- LIT 351 World Mythology (3)
- LIT 352 Folk Literature: Ballads and Folk Tales (3)

One of:

- *CTA 121 Fundamentals of Speech (2)
 - *CTA 124 Fundamentals of Speech (3)
 - CTA 222 Drama and Play in Human Experience (3)
 - CTA 323 Improvising and Role-Play (3)
 - CTA 324 Oral Interpretation of Literature for the Young (3)
- If CTA 121 is in the program, choose 10 credits from this list; if CTA 124 is in the program, choose 9 credits from this list:
- CTA 322 Theatre for the Young (3)
 - CTA 327 Plays for the Young (3)
 - CTA 497/498/499 Independent Study in Drama/Theatre for the Young (1/2/3)
 - CTA 210 Interpretative Reading (3)
 - CTA 168/268/368/468 Interpretation (1 each)
 - ENG 451 Writing about Controversy in Literature for the Young (3)
 - *LIT 204 Native American Literature (3)
 - LIT 210 Introduction to Shakespeare (3)
 - LIT 251 The Bible as Literature (3)
 - LIT 351 World Mythology (3)
 - LIT 352 Folk Literature: Ballads and Folk Tales (3)
 - LIT 401 Modern British and American Poetry 1914 to Present (3)

Approved minors are those for the elementary program as given on page 284.

24 hours, not including the minor and not including requirements that may be satisfied through Basic Studies (*).

**ELEMENTARY SCIENCE GROUP MAJOR
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 "DX." The certification test covering this field is #16, "Science."

If PSY 101 is in the program, choose 21 credits from this list; if PSY 102 is in the program, choose 20 credits from this list:

- AST 203 Exploration of the Universe (3)
- BIO 105 Biology and the Human Species (4)
- BIO 205 Field Biology (4)
- BIO 207 Elements of Ecology (2)
- BIO 224 Principles of Conservation (4)
- BIO 232 Nature Interpretation (3)
- BIO 413 Animal and Plant Preservation Techniques (1)
- BIO 415 Basic Histological Techniques (1)
- BOT 209 Ornamental Plants (2)
- BOT 215 Economic Botany (3)
- BOT 354 Trees and Shrubs (3)
- CHM 105 Survey of Chemistry (5) or CHM 119 Fundamentals of Chemistry (4)
- CHM 115, 116 Chemistry and Society (4)
- CHM 120 Fundamentals of Organic and Biochemistry (4)

CHM 121-122 General Chemistry I with lab (4)
 GES 114 National Parks and Monuments (2)
 GES 200 The Oceans (3)
 GES 227 Topographic Maps (2)
 GES 303 Field Geography (3)
 GES 309 Plate Tectonics (3)
 GES 324 Weather (3)
 GES 401 Cartography (3)
 GLG 161 Historical Geology (4)
 GLG 229 Rocks of Michigan (2)
 GLG 325 Geomorphology (3)
 PHY 110 Physical Science (4)
 PHY 210 Musical Acoustics (4)
 PHY 211 Elementary Physical Science (3)
 PHY 221 Mechanics, Sound, and Heat (4)
 PHY 222 Electricity and Light (4)

21 hours, not including course work satisfied through Basic Studies or professional studies.

The following courses, required in the general education for elementary education, are considered part of this major and must be included if this major is selected:

PHY 100 Science for Elementary Teachers (3)
 CHM 101 Science for Elementary Teachers (3)
 GES 202 Science for Elementary Teachers (3)
 ESC 303 Science for the Elementary Teacher (3)

One of:

PSY 101 General Psychology (3)
 PSY 102 General Psychology (4)

LITERATURE, LANGUAGE, COMMUNICATION, AND THEATRE ARTS MAJOR ELEMENTARY TEACHER CERTIFICATION

Successful completion of this major, in the context of other program requirements, qualifies the student for recommendation for endorsement in language arts, certification code "BX." The certification test covering this field is #01, "Language Arts."

*ENG 121 English Composition (3)
 LIT 210 Introduction to Shakespeare (3)
 *LIT 207 Introduction to Children's Literature (3)

Two of:

*LIT 100 The Reading of Literature (3)
 *LIT 101 The Reading of Literature: Fiction (3)
 *LIT 102 The Reading of Literature: Poetry (3)
 *LIT 204 Native American Literature (3)
 LIT 251 The Bible as Literature (3)
 *LIT 260 African American Literature (3)

One of:

*ENG 225 Intermediate English Composition (3)
 ENG 328 Writing: Style and Language (3)
 ENG 335 Imaginative Writing (3)

Two of:

LIN 201 An Introduction to Linguistics (3)
 LIN 401 Introduction to Linguistic Science (3)
 LIN 402 Modern English Grammar (3)
 LIN 421 The History of the English Language (3)

One of:

*CTA 121 Fundamentals of Speech (2)
 *CTA 124 Fundamentals of Speech (3)
 CTA 210 Interpretative Reading (3)
 CTA 222 Drama and Play in Human Experience (3)

If CTA 121 is in the program, take 4 hours in communication and theatre arts; if CTA 124 is in the program, take 3 hours in communication and theatre arts.

18 hours, not including the minor and not including requirements that may be satisfied through Basic Studies (*).

*NOTES:

← Literature, Language, Communication, and Theatre Arts Major

*May be satisfied in Basic Studies.

SOCIAL SCIENCE GROUP MAJOR FOR ELEMENTARY EDUCATION

ELEMENTARY TEACHER CERTIFICATION

Note: Recommendation for endorsement in social science (certification code "CX") requires a group major of 36 hours from economics, geography, history, political science, psychology, sociology, anthropology, cultural studies, government, and behavioral studies. The certification test covering social sciences is #06, "Social Sciences."

Choose at least 12 credits, but no more than 18 credits from one of the following five areas: economics, geography, history, political science, sociology. Geography and geology applicable in the science and technology courses do not count on this major.

Choose three credits in each of the remaining four social science areas.

12 hours, not including the minor and not including requirements that may be satisfied through Basic Studies.

ARTS GROUP MINOR (NOT AVAILABLE WITH ART MAJOR OR WITH MUSIC MAJOR)

ELEMENTARY AND SPECIAL EDUCATION-ELEMENTARY CERTIFICATION

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in fine arts, certification code "OX." The certification test covering this field is #53, "Fine Arts."

FA 101 Introduction to Art (3)

**MUS 104 Elements of Music (2)

*IE 253 Technology Education for Children (3)

*FA 300 Art Integration for the Elementary Teacher (4)

*MUS 320 Elementary Music Education (2)

IE 354 Experiences in Technology for Children (2)

8 hours from:

CTA 222 Drama and Play in Human Experience (3)

CTA 322 Theatre for the Young (3)

CTA 323 Improvising and Role-Play (3)

CTA 324 Oral Interpretation of Literature for the Young (3)

CTA 497/498/499 Independent Study in Drama/Theatre for the Young (1/2/3)

CTA 210 Interpretative Reading (3)

CTA 106 Introduction to the Performing Arts (3) Not open to those with credit in MUS 106.

CTA 150 Introduction to Theatre (3)

*CTA 151 Black Theatre: An Introduction (3)

CTA 153 Introduction to Theatre Crafts (2)

CTA 251 Black Theatre: Creative Problems (3)

CTA 168/268/368/468 Interpretation (1 each)

AMU 101-300 Applied Music Lessons (1-4)

FA 100 Art Appreciation (3)

FA 107 Art History Survey I (3)

FA 108 Art History Survey II (3)

FA 421 History of Oriental Art (3)

FA 122 Two-Dimensional Design (3)

FA 123 Drawing I (3)

FA 124 Drawing II (3)

*FA 222 African and African American Art (3)

FA 231 Three-Dimensional Design (3)

FA 302 Graphic Design (3)

FA 436 Women in Art (3)

IDT 121 Graphic Communication (3)

IE 102 Woodwork (3)

IE 105 History of Industrial Technology (3)

IE 118 Energy Technology (3)

IE 152 Arts and Crafts (3)

IE 255 Art Metalwork (2)

MUS 106 Introduction to the Performing Arts (3)

MUS 107 Music Appreciation (2)

MUS 151 Class Piano (2)

MUS 152 Class Piano (2)

MUS 232 Voice Class (1)

MUS 131 University Choir (1)

MUS 134 University Women's Chorus (1)

MUS 135 University Men's Chorus (1)

MUS 249 Band (1)

*NOTES:

Arts Group →

*Satisfies multicultural/international studies requirement.

**Included in Basic Studies for elementary program.

*Included in professional studies for elementary program.

- MUS 248 Orchestra (1)
 MUS 274 Functional Guitar (2)
 MUS 224 Recreational Music (2)
 Other courses in fine arts, industrial education, music, or theatre arts

13 hours for elementary program, not counting hours in Basic Studies and professional studies. 21 hours for special education program, not counting hours that could be taken in Basic Studies.

EARLY CHILDHOOD EDUCATION MINOR

Successful completion of this minor, in the context of other program requirements, qualifies the student for recommendation for endorsement in early childhood, certification code "ZA." The certification test covering this field is #82, "Early Childhood."

- CUR 214 The Developing Child (3)
 CUR 215 Child Development Lab: Preschool Child (1)
 **CUR 373 Child Development Lab: Methods and Resources (1)
 **CUR 401 Issues and Practices in Early Childhood Education (2)
 *SGN 251 Education of Exceptional Children (3)
 **CUR 302 Methods of Integrating Curriculum and Resources in Early Childhood (3)
 **EDP 341 Assessment of the Young Child (3)
 **EDU 496 Student Teaching (6)

Three hours from:

- CUR 314 The Developing Infant (3)
 CUR 315 Child Development Lab: Infancy (1)
 EDP 318 Uses of Play in the Helping Professions (3)
 PED 281 Motor Development (3)

24 hours for those in elementary programs; 21 hours for those in special education programs.

ELEMENTARY SCIENCE GROUP MINOR

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 science, certification code "DX." The certification test covering this field is #16, "Science."

If PSY 101 is in the program, choose 9 credits from this list; if PSY 102 is in the program, choose 8 credits from this list:

- AST 203 Exploration of the Universe (3)
 #BIO 105 Biology and the Human Species (4)
 BIO 205 Field Biology (4)
 BIO 207 Elements of Ecology (2)
 BIO 224 Principles of Conservation (4)
 BIO 232 Nature Interpretation (3)
 BIO 413 Animal and Plant Preservation Techniques (1)
 BIO 415 Basic Histological Techniques (1)
 BOT 209 Ornamental Plants (2)
 BOT 215 Economic Botany (3)
 BOT 354 Trees and Shrubs (3)
 CHM 105 Survey of Chemistry (5) or CHM 119 Fundamentals of Chemistry (4)
 #CHM 115-116 Chemistry and Society with lab (4)
 #CHM 120 Fundamentals of Organic and Biochemistry (4)
 #CHM 121-122 General Chemistry I with lab (4)
 GES 114 National Parks and Monuments (2)
 GES 200 The Oceans (3)
 GES 227 Topographic Maps (2)
 GES 303 Field Geography (3)
 GES 309 Plate Tectonics (3)
 GES 324 Weather (3)
 GES 401 Cartography (3)
 GLG 161 Historical Geology (4)
 GLG 229 Rocks of Michigan (2)
 GLG 325 Geomorphology (3)
 PHY 110 Physical Science (4)
 PHY 210 Musical Acoustics (4)
 PHY 211 Elementary Physical Science (3)
 PHY 221 Mechanics, Sound, and Heat (4)

*NOTES:

<— Early Childhood Education

**Requires formal admission to the teacher education program.

*Included in the special education programs.

*NOTES:

<— Elementary Science Group

*Required in Basic Studies in the elementary program.

#could be taken in Basic Studies in the special education programs.

- PHY 222 Electricity and Light (4)
- *PHY 100 Science for Elementary Teachers (3)
- *CHM 101 Science for Elementary Teachers (3)
- *GES 202 Science for Elementary Teachers (3)
- *ESC 303 Science for the Elementary Teacher (3)
- *One of:

- #PSY 101 General Psychology (3)
- PSY 102 General Psychology (4)

9 hours for elementary program; 13 hours for special education programs.

FRENCH LANGUAGE MINOR

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 French, certification code "FA." The certification test covering this field is #23, "French."

- FRN 343 French Composition (3)
- FRN 344 French Conversation (3)
- 14 credits from any level French courses

20 hours

GERMAN LANGUAGE MINOR

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 German, certification code "FB." The certification test covering this field is #24, "German."

- GER 343 German Composition (3)
- GER 344 German Conversation (3)
- 14 credits from any level German courses

20 hours

SOCIAL SCIENCE GROUP MINOR (ELEMENTARY)

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 social science, certification code "CX." The certification test covering this field is #06, "Social Sciences."

- *SOC 105 Introductory Sociology (3)
- **9 credits in social science courses
- One of:
 - *#HIS 123 The United States to 1877 (3)
 - *#HIS 124 The United States, 1877 to the Present (3)
- *GEO 110 World Regions (3)
- One of:
 - ECO 200 The American Economy (3)
 - ECO 201 Principles of Economics I (3)
- *#PLS 112 American Government (3)

12 hours

SPANISH LANGUAGE MINOR

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 Spanish, certification code "FF." The certification test covering this field is #28, "Spanish."

- SPN 343 Spanish Grammar and Composition (3)
- SPN 344 Spanish Conversation and Composition (3)
- 14 credits from any level Spanish courses

20 hours

***NOTES:**

Social Science Group (Elementary) —>

*Can be satisfied in Basic Studies requirements for elementary program.

*Can be satisfied in Basic Studies requirements for special education programs.

**3 hours can be satisfied in Basic Studies requirements.



COLLEGE OF HEALTH AND HUMAN SERVICES

Elizabeth King, Dean
Kathy Randles, Assistant to the Dean
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DEPARTMENT

Human, Environmental, and Consumer Resources

HUMAN, ENVIRONMENTAL, AND CONSUMER RESOURCES

E. A. Rhodes
Department Head
108 Roosevelt Building
487-0077/487-0078

See the Human, Environmental, and Consumer Resources department listings on pp. 223-242 for further information.

OCCUPATIONAL FOODS MINOR (AVAILABLE ONLY TO BUSINESS EDUCATION AND TECHNOLOGY EDUCATION MAJORS) SECONDARY TEACHER CERTIFICATION

HM 251 Meal Service Management (3)
HEC 374 Methods of Teaching Occupational Foods (2)
DTC 393 Food Systems Management I Experience (2)
DTC 394 Food Systems Management I (2)
HM 440 Financial Management in Hospitality Management (3)
HM 441 Commercial Purchasing (3)
HEC 487 Field Experience (3)
DTC 492 Food Systems Management II Experience (4)
DTC 494 Food Systems Management II (1)

23 hours



COLLEGE OF TECHNOLOGY

Robert Ristau, Interim Dean
150 Sill Hall
487-0354

DEPARTMENT

Business and Industrial Education

BUSINESS AND INDUSTRIAL EDUCATION

Ann M. Remp
Acting Department Head
14 Sill Hall
487-4330

See the Business and Industrial Education department listings on pp. 252-259 for further information.

BUSINESS SERVICES AND TECHNOLOGY EDUCATION MAJOR SECONDARY TEACHER CERTIFICATION

BUSINESS SERVICES AND TECHNOLOGY EDUCATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in business education, certification code "GX," or, with appropriate work experience, certification code "VB." The certification test covering this field is #32, "Business Education."

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. See inside back cover
- I-B-3. See inside back cover
- I-B-4. MTH 118 Mathematical Analysis for Social Sciences I (3)
- I-B-5. BE 201 Microcomputers for Business Applications (3)^a
- II-B-1. See inside back cover
- II-B-2. PSY 101 General Psychology (3)^a
- II-B-3. See inside back cover
Any other course listed in group II-B-1 above
- III-B-1. See inside back cover
- III-B-2. See inside back cover, or one of:
 - *HIS 305 Indians of the United States (3)
 - *HIS 315 History of Black Americans (3)
 - *HIS 336 History of Women in the United States and Great Britain, 1800 to the Present (3)
 - *HIS 341 The Middle East, 1798 to Present (3)
 - *HIS 342 North Africa, 1798 to Present (3)
 - *HIS 348 Twentieth Century Africa (3)
 - *HIS 356 Latin America: National Period (3)
 - *HIS 375 Modern India (3)
- III-B-3. ECO 201 Principles of Economics I (3)
- III-B-4. ECO 202 Principles of Economics II (3)
- IV-B-1. See inside back cover
- IV-B-2. See inside back cover
- IV-B-3. See inside back cover
- IV-B-4. See inside back cover
Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:49

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Business and Industrial Education for additional applicable information. See note "a" above for courses applicable to both Basic Studies and the major.

- BE 100 Contemporary Business (3)
- BE 123 Word Processing/Keyboarding Applications (2)
- BE 210 Concepts of Word/Information Processing (3)
- BE 220 Word/Information Processing Operations (3)
- BE 222 Transcription Applications and Technology (3)
- BE 224 Computer-based Business Mathematics (3)
- ACC 240-241 Principles of Accounting I-II (6)
- ACC 244 Personal Tax Accounting (2)
- Accounting concentration courses (6)
- BE 250 Personal Finance (3)
- LAW 293 Legal Environment of Business (3)
- BE 310 Word/Information Processing Administration (3)
- MKT 360 Principles of Marketing (3)
- BE 395 Office Administration (3)
- BE 396 Records Administration (3)
- BE 496 Records Administration Using Database (3)

Subtotal, Teaching Major:52

*NOTES:

Secondary

^aCourse required for and applicable to major.

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- BE 200 Principles of Marketing and Business Education (3)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)

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

- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- BE 364 Methods of Teaching General Business Subjects (2)
- BE 365 Methods of Teaching Office Education (2)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies:33

Total credit hours required: 134

INDUSTRIAL-VOCATIONAL EDUCATION MAJOR SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. *See inside back cover*
- I-B-3. *One of:*
 - ENG 324 Principles of Technical Communication (3)
 - ENG 326 Research Writing (3)
- I-B-4. *One of:*
 - MTH 112 Topics in Precalculus Mathematics (4)
 - MTH 118 Mathematical Analysis for Social Sciences I (3)
 - MTH 120 Calculus I (4)
- I-B-5. *One of:*
 - BE 201 Microcomputers for Business Applications (3)
 - CSC 136 Computers for the Non-Specialist (3)
 - CSC 137 Introduction to FORTRAN Programming (3)
 - IDT 201 Microcomputer Applications in Technology (3)
 - IT 105 Computer Applications for Industry (3)
- II-B-1. *One of:*
 - CHM 119 Fundamentals of Chemistry (4)
 - CHM 121-122 General Chemistry I with lab (4)
- II-B-2. *See inside back cover*
- II-B-3. *One of:*
 - PHY 221 Mechanics, Sound, and Heat (4)
 - PHY 223 Mechanics, Sound, and Heat (5)
- III-B-1. *See inside back cover, or:*
 - PLS 202 State and Local Government (3)
- III-B-2. *See inside back cover, or*
 - HIS 290 Introduction to the History of Technology (3)
- III-B-3 and III-B-4. *Either option:*
 - a. Principles courses
 - ECO 201-202 Principles of Economics I-II (6)
 - b. Other economics courses
 - ECO 200 The American Economy (3)
 - ECO 300 Contemporary Economics (3)
- IV-B-1. *Two of:*
 - LIT 100 The Reading of Literature (3)
 - LIT 101 The Reading of Literature: Fiction (3)
 - LIT 102 The Reading of Literature: Poetry (3)
 - LIT 103 The Reading of Literature: Drama (3)
 - LIT 150 Humanity and Technology (3)
- IV-B-2. *One of:*
 - *FLA 215 The Culture of the Latino Groups in the United States (3)
 - *LIT 204 Native American Literature (3)
 - *LIT 260 African American Literature (3)
 - *PHI 226 Philosophy of Women (3)
 - *FA 222 African and African American Art (3)
 - *CTA 151 Black Theatre: An Introduction (3)

INDUSTRIAL- VOCATIONAL EDUCATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in vocational trades, certification code "VT." The certification test covering this field is an occupational area test.

NOTES:*Secondary**

At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk ().

***NOTES:**

Secondary

^bPrerequisite for another course in program.

At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk ().

- IV-B-3. *One of:*
 - PHI 100 Introduction to Philosophy (3)
 - PHI 130 Introduction to Logic (3)
 - PHI 150 Humanity and Technology (3)
- IV-B-4. FA 122 Two-Dimensional Design (3)

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 54

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Business and Industrial Education for additional applicable information.

- IDT 150 Understanding Technology (3)
- IE 246 Safety in Technology and Industrial-Vocational Education (2)
- IE 452 Principles of Vocational-Technical Education (3)
- Concentration (36)

The occupational specialization in which the student will seek vocational authorization. Approval may be sought for community college or other technical school course work as transfer credit if it properly represents a certifiable occupational area. Work experience also may be validated and credit awarded toward the area of concentration by successfully passing an occupational competency examination.

Subtotal, Major and minor: 44

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- IE 250 Foundations of Technology and Industrial-Vocational Education (3)
- SGN 251 Education of Exceptional Children (3)
- EDP 322 Human Development and Learning (4)

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

- SFD 328 Social Aspects of Teaching (3)
- RDG 311 Teaching Reading in the Secondary School (3)
- IE 350 Curriculum in Technology and Industrial-Vocational Education (3)
- IE 460 Practicum in Technology and Industrial-Vocational Education (2)
- IE 461 The Teaching of Technology and Industrial-Vocational Education (2)
- EDP 340 Introduction to Assessment and Evaluation (3)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies: 38

Total credit hours required: 136

**MARKETING EDUCATION
SECONDARY TEACHER CERTIFICATION**

Basic Studies

- I-B-1. ENG 121 English Composition (3)
- I-B-2. See inside back cover
- I-B-3. See inside back cover
- I-B-4. MTH 118 Mathematical Analysis for Social Sciences I (3)
- I-B-5. BE 201 Microcomputers for Business Applications (3)
- II-B-1. See inside back cover
- II-B-2. PSY 101 General Psychology (3)^b
- II-B-3. See inside back cover
- III-B-1. See inside back cover
- III-B-2. See inside back cover, or one of:
 - *HIS 305 Indians of the United States (3)
 - *HIS 315 History of Black Americans (3)
 - *HIS 336 History of Women in the United States and Great Britain, 1800 to the Present (3)
 - *HIS 341 The Middle East, 1798 to Present (3)
 - *HIS 342 North Africa, 1798 to Present (3)
 - *HIS 348 Twentieth Century Africa (3)
 - *HIS 356 Latin America: National Period (3)
 - *HIS 375 Modern India (3)
- III-B-3. ECO 201 Principles of Economics I (3)
- III-B-4. ECO 202 Principles of Economics II (3)

**MARKETING
EDUCATION**

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in business education, certification code "GX," or, with appropriate work experience, certification code "VB." The certification test covering this field is #36, "Marketing (Distributive Education)."

- IV-B-1. *See inside back cover*
- IV-B-2. **Cross-cultural or international studies**
 - *FLA 215 The Culture of the Latino Groups in the United States (3)
 - *LIT 204 Native American Literature (3)
 - *LIT 260 African American Literature (3)
- IV-B-3. *See inside back cover*
- IV-B-4. *See inside back cover*
- Physical education, military science, or equivalent (2)

Credit hours in Basic Studies: 49

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Business and Industrial Education for additional applicable information.

- ACC 240-241 Principles of Accounting I-II (6)
- BE 100 Contemporary Business (3)
- LAW 293 Legal Environment of Business (3)
- MGT 386 Organizational Behavior and Theory (3)
- MKT 360 Principles of Marketing (3)
- MKT 261 Contemporary Selling (3)
- MKT 363 Retailing (3)
- MKT 365 Buyer Behavior (3)

Two of:

- LAW 393 Law of Business Enterprises (3)
- MGT 384 Human Resource Management (3)
- MGT 485 Human Resource Development (3)
- MKT 369 Advertising (3)
- MKT 374 Business to Business Marketing (3)
- MKT 461 Sales Management (3)

Eleven hours from:

- BE 122 Keyboarding for Office Technology (2)
 - BE 123 Word Processing/Keyboarding Applications (2)
 - BE 201 Microcomputers for Business Applications (included in Basic Studies requirements) (3)
 - BE 224 Computer-based Business Mathematics (3)
 - BE 250 Personal Finance (3)
 - BE 387 Cooperative Education in Business Education (3)
 - BE 487 Cooperative Education in Business Education (3)
 - BE 497/498/499 Independent Study (1/2/3)
 - FM 145 Introduction to Merchandising (3)
 - FM 235 Textiles for Consumers (3)
 - FM 255 Apparel Analysis (3)
 - FM 439 Fashion Markets (2)
 - IE 452 Principles of Vocational-Technical Education (3)
- 4000 clock hours (or equivalent) of recent work experience in the field of marketing (0)

Subtotal, Major: 44

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- BE 200 Principles of Marketing and Business Education (3)
- SGN 300 Exceptional Children in the Regular Classroom (1)
- EDP 322 Human Development and Learning (4)
- BE 368 Management of Marketing Education Programs (2)
- BE 461 Projects and Simulations in Marketing Education (2)

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

- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- BE 364 Methods of Teaching General Business Subjects (2)
- BE 366 Methods of Teaching Marketing Education (2)
- BE 367 Curriculum in Marketing Education (2)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies: 39

Total credit hours required: 132

***NOTES:**

Secondary

^bPrerequisite for another course in program.

At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk ().

TECHNOLOGY EDUCATION

Successful completion of this course of studies qualifies the student for recommendation for certification for the Michigan Department of Education Secondary Provisional Certificate endorsed in industrial arts, certification code "IX." The certification test covering this field is #38, "Industrial Arts."

*NOTES:

Secondary

^bPrerequisite for another course in program.

At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk ().

TECHNOLOGY EDUCATION MAJOR SECONDARY TEACHER CERTIFICATION

Basic Studies

- I-B-1. ENG 121 English Composition (3)
I-B-2. See inside back cover
I-B-3. One of:
ENG 324 Principles of Technical Communication (3)
ENG 326 Research Writing (3)
I-B-4. One of:
MTH 112 Topics in Precalculus Mathematics (4)
MTH 118 Mathematical Analysis for Social Sciences I (3)
MTH 120 Calculus I (4)
I-B-5. One of:
BE 201 Microcomputers for Business Applications (3)
CSC 136 Computers for the Non-Specialist (3)
CSC 137 Introduction to FORTRAN Programming (3)
IDT 201 Microcomputer Applications in Technology (3)
IT 105 Computer Applications for Industry (3)
II-B-1. One of:
CHM 119 Fundamentals of Chemistry (4)
CHM 121-122 General Chemistry I with lab (4)
II-B-2. See inside back cover
II-B-3. One of:
PHY 221 Mechanics, Sound, and Heat (4)
PHY 223 Mechanics, Sound, and Heat (5)
III-B-1. See inside back cover, or:
PLS 202 State and Local Government (3)
III-B-2. See inside back cover, or:
HIS 290 Introduction to the History of Technology (3)
III-B-3 and III-B-4. Either option:
a. Principles courses
ECO 201-202 Principles of Economics I-II (6)
b. Other economics courses
ECO 200 The American Economy (3)
ECO 300 Contemporary Economics (3)
IV-B-1. Two of:
LIT 100 The Reading of Literature (3)
LIT 101 The Reading of Literature: Fiction (3)
LIT 102 The Reading of Literature: Poetry (3)
LIT 103 The Reading of Literature: Drama (3)
LIT 150 Humanity and Technology (3)
IV-B-2. One of:
*FLA 215 The Culture of the Latino Groups in the United States (3)
*LIT 204 Native American Literature (3)
*LIT 260 African American Literature (3)
*PHI 226 Philosophy of Women (3)
*FA 222 African and African American Art (3)
*CTA 151 Black Theatre: An Introduction (3)
IV-B-3. One of:
PHI 100 Introduction to Philosophy (3)
PHI 130 Introduction to Logic (3)
PHI 150 Humanity and Technology (3)
IV-B-4. FA 122 Two-Dimensional Design (3)

Physical education, military science, or equivalent (2)

Credit hours in Basic Studies:54

Teaching Major

See the 1993-94 Undergraduate Catalog under Department of Business and Industrial Education for additional applicable information.

- IE 103 Structures and Design in Technology (3)
IE 106 Processing Technology (3)
IE 114 Information and Control Technology (3)
IE 118 Energy Technology (3)
IDT 121 Graphic Communication (3)
IT 123 Manufacturing Processes and Methods I (3)

- IT 125 Introduction to Construction (2)
 IT 200 Industrial Electricity and Controls I (3)
 IE 246 Safety in Technology and Industrial-Vocational Education (2)
 IE 450 Solving Technological Problems (3)
 Sixteen hours from one of the following concentrations:

Construction (16 hours from among:)

- IT 201 Construction Systems (3)
 IT 206 Surveying (3)
 IT 229 Analysis of Commercial Prints (3)
 IT 303 Electrical, Mechanical, and Equipment Systems (3)
 IT 387 Cooperative Education in Industrial Technology (3)
 IT 402 Construction Materials (3)
 IE 487 Cooperative Education in Industrial Education (3)
Manufacturing (16 hours from among:)
 IT 103 Introduction to Automation (3)
 IT 124 Manufacturing Processes and Methods II (3)
 IT 202 Plastics (3)
 IT 215 Machine Tool Metalworking (3)
 IT 218 Industrial Electricity and Controls II (3)
 IT 223 Engineering Graphics II (3)
 IT 231 Industrial Computer Graphics (3)
 IT 251 Material Analysis and Testing (3)
 IT 306 Plastic Processing (3)
 IT 316 Manufacturing Tooling (3)
 IT 318 Fluid Power (3)
 IT 361 Computer Numerical Control (3)
 IE 387 Cooperative Education in Industrial Education (3)
 IT 417 Industrial Robotics (3)
 IT 425 Advanced Manufacturing Methods (3)
 IE 487 Cooperative Education in Industrial Education (3)
Graphic Communications (16 hours from among:)

Drafting Option

- IT 101 Introduction to Industrial Drawing (3)
 IT 122 Engineering Graphics I (3)
 IT 206 Surveying (3)
 IT 223 Engineering Graphics II (3)
 IT 228 Construction Drawing (3)
 IT 230 Introduction to Computer Graphic Systems (3)
 IT 231 Industrial Computer Graphics (3)
 IT 324 Industrial Drawing (3)
 IE 387 Cooperative Education in Industrial Education (3)
 IT 431 Interactive Industrial Computer Graphics (3)
 IT 432 3-D Computer-Aided Design (3)
 IT 433 Advanced Computer-Aided Design (3)
 IE 487 Cooperative Education in Industrial Education (3)

Graphic Arts Option

- IDT 104 Introduction to Communication Technology (2)
 IDT 204 Photographic Communication (3)
 IDT 205 Photo-Technology (2)
 IDT 207 Photographic Reproduction (3)
 IDT 304 Advanced Photographic Communication (3)
 IDT 305 Communication Transmission Systems (3)
 IDT 318 Graphic Arts Workshop (3)
 IE 387 Cooperative Education in Industrial Education (3)
 IDT 404 Photo Communication Workshop (3)
 IDT 409 Emerging Technologies in Storage and Retrieval (3)
 IDT 421 Photographic Typesetting (3)
 IDT 425 Communication Technology and Social Change (3)
 IDT 436 Electronic Publishing Technology (3)
 IE 487 Cooperative Education in Industrial Education (3)

Power (16 hours from among:)

Electronics option

- IT 218 Industrial Electricity and Controls II (3)
 IT 314 Integrated Circuits: Digital (3)
 IE 387 Cooperative Education in Industrial Education (3)
 IT 414 Integrated Circuits: Linear (3)
 IT 415 Communication Circuits (3)
 IT 434 Microcomputer Circuits (3)

***NOTES:**

Secondary

^bPrerequisite for another course in program.

At least one approved course in cross-cultural or international studies must be completed in the process of meeting the Basic Studies requirements of the foregoing Areas I-IV. Approved courses are designated with an asterisk ().

- IE 487 Cooperative Education in Industrial Education (3)
Energy Systems option
- IT 219 Techniques of Energy Control (3)
- IT 318 Fluid Power (3)
- IE 387 Cooperative Education in Industrial Education (3)
- IT 417 Industrial Robotics (3)

Subtotal, Major and related areas:44

Professional Studies

- 100 clock hours of approved pre-student teaching field experiences (0)
- IE 250 Foundations of Technology and Industrial-Vocational Education (3)
- SGN 251 Education of Exceptional Children (3)
- EDP 322 Human Development and Learning (4)

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

- RDG 311 Teaching Reading in the Secondary School (3)
- SFD 328 Social Aspects of Teaching (3)
- EDP 340 Introduction to Assessment and Evaluation (3)
- IE 350 Curriculum in Technology and Industrial-Vocational Education (3)
- IE 460 Practicum in Technology and Industrial-Vocational Education (2)
- IE 461 The Teaching of Technology and Industrial-Vocational Education (2)
- EDU 492 Student Teaching (12)

Credit hours in Professional Studies:36

Total credit hours required:..... 134

TECHNOLOGY EDUCATION MINOR

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 industrial arts, certification code "IX." The certification test covering this field is #38, "Industrial Arts."

*IE 253 Technology Education for Children (3)

One of:

- IE 354 Experiences in Technology for Children (2)
- *IE 252 Prevocational/Vocational Special Needs Program (4)

11-12 credits from:

- IE 103 Structures and Design in Technology (3)
- IE 106 Processing Technology (3)
- IE 114 Information and Control Technology (3)
- IE 118 Energy Technology (3)
- IE 152 Arts and Crafts (3)
- IE 250 Foundations of Technology and Industrial-Vocational Education (3)
- IE 355 Seminar in Technology for the Elementary School (2)

3-5 credits from:

- IDT 121 Graphic Communication (3)
- IDT 204 Photographic Communication (3)
- IE 350 Curriculum in Technology and Industrial-Vocational Education (3)
- IE 452 Principles of Vocational-Technical Education (3)
- IE 497 Directed Study (1)

Hours from the requirements above must total at least 20.

17 hours for elementary program; 16 hours for special education programs.

***NOTES:**

Technology Education —>

*Satisfied in professional studies in elementary program.

*Satisfied in professional studies in special education programs.



CONTINUING EDUCATION

Paul McKelvey, Dean
321 Goodison Hall
487-0407

CONTINUING EDUCATION

Paul T. McKelvey
Dean
321 Goodison Hall
487-0407

Continuing Education offers flexible, innovative, and exciting credit course and program options available to all EMU students. This includes full or part-time, residential or commuter, graduate or undergraduate. Courses offered through Continuing Education are available at times, locations, and in formats that are convenient for students balancing a full or part-time job, co-curricular activities, and/or family responsibilities with their college education. Credit earned in Continuing Education courses and programs is regular university academic credit.

Course Listings

Each semester, Continuing Education publishes a Course Bulletin listing the courses available that semester. These bulletins are available at the Continuing Education Office in 321 Goodison Hall and in display racks in various locations around the EMU campus. Since some courses are scheduled after the Course Bulletin is published, you may also want to stop by the office to check the course listing update posted in the hallway. You can also call 487-0407 with questions about the availability of a particular course.

As with all EMU courses, your academic adviser is the person best equipped to guide you and answer specific questions about which courses will meet the requirements of your program of study.

SPECIAL PROGRAMS AND SERVICES

ACADEMIC PROGRAMS ABROAD

George Klein
Director
333 Goodison Hall
487-2424

In today's interconnected world, a global perspective is increasingly important and valuable. The Office of Academic Programs Abroad provides opportunities for EMU students to diversify and enrich their university education through several kinds of study abroad programs:

Semester-Long Programs:

- 1) The European Cultural History Tour, offered fall semester, is a unique travel-study program that includes more than 40 cities in 18 countries throughout Europe, Russia, and the Mediterranean. Students and EMU professors visit major historic and cultural sites while pursuing in-depth academic studies in an interdisciplinary context. Up to 15 hours of credit are available in history, art, literature, and political science. Since its beginning in 1974, ECHT has grown to become the largest university-sponsored program of its kind in the country, drawing students from EMU as well as other colleges and universities throughout the United States and Canada. ECHT is also offered in summer. A program in Asia is anticipated for winter semester 1994.
- 2) Exchange with the University of Groningen, The Netherlands, available fall and winter semesters. A limited number of EMU students spend a semester in residence at the University of Groningen studying Dutch language, history, art, literature, society, and politics. All courses except Dutch language are taught in English. Tuition and housing costs are the same as a semester in residence at EMU.

Summer Intensive Language Programs:

Intensive French, Spanish, and German language programs are available in Canada, Mexico, and Austria respectively, in settings of cultural immersion with additional instruction and supervision by EMU faculty. These programs are offered in cooperation with the Department of Foreign Languages and Bilingual Studies.

Other Summer Programs:

A version of the European Cultural History Tour is available in summer, along with a variety of travel and residence programs that carry credit in such fields as art, business, economics, education, history, political science, and social work. These study abroad programs have taken students to countries in Europe, Asia, and Latin America.

Access to Programs Sponsored by Other Universities:

The Office of Academic Programs Abroad has a library of information on hundreds of study abroad programs sponsored by universities all over the world and offers comprehensive advising and assistance to interested EMU students. EMU students who qualify for financial aid may apply that aid to all EMU-sponsored programs and to many programs sponsored by other universities.

ADVENTURES IN EDUCATION

Karen Cline
Coordinator
314 Goodison Hall
487-0407

Adventures in Education programs are all built around the concept of intensive shortened courses offered in beautiful resort-like or *adventurous* settings appropriate or relevant to the course content. Most Adventures in Education programs are held in the summer months or during other traditional breaks in the academic year. The students who take advantage of these programs do not fall into a stereotype. They include adult learners, traditional age undergraduates, teachers, and other seasoned professionals from many fields. The diversity of participants is a strength of the Adventures programs. A pre and/or post assignment is required for each course.

CONFERENCES & INSTITUTES

Neeta Delaney
Director
304 Goodison Hall
487-4045

Continuing Education's Office of Marketing and Special Programs is responsible for the administration of conferences and institutes. Although some conferences are held on an annual basis, new programs are added each year. Most range in length from two to ten days. Several credit and non-credit attendance options are typically available. Topics are most often tied to major national or international issues and/or targeted at certain professions. In addition to one or more University instructors, nationally known experts in the field are usually involved. All conferences and institutes involve additional fees.

INDEPENDENT STUDY

(DISTANCE EDUCATION)

Michael McPhillips
Coordinator
327 Goodison Hall
487-1081

The Independent Study Program allows you to enroll anytime and earn university credit without classroom attendance. The time limit for course completion is six months. When you register for a course through our Independent Study Program, you receive study guides, instructions, and all required assignments. In addition, all courses incorporate audio and/or video materials. Assignments, papers, and proctored exams are an integral part of each course. Courses are academically rigorous; students on probation may not enroll. For course listings and additional information, contact the Independent Study Office.

REGIONAL LEARNING CENTERS

In order to make it more convenient for individuals living in southeastern Michigan to take courses through Eastern Michigan University, Continuing Education offers a wide range of courses at a number of off-campus locations. These courses are coordinated through three EMU Continuing Education Regional Learning Centers located in Detroit, Flint, and Jackson and are listed in the Continuing Education Course Bulletin. Registration for these courses is no different than for any other course. See the Course Bulletin for details. For more information, you can either call the Regional Center directly or our main campus office at (800) 777-3521 long distance or (313) 487-0407 local.

Regional Learning Centers

Detroit: (313) 831-5280
Flint: (313) 762-0303
Jackson: (517) 787-7265

WEEKEND UNIVERSITY

Arthur Hoover
Coordinator
321 Goodison Hall
487-0407

Continuing Education's Weekend University program offers a wide range of undergraduate and graduate courses scheduled on the weekend. All Weekend University courses are held either on EMU's main campus or at the EMU Corporate Education Center. Among the many Weekend University offerings is a Weekend MBA program designed to meet the needs of students already in the workplace. For information about the Weekend University, call (313) 487-0407. For information about the Weekend MBA program, call the College of Business at (313) 487-4444.

For more information about EMU Continuing Education in general or about any of the specific programs or services, either call the appropriate numbers listed with each special program or the main office at (800) 777-3521 long distance or (313) 487-0407 local.



OFFICES, OFFICERS, AND OTHER CAMPUS DEPARTMENTS AND LOCATIONS

THE GRADUATE SCHOOL

UNIVERSITY ADVANCEMENT

STUDENT REFERENCES

UNIVERSITY CAMPUSES

ATHLETIC FIELDS

ADMINISTRATIVE OFFICERS

FACULTY AND STAFF

EMERITUS FACULTY

THE GRADUATE SCHOOL

Ronald E. Goldenberg
Dean
Starkweather Hall
487-3400

The Graduate School at Eastern Michigan University provides advanced undergraduate students with an opportunity to enroll in selected graduate level courses provided that they meet The Graduate School's admission standards and have achieved the requisite number of undergraduate credits. This privilege afforded to only EMU advanced undergraduate students will provide these students with an opportunity to advance their academic standing at the graduate level and be considered for graduate admission to one of the many graduate programs offered by The Graduate School.

Graduate School Catalogs are available at the time of admission without charge at Starkweather Hall. (Additional copies may be purchased at the bookstore in McKenny Union.) Students are responsible for the information therein and are affected by the policies and regulations explained in that catalog.

Advanced undergraduate students at Eastern Michigan University may register for 500-level graduate courses if recommended by their advisers and approved by the assistant dean of The Graduate School prior to registering for the class. Credit earned may be used to meet the requirements of the baccalaureate degree (recorded as undergraduate credit) or to apply toward a master's degree (receive graduate credit).

The following regulations apply:

1. Student applicants must have accumulated 76 hours or more of undergraduate credit and have a cumulative grade point average (GPA) of 2.50 or better in all course work completed at Eastern Michigan University.
2. Election of graduate hours as an undergraduate must be limited to the 500-level course series. Advanced undergraduates are not permitted to enroll in 600- or 700-level course series. Students must be admitted to a graduate degree program in the College of Business in order to enroll for a 500-level business course.
3. Credit in graduate courses may be used for only one purpose, either undergraduate credit or graduate credit.
4. Permission to enroll in graduate courses as an advanced undergraduate should not prolong the completion of undergraduate degree requirements.
5. The maximum number of graduate hours that can be elected as an advanced undergraduate student is 15. *Senior students who hold guest admission in the University are not eligible to enroll in graduate courses.*
6. Permission to take graduate courses does not represent admission to The Graduate School. Students wishing to continue graduate study and utilize the graduate credit earned in courses elected as an undergraduate must apply and meet all requirements for admission to The Graduate School and degree programs.

Procedures for graduate admission require the student to complete and submit the application for admission directly to The Graduate School with official transcripts of all undergraduate and graduate credit earned. Where necessary, official scores from national examinations must be submitted (departments requiring exams are listed in the Graduate Catalog).

Please note the following deadline schedule. These are the dates the Graduate School must receive all application

materials required for admittance to a degree program at Eastern Michigan University.

Fall admission March 15
Winter admission September 15
Spring/Summer admission February 15

Applications received after the above established deadlines will be moved to the subsequent semester; i.e., an application for fall semester received April 1 will be processed for winter semester. All documents and supporting data required for admittance become the property of The Graduate School and will not be returned.

Applicants are *not* officially admitted to The Graduate School and the requested graduate academic program until they have been notified in writing of acceptance by the assistant dean of The Graduate School.

ADMISSION CATEGORIES

It should be understood that the admission policies presented are minimum standards and that many departments have established criteria above these minimums. For this reason, applicants for degree admission may have to meet additional requirements established by departments. These requirements often include admission tests, valid teaching certificates, letters of recommendation and/or personal interviews and grade point averages above the minimum established by The Graduate School.

Anyone planning to enroll in graduate level courses must be admitted to The Graduate School through one of the following two admission categories: degree admission or non-degree student status.

ADMISSION REQUIREMENTS

Specialist's Degree

A minimum grade point average of 3.3 (B+) in the master's degree program is required for admission to the specialist's degree. For those departments admitting students into the specialist's degree directly from the bachelor's degree, a minimum undergraduate grade point average of 2.75 is required. Departments may establish standards higher than this minimum.

Master's Degree

Degree admission requires that the applicant hold a bachelor's degree from an accredited college or university and possess a minimum undergraduate grade point average of 2.50 (4.0) or 2.75 in the last half of the undergraduate program. Applicants who do not possess minimum requirements for admission may be granted conditional admission. Conditions of admission must be met prior to beginning core course work for the degree.

TYPES OF ADMISSION

Degree Admission Status

Degree admission into a master's or graduate certificate program requires that the candidate meet both The Graduate School requirements (conferred bachelor's degree and at least a 2.5 GPA or 2.75 GPA in the last half of the undergraduate program) and the departmental admission requirements as stated in The Graduate Catalog. Specialist's degree admission requires a 3.3 GPA in the completed master's program.

Conditional Admission

Condition 1: Curriculum Deficiencies is a conditional admission status for students who meet the degree admission requirements of The Graduate School, but have curricular deficiencies in their undergraduate program and/or other departmental standards and therefore do not meet departmental admission requirements. In such cases, special conditions noted

on the departmental recommendation form must be completed prior to gaining degree admission.

Condition 2: Senior Status is the conditional admission granted to candidates completing an undergraduate degree at the end of the current semester and is valid for one enrollment period only. This condition is removed when the student submits an official undergraduate transcript with the baccalaureate degree posted.

Condition 3: English as a Second Language Program is a conditional admission status granted to international non-native speakers of English who scored below the required minimum score in the English proficiency exam (TOEFL and the Test of Written English, or MELAB) and will be required to elect appropriate ESL courses. The ESL courses are determined by the ESL program staff based on the candidate's score and a placement examination. The examination is administered by the English as a Second Language program staff at Eastern Michigan University prior to the beginning of each term.

Non-Degree Admission

Non-degree students may enroll under this status for any of the semesters or sessions (fall, winter, spring or summer) and there is no limit to the number of hours a non-degree student may earn. However, students will be subject to course prerequisites. Also, a student cannot earn a degree with non-degree student status. Students can transfer from non-degree student status to degree status if they meet departmental and Graduate School requirements (see Transfer of Credit to Degree Programs in the Graduate Catalog). Policy states that a student must complete a minimum of 10 semester hours after admission to the degree program. Non-degree students can earn a graduate certificate in such programs as artificial intelligence, gerontology, and state and local history.

Credits earned do not automatically apply toward a degree program but are dependent upon admission to The Graduate School, the requirements of the program, recommendation by an adviser, and the approval of The Graduate School.

Status 1: Academic Deficiencies is a non-degree admission status granted on the recommendation of the academic department to candidates who *do not* meet the minimum undergraduate grade point average (2.5 GPA) requirement of The Graduate School or the academic department GPA requirements, whichever is higher; and/or have graduated from a non-accredited academic institution; and/or have demonstrated the potential to perform graduate level work at Eastern Michigan University. This type of admission provides students with an opportunity to demonstrate that they can be successful in a graduate program at EMU by completing a minimum of nine and no more than 12 graduate level credit hours specified by the department, while maintaining good academic standing (3.0 GPA). The hours elected as a non-degree admission candidate can only be applied to a graduate degree program upon the recommendation of the coordinator of graduate advising. It should be specifically noted that successful completion of nine and not more than 12 graduate level credit hours with a 3.0 GPA does not guarantee, nor does it constitute, admission to a graduate degree program.

Status 2: Continuing Certification is a non-degree admission status granted to certified teachers and other professionals in education who explicitly indicate that they do not intend to pursue a graduate degree program but wish to enroll only in graduate level courses to meet continuing certification requirements. The academic courses that are elected via the non-degree admission status do not follow a prescribed graduate degree program and do not earn the student a graduate degree.

Status 3: Continuing Education Division Courses is a non-degree admission status granted to students who enroll in

courses through the Division of Continuing Education. Courses taken under this non-degree admission status do not automatically apply to a graduate degree. **Students intending to use graduate level courses offered through the Division of Continuing Education on a degree program must seek formal admission to a graduate degree by completing an admission application and providing The Graduate School with official transcripts.** Students intending to enroll in graduate level courses to meet degree requirements must meet all of the program admission requirements prior to enrollment in Continuing Education courses.

Status 4: Personal/Professional Development is a non-degree admission status granted to candidates who wish to enroll in graduate level courses for self-enrichment purposes and/or participate in a graduate certificate/advanced graduate certificate program. Courses taken under this admission status do not automatically apply to a graduate degree at Eastern Michigan University.

Financial assistance is available to graduate students under specific programs listed previously in the Financial Aid section of this catalog. This includes the College Work-Study Program, student employment, and educational loans such as Perkins Loans and the Stafford Loan Program.

Graduate assistantships are available through academic departments, and are awarded on the basis of the qualifications of the applicant. Each appointment requires considerable research time and precludes other employment. The academic year stipend ranges from about \$2,400 to \$4,800. In addition, depending upon the appointment, the University pays full tuition for up to 18 credit hours for each fiscal year of the assistantship, as well as registration, health service, and student government fees.

The total assistantship package may be worth up to \$9,035 per academic year depending on whether you receive a full-time or part-time assistantship or whether you are a resident or non-resident of Michigan. Graduate students interested in applying for such positions should write to their major area department head or the Graduate Dean's Office.

A limited number of assistantships are funded through the College Work-Study Program. Interested students should contact their major area department head or the Graduate Dean's Office. Students need to submit the graduate assistantship application material, as well as the Family Financial Statement or Financial Aid Form, to qualify for the College Work-Study Program.

The minority graduate assistantship program strives to attract highly qualified minority students in academic disciplines that traditionally have not been accessible to minorities. Eastern Michigan University has continually encouraged the application and enrollment of promising minority graduate students and recognizes the need for well-trained minority scholars.

For more information on this program, please call 487-0042.

The graduate fellowship program is an honor awarded to selected graduate students for academic merit. The award is a \$300 tuition waiver per semester (fall and winter) with the provision that *the fellow must enroll in and complete at least six hours of graduate level course work in each of the terms of the award.* Undergraduate courses taken for graduate credit are *not* considered part of the required six hours.

Both new and continuing graduate students may apply for graduate fellowships. New graduate students must present a minimum 3.2 cumulative undergraduate GPA to receive consideration. Graduate students who have already begun their

programs must present a minimum of 3.6 cumulative graduate GPA to receive consideration. Students having completed more than 15 graduate hours of their current degree program at the time of initial application are not eligible for this program.

Graduate fellows (1) must hold admission to an academic program leading to either a master's or a specialist's degree; (2) must maintain a cumulative graduate GPA of 3.6 at all times during their fellowship in order to maintain the award; and (3) are eligible for reappointment for one additional academic year if they apply and continue to achieve a 3.6 cumulative graduate GPA. Students accepted into the graduate assistantship program are not eligible to be graduate fellows.

Applications are available in the Graduate Dean's Office, Starkweather Hall.

The Graduate Dean's Award for Research Excellence is a \$250 cash award made in the fall and winter semesters to reward excellence in ongoing or completed research projects.

Currently enrolled Eastern Michigan University graduate students or recent graduates (within one year) are eligible to apply for the award. Part- and full-time students who have completed 15 semester hours and are in good academic standing are encouraged to apply.

The major criterion for the award is the exhibition of superior initiative in the student's own research project.

Deadlines for application are November 15 for the fall award and March 15 for the winter award. Applications are available in the Graduate Dean's Office, Starkweather Hall.

The Barton Scholarship is a one-time competitive award of \$500 which is applied to the recipient's tuition and fees. Applications will be considered by The Graduate School Scholarship Committee bi-annually for the fall and winter semesters. Applicants must (1) either be enrolled in the final semester of their undergraduate program of study and earn a baccalaureate degree from Eastern Michigan University with no graduate level academic work completed prior to receiving the award, or have previously earned a baccalaureate degree from EMU and have not enrolled in courses as a graduate student prior to receiving the award; (2) must have a cumulative undergraduate GPA of 3.5 or better at the time of submitting the scholarship application; and (3) must become candidates for admission into a graduate academic program at Eastern Michigan University or The University of Michigan prior to submitting the Barton Scholarship application form. Students who wish to pursue their graduate studies at The University of Michigan must submit a completed Graduate Admission Verification Form before consideration can be given to their scholarship application. The deadline for submission of materials for a fall semester award is June 30 and November 30 for a winter semester award.

Applications are available in The Graduate School, Starkweather Hall.

The Anton Brenner Scholarship is a one-time competitive award of \$500 which is applied to the recipient's tuition and fees. Applications will be considered by The Graduate School Scholarship Committee for each fall semester. Applicants must (1) have completed at least one full academic semester (spring and summer combined equals one full semester) at EMU and earned at least 10 graduate credit hours toward their master's degree prior to submitting an application for the award; (2) have a cumulative graduate GPA of 3.5 or better at the time of submitting the scholarship application; (3) be enrolled in at least four graduate credit hours during the fall semester for which the scholarship award is granted; and (4) submit an application on or before April 15 to be considered for an award the following fall. Applications are available in The Graduate School, Starkweather Hall.

OFFICE OF ALUMNI RELATIONS

George G. Beaudette
Director
15 Welch Hall
487-0250

Alumni are Eastern Michigan University's lifeline to every community in the state of Michigan, to business and industry across the country, and to the world-at-large. The continuing interest of graduates and former students is a major investment in the progress and future of EMU.

The Office for Alumni Relations is the coordinating body for all alumni activity and the means by which personal relationships established during student days can be maintained and renewed.

It is responsible for updating the computerized list of 87,000 known alumni, assisting in special reunions of various constituent groups of alumni, providing programs for special alumni meetings and giving staff support to the Alumni Association and various other alumni groups. Special activities include Homecoming, a dinner dance honoring distinguished alumni, golf outings, concerts and an active outreach program.

In August 1983, it initiated a new alumni periodical, *Eastern Today*, published four times yearly in cooperation with the Offices of Public Information and Publications. The magazine is designed to enhance communications about and among alumni, faculty, administration, and friends of EMU. The *National Edition Alumni Newsletter* was added in 1992.

The Alumni Association plans programs of interest for alumni and serves as the vehicle for communicating to the University faculty and administration the concerns of EMU's alumni as they relate to the development of the University.

Active in fund raising campaigns, the association is responsible for the Memorial Chimes and Pierce Hall clocks given in former years, and more recently for gifts to the University Library, various established funds and scholarships, and additional scholarships and aid to student organizations. Charles McKenny Union, completed in 1931 and built through the cooperative efforts of alumni and the University, stands as a visible symbol of the association's ongoing service to EMU.

The association is governed by a 24-member board of directors elected in the spring of each year by a vote of all eligible association members. The president of the University and the executive vice president are ex-officio members of the board; the director of the Office for Alumni Relations serves as secretary.

OFFICE OF DEVELOPMENT

The Office of Development was established in 1975 to create a new awareness of the University's ever-increasing need for private support and to organize a University-wide development program.

Its primary functions include the identification, cultivation and solicitation of alumni, friends, parents, corporations, foundations, and civic and labor organizations; the design and implementation of direct-mail, telemarketing and personal solicitations to meet specific annual capital and endowment objectives; the receipt, acknowledgment and accurate recording of all gifts to the University; and the coordination of all fund-raising activities undertaken in the name of Eastern Michigan University.

OFFICE OF RESEARCH DEVELOPMENT

David L. Clifford
Director and Associate Graduate Dean
B-18 Goddard Hall
487-3090

The Office of Research Development's objectives are to stimulate, initiate, develop, and administer externally funded research activities in the University by working with faculty, administrators, and students interested in obtaining funds for independent research, demonstration programs, training, experimental projects, and other efforts directed toward expanding the scope and quality of the University.

Its activities include:

1. Identifying funding sources through liaison with governmental and private agencies, screening of grant announcements and requests for proposals, and personal contacts.
2. Providing information on funding opportunities through the sponsored program announcements to EMU personnel.
3. Maintaining informational files on foundation, corporate, state, and federal funding programs and updating changing priorities or funding levels of potential sponsors.
4. Organizing groups of faculty and staff to plan projects and respond to opportunities for external funding.
5. Assisting proposal writers in editing, typing, and preparing proposals for submission, obtaining all necessary University approvals, and formally submitting the completed application to the funding agency.
6. Assisting in the administration of externally sponsored programs by providing post-award support services to grant recipients.
7. Administering faculty release time awards, special project funds, and other research support programs.
8. Developing, implementing, and monitoring policies in the area of research and sponsored projects.

THE WORLD COLLEGE

Eastern Michigan University established the World College in 1987 as one of the top institutional priorities of the University's "Decade of Advancement." The result of internal restructuring, this new college evolved from the administrative function of the Language and International Trade Program

in the Department of Foreign Languages and Bilingual Studies. It also encompasses the functions of the former Office of International Projects.

Reporting to the Office of the Provost and to the Executive Vice President, the World College coordinates and facilitates the development of internationally-focused programs via collaboration with the entire University community. Among the major goals of the World College are:

- To facilitate the incorporation of global perspectives in university curricula.
- To assist in developing and maintaining liaison with foreign academic institutions, governments and business organizations.
- To serve as a clearinghouse of information and referrals regarding internationally-focused projects, programs, events, and activities.
- To assist faculty and staff in internationalizing their own expertise and in applying their expertise to new international endeavors.
- To increase international educational experiences for students and faculty, on campus and abroad.
- To seek and develop international programs through federal and state funding.
- To develop contract-based non-credit, internationally-focused experiences and courses for the public and for the private sector.

The World College is not a traditional academic college with its own departments and courses, faculty members, majors, and degrees. 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.

STUDENT REFERENCES

Dean of Students: Bette White
205 Goodison Hall
487-3118

Official policies regarding student conduct and grade grievance procedures are established by the University's Board of Regents. Copies of the Student Conduct Code may be obtained in the Dean of Students' Office.

CONDUCT CODE AND JUDICIAL STRUCTURE FOR STUDENTS AND STUDENT ORGANIZATIONS

Section I.

A. University-Wide Regulations

The following conduct, should it take place on University owned or controlled property or at a University sponsored or supervised event, may result in disciplinary action by the University, including dismissal from the University.

1. Use of alcohol

Consumption or possession of alcoholic beverages by persons under 21 years of age. Consumption or possession of alcoholic beverages by any person at any place or at any time where not specifically permitted by University policy or regulation. NOTE: Transportation in sealed containers to and from an authorized area or place is permissible if the person in possession has attained the legal age as prescribed by Michigan law for the legal possession of alcoholic beverages.

2. Drugs

- (a) Drug distribution. Distribution of narcotic or drug substance in violation of local, state, or federal drug or narcotic laws.
- (b) Drug usage. Use or possession of any drug or narcotic in violation of local, state, or federal drug or narcotic laws.

3. Property

- (a) Theft of University property or property of a member of the University or visitor.
- (b) Damage, destruction, or defacement of University property or property of a member of the University or visitor.
- (c) Wrongful appropriation of University property or property of a member of the University or visitor.

4. University facilities

- (a) Unauthorized use: including entry to, occupation of, or blocking ingress or egress of University facilities such as but not limited to buildings, classrooms, hallways, entryways, conference rooms, campus grounds, as well as unauthorized use of vehicles, equipment, or services or University name or logo (including University Computing Center).
- (b) Gambling: on campus for money or other things of value except as provided by law.
- (c) Pets: Dogs, cats, reptiles, or other animals are prohibited in University buildings or on University grounds, except where properly authorized.

5. Disruptive conduct

- (a) Active participation in or instigation of disruption or obstruction of any University activity.
- (b) Disturbance of or harassment of any member of the University community or visitor.

6. Physical abuse

- (a) Physical abuse or threat of physical abuse or unwarranted inflammatory provocation to physical abuse against any member of the University community or any person on University property or conduct which threatens or endangers the mental or physical health or safety of any such person.
- (b) Sexual harassment: Sexual harassment means unconsented physical contact of a sexual nature, unwelcome sexual advances, unwelcome requests for sexual favors, and other verbal or physical conduct or communications constituting sexual harassment.

7. Discrimination and discriminatory harassment

It is the policy of Eastern Michigan University to maintain an educational environment free from harassment, humiliation, and intimidation of students and other members of the University community. Discriminatory harassment, as defined herein, is prohibited and offenders are subject to disciplinary action under Section 3, *infra* (Judicial Structure for Students and Organizations). Speech or other expression constitutes discriminatory harassment under any of the following circumstances.

(a) If it:

- 1. is intended to insult or otherwise injure an individual on the basis of personal characteristics such as, but not limited to, race, ethnicity, color, national origin, creed, religion, ancestry, age, handicap, or sexual orientation, and
- 2. is addressed directly to the individual whom it insults, and
- 3. amounts to "fighting words."
"Fighting words" are those personally abusive epithets which, when directly addressed to any ordinary person are, in the context used and as a matter of common knowledge, inherently likely to provoke a violent reaction, whether or not they actually do. Such words include, but are not limited to, derogatory references to the personal characteristics described in Section 1.
- 4. This section (a) shall be construed as a proscription of all so-called "fighting words."

(b) If it:

- 1. constitutes a violation of MCL 750.147b, prescribing criminal and civil penalties for ethnic intimidation. See PA 1988 No. 371-1, effective March 30, 1989.

(c) If it:

- 1. presents a clear and present danger of substantial disorder, violence, interruption of classes, or material interference with the operation of the University.

(d) If it:

- 1. consists of extreme or outrageous acts or communications intended to harass, intimidate, or humiliate the person to whom it is directed on account of the personal characteristics described in Section A-1 and reasonably causes such person or persons to suffer severe emotional distress.

Severability

Any part of the foregoing provisions of Section 7 which shall be found by a court of competent jurisdiction to unconstitutionally abridge a person's

rights to free speech and expression shall be severed, held for naught, and the balance of such Section 7 shall remain fully enforceable.

8. Falsification of records
 - (a) Furnishing false information to the University.
 - (b) Forgery, alteration, or improper use of University documents, records, or identification.
9. Firearms, weapons, and explosives
 - (a) Possession or use of firearms and other weapons.
 - (b) Possession or use of firecrackers, gunpowder, explosives or incendiary devices, or other materials which endanger health or safety.
10. Fires or fire alarm systems and equipment
 - (a) Tampering with or misuse of fire alarm systems or firefighting equipment.
 - (b) Intentionally or recklessly burning or setting fire to or in any building or starting unauthorized fire on University property.
11. Academic dishonesty

Students are not to engage in any form of academic dishonesty including, but not limited to, plagiarism, alteration of records, substitution of another's work representing it as the student's own, and knowingly assisting another student in engaging in any such activity.

For purposes of this section, plagiarism is defined as the knowing use, without appropriate approval, of published materials, expressions, or works of another with intent to represent the material(s) as one's own.
12. Other University regulations:

Violation of any of the following posted or published University regulations:

 - (a) EMU policy manual(s);
 - (b) Terms and conditions of the residence hall contract;
 - (c) EMU published undergraduate and graduate catalogs;
 - (d) Rules and regulations specific to University buildings.

B. Off-Campus Conduct

Individual or group conduct described in the regulations in Part A which occurs off-campus also may result in disciplinary action by the University when:

1. such conduct has or tends to have a substantial adverse impact on the interest of the University or an individual within the University community, *and*
2. there is a showing to that effect to the satisfaction of a University hearing board to which the case is referred.

Section II. Conduct Code for Student Organizations

Recognized student organizations have considerable freedom to accomplish their goals. However, they must conform to the policies, regulations, and procedures for student organizations and the Code of Conduct. Any group in violation of these standards is subject to disciplinary action. Original jurisdiction for conduct cases for all recognized student organizations is held by the Dean of Students Office.

A. University-Wide Regulations

The following conduct, should it take place on University owned or controlled property or at a University sponsored or supervised event, may result in disciplinary action by the University, including separation from the University.

1. Non-discrimination by organizations
 - (a) Every student organization registered and approved by the University is expected to be free to select its membership upon the basis of indi-

vidual merit. Any student organization selecting its membership upon the basis of restrictive clauses involving race, religion, color, national origin, sex, age, or handicap will be considered to be operating in conflict with University policy.

- (b) Exceptions to this policy include religious qualifications which may be required by organizations whose aims are primarily sectarian, and social fraternities and sororities that are permitted by federal and state law to discriminate on the basis of sex.
 - (c) Should a student organization be in conflict with University policy in the selection of its members, the group will be asked to submit evidence that action has been or is being taken to remove such restrictive membership provision such as a request for a waiver of the restriction from the national organization. A reasonable period of time as determined by the Dean of Students Office may be granted to remove the restrictive provisions. Continued restriction of membership by constitutional requirements or other binding enactment contrary to University policy will result in withdrawal of University registration of the student organization.
2. Property
 - (a) Theft of University property or property of a member of the University or visitor.
 - (b) Damage, destruction, or defacement of University property or property of a member of the University or visitor.
 - (c) Wrongful appropriation of University property or property of a member of the University or visitor.
 - (d) Unauthorized possession of University property or property of a member of the University or visitor.
 3. University facilities
 - (a) Unauthorized use including entry to, occupation of, or blocking ingress or egress of University facilities such as but not limited to buildings, classrooms, hallways, entryways, conference rooms, outside grounds as well as unauthorized use of vehicles, equipment, services, or University name or logo (including University Computing Center).
 - (b) Misuse of University facilities, vehicles, equipment, services, or University name or logo including but not limited to use for purposes other than intended for or authorized.
 4. Falsification of records
 - (a) Furnishing false information to the University.
 - (b) Forgery, alteration, or improper use of University documents, records, or identification.
 5. Disruptive conduct
 - (a) Active participation in or instigation of disruption or obstruction of any University activity.
 - (b) Disturbance of or harassment of any member(s) of the University community or any person(s) on campus in an official capacity or visitor(s).
 6. Physical abuse
 - (a) Physical abuse or threat of physical abuse or unwarranted inflammatory provocation to physical abuse against any member of the University community or any person on University property or conduct which threatens or endangers the mental or physical health or safety of any such person.

- (b) Sexual harassment: Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communications constituting sexual harassment as defined and otherwise prohibited by state or federal statutes.
- (c) In cases where the activity is performed by an individual member of a student organization, the total organization may be held responsible when those members not directly involved participate in said activity by encouraging, witnessing, or condoning the act in any manner.

7. Discrimination and discriminatory harassment

It is the policy of Eastern Michigan University to maintain an educational environment free from harassment, humiliation, and intimidation of students and other members of the University community. Discriminatory harassment, as defined herein, is prohibited and offenders are subject to disciplinary action under Section 3, *infra* (Judicial Structure for Students and Organizations). Speech or other expression constitutes discriminatory harassment under any of the following circumstances.

- (a) If it:
 - 1. is intended to insult or otherwise injure an individual on the basis of personal characteristics such as, but not limited to, race, ethnicity, color, national origin, creed, religion, ancestry, age, handicap, or sexual orientation, and
 - 2. is addressed directly to the individual whom it insults, and
 - 3. amounts to "fighting words."
"Fighting words" are those personally abusive epithets which, when directly addressed to any ordinary person are, in the context used and as a matter of common knowledge, inherently likely to provoke a violent reaction, whether or not they actually do. Such words include, but are not limited to, derogatory references to the personal characteristics described in Section 1.
 - 4. This section (a) shall be construed as a proscription of all so-called "fighting words."
- (b) If it:
 - 1. constitutes a violation of MCL 750.147b, prescribing criminal and civil penalties for ethnic intimidation. See PA 1988 No. 371-1, effective March 30, 1989.
- (c) If it:
 - 1. presents a clear and present danger of substantial disorder, violence, interruption of classes, or material interference with the operation of the University.
- (d) If it:
 - 1. consists of extreme or outrageous acts or communications intended to harass, intimidate, or humiliate the person to whom it is directed on account of the personal characteristics described in Section A-1 above and reasonably causes such person or persons to suffer severe emotional distress.

Severability

Any part of the foregoing provisions of Section 7 which shall be found by a court of competent jurisdiction to unconstitutionally abridge a person's rights to free speech and expression shall be severed, held for naught, and the balance of such Section 7 shall remain fully enforceable.

8. Hazing

- (a) Eastern Michigan University students as individuals or members of registered student organizations are expressly forbidden from engaging in hazing. Initiation into University organizations is permissible excluding any activities construed as hazing.
- (b) Hazing shall be defined as the performing of an act or insisting that another, including the initiate, perform an act for initiation individually or with any student or other organization which may cause or create an unnecessary risk or cause mental or physical harm to any person or which is not deemed socially acceptable.

Such acts include, but are not limited to: requiring an initiate to consume alcohol or any other substance, preventing an initiate from having at least six hours sleep in any 24-hour period, branding, paddling, causing excessive fatigue—mental or physical, expecting participation in acts which cause embarrassment, humiliation, discomfort, pain, fright, or injury or which violate any federal, state, or local statute, or University policy.

- (c) In cases where the activity is performed by an individual member of a student organization, the total organization may be held responsible, when those members not directly involved participate in said activity by encouraging, witnessing, or condoning the act in any manner.
- (d) Any individual and/or organization found guilty of hazing will be subject to a minimum penalty of suspension.

9. Other University regulations

Violation of any other posted or published University regulations, including but not limited to:

- (a) EMU policy manual(s);
- (b) Terms and conditions of the residence hall contract;
- (c) EMU published bulletins (undergraduate and graduate catalogs);
- (d) *The Eastern Echo*;
- (e) Rules and regulations specific to University buildings;
- (f) Campus Life Council regulations and guidelines for organizations;
- (g) Student government monetary allocation guidelines.

B. Off-Campus Conduct

Conduct described in the regulations in Part A which occurs off campus also may result in disciplinary action by the University under the same provisions as the individual conduct code.

Note: Nothing in the foregoing shall subject an organization to liability under the provisions of this code for the acts of individuals unless such acts are committed under the formal or informal sponsorship, authority, direction, or as a group action of the organization.

Section III. Judicial Structure for Students and Student Organizations

A. Procedural Rights of the Student/Student Organization

- 1. The student/student organization shall have the right to remain silent.
- 2. The student/student organization shall have a right to a voluntary adviser of their choice. Such adviser shall be selected from the University community and may participate in the disciplinary proceedings. The student also shall be informed by the dean of students that assistance is available through Student Government's

Student Defender's Union. The student shall be informed of the availability of such assistance prior to the discipline process when applicable.

When criminal prosecution is pending on charges stemming from the same incident, the student/student organization shall have a right to engage an attorney, at their own expense, of their choice to be present at a University hearing. The attorney shall not represent the student/student organization nor be a participant in the hearing but shall be permitted to consult with the student/student organization at all stages of the proceedings.

3. The student/student organization shall be given a written statement of the charges against them prior to the commencement of the disciplinary process.
4. The student/student organization must be presented with a written list of their rights. Rights 1-4 shall extend to all judicial proceedings, all investigations conducted by the Dean of Students Office, and before any statement is made to the Dean of Students Office.
5. The student/student organization may confront their accuser and is guaranteed to the right to cross-examine all those testifying against them.
6. The student/student organization shall have the right to bring witnesses to testify in their defense. The University Judicial Board and the Judicial Appeals Board shall have the authority to limit the number of witnesses by a two-thirds (2/3) vote of those members present, in order to avoid dilatory tactics.
7. The student/student organization shall have the right to an open or closed hearing at their discretion. A hearing shall be deemed to have been open if provision for twenty (20) spectators was made in the hearing room and no person was excluded until the room's capacity was reached except for sequestration or if such person's behavior was disruptive of the atmosphere for the conduct of a fair hearing.

A closed hearing means participants only: student/student organization charged, adviser(s), dean of students and/or designee(s), witnesses, members of the board.
8. The student/student organization may submit to the dean of students, University Judicial Board, or the Judicial Appeals Board, in writing, a supportive report of any individual organization that chooses to intervene in their behalf.
9. The student/student organization shall have the right to challenge for cause any member of the University Judicial Board or Judicial Appeals Board. Each body shall determine the validity of such challenges.
10. No member of the University Judicial Board or Judicial Appeals Board who is involved with the investigation of a case or is a party to the case shall sit on the board while the case is being heard. Rights 5-10 shall extend to all cases before the University Judicial Board or Judicial Appeals Board.
11. With the assistance of the Dean of Students Office, the University Judicial Board and the Judicial Appeals Board must keep official records of each case which the student/student organization may examine.

B. Dean of Students Office

1. The dean of students shall have the power to investigate each student/student organization disciplinary case.
2. After investigation, the dean of students will make one of the following decisions:
 - (a) charge the student(s)/student organization with misconduct and assign a penalty;
 - (b) charge the student(s)/student organization with misconduct and refer the case to the UJB for action;

- (c) refer the case to the UJB for review and action;
- (d) not charge the student(s)/student organization.
3. In all cases where a student/student organization is charged, a written notice shall be prepared by the Dean of Students Office and served on the student(s)/student organization involved. It will satisfy this provision if such a notice is given to the student(s)/student organization's last known address registered with the University. The notice shall include the following:
 - (a) A recitation of the facts which surround the violation giving, so far as possible, the date, time, and location of the behavior in question.
 - (b) A recitation of the specific regulation violated.
 - (c) Any penalty assigned or other action taken.
 - (d) The student/student organization has ten (10) calendar days to appeal the finding in writing.
 - (e) Failure to appeal the decision within ten (10) calendar days shall result in the penalty taking effect.
4. When a case is taken to the University Judicial Board (or Judicial Appeals Board), the complaint should be submitted in writing to the hearing board by a representative from the Dean of Students Office or by an appointee of the Dean of Students Office.
5. In case of a hearing before the University Judicial Board (or Judicial Appeals Board), the dean of students shall notify the student(s)/student organization involved of the date, time, and place of the hearing and/or pre-hearing conference. The date of the pre-hearing conference shall not be less than two (2) days prior to the date of the hearing—except by mutual consent.

C. Pre-hearing Conferences

At least two days prior to any hearing by the University Judicial Board or hearing officer, the dean of students shall schedule a pre-hearing conference for any student(s)/student organization charged with conduct violations. Such conference shall be attended by:

1. The presiding officer of the University Judicial Board or Judicial Appeals Board, or the hearing officer or a designee of one of these officers.
2. The dean of students or his/her designee and may be attended by:
 - (a) Any employee of the University who may be designated to represent the University.
 - (b) The student(s)/student organization involved.
 - (c) Any member of the University community in good standing selected by the student(s)/student organization to serve as an adviser or representative.

The purpose of such conference shall 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 so far as possible, and to settle those matters which may be agreeably concluded. This conference will not determine questions of innocence or guilt or recommendation of penalty. The failure of the student(s)/student organization or their adviser or representative to appear shall in no way affect any procedural rights of the student(s)/student organization in subsequent disciplinary proceedings and such failure will not prohibit a hearing from being set and a hearing being held.

D. The University Judicial Board

1. Composition
 - (a) The University Judicial Board shall 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 mem-

bers of the University community and one (1) alternate (which includes current faculty, staff, employees, and students).

(b) No member shall be on any probationary status and no member shall have any pending disciplinary action which may lead to a change of status.

2. Selection of members

(a) The student members shall be appointed by the Student Senate as directed by their constitution and by-laws; with one student member from the Office of Campus Life.

(b) The faculty members shall be selected by the Faculty Council.

(c) The president or his/her designee shall appoint the members from the University community.

3. Term of office

(a) Members shall be appointed for up to a two-year period. They may be reappointed by the person or body who appointed them.

(b) Members may be removed from the board for poor attendance by a simple majority vote of the total board.

4. The chief justice shall be elected from within the body by a majority of the body.

E. Jurisdiction of the University Judicial Board

1. The University Judicial Board shall have original jurisdiction in all cases involving violations of University regulations.

2. The University Judicial Board shall exercise superintending control if there is probable cause to believe that elementary principles of fairness and justice are being or will be violated.

F. Appeals to the University Judicial Board

All appeals to the University Judicial Board shall be governed by the following:

1. Appeal may be granted on any basis.
2. Appeals shall be made to the University Judicial Board in writing through the Dean of Students Office.
3. The University Judicial Board shall decide whether or not to hear the case by majority vote.
4. All cases shall be heard from the beginning.
5. Upon motion of the student(s)/student organization party, any case may be removed directly to the Judicial Appeals Board, which shall assume original jurisdiction.

G. Procedure of the University Judicial Board

1. Prior to any discipline hearing, a pre-hearing conference will be held (see Item C, Pre-Hearing Conferences).

2. Quorum

A quorum shall exist with the presence of any six (6) members.

3. Disposition of cases

(a) A simple majority of the board members present shall be required for any action taken.

(b) Decisions of the University Judicial Board shall be in writing. The decision shall be based on the evidence presented. The decision shall state what rule was violated, the behavior constituting the violation and, if known, the date, time, and place of the violation. Within forty-eight (48) hours, the decision will be submitted in writing to the dean of students for mailing to the student(s)/student organization's last known address. Also a copy will be sent to the Judicial Appeals Board.

(c) All decisions of the University Judicial Board shall be final and shall be implemented after five (5) working days, unless appealed or as provided under Section 5, Item A. These decisions may be appealed by either party to the Judicial Appeals Board. The appeal must be in writing to the chair of the Judicial

Appeals Board and delivered to the Dean of Students Office within five (5) working days from the date of the decision.

(d) The University Judicial Board shall have authority to decide on penalties sanctioned by the University (see Section 4) and/or other action deemed appropriate.

H. Judicial Appeals Board

1. Composition

(a) The Judicial Appeals Board shall consist of two (2) enrolled students, two (2) full-time faculty members, and two (2) full-time members of the University community.

(b) No members shall be on any probationary status, and no member shall have any pending disciplinary action which may lead to a change of status.

2. Selection of members

(a) The student members shall be appointed by the Student Senate as directed by their constitution and by-laws.

(b) The faculty members shall be selected by the Faculty Council.

(c) The president or his/her designee shall appoint the members from the University community.

3. Term of office

(a) Members shall serve for up to a three-year term. They may be reappointed by the person or body that appointed them.

(b) Members may be removed from the board for poor attendance by a simple majority vote of the total board.

4. Chair

The chair of the Judicial Appeals Board shall be elected by a majority vote of the board.

I. Jurisdiction of the Judicial Appeals Board

1. The Judicial Appeals Board shall have appellate jurisdiction in all cases heard before the University Judicial Board and shall have original jurisdiction on the motion of the student/student organization party in any case.

2. In the event the University Judicial Board shall fail to convene and decide any case within a reasonable time, the Judicial Appeals Board will have the power to assume jurisdiction.

3. The Judicial Appeals Board shall exercise superintending control over lower courts if there is probable cause to believe that elementary principles of fairness and justice are being violated or will be violated.

J. Appeals to the Judicial Appeals Board

1. Student/student organization appeals or administrative appeals shall be made in writing to the chair of the Judicial Appeals Board and submitted to the Dean of Students Office within five (5) working days. In case of administrative appeal, the student/student organization involved shall be notified at least five (5) working days prior to their hearing before the Judicial Appeals Board.

2. All cases on appeal will be heard from the beginning.

K. Procedure of the Judicial Appeals Board

1. Prior to any discipline hearing, a pre-hearing conference will be held (see Item C, Pre-Hearing Conferences).

2. Quorum

A quorum shall exist with the presence of any four members.

3. Disposition of cases

(a) A simple majority of those present shall be required for any action taken by this board.

- (b) Decisions of the Judicial Appeals Board shall be in writing. The decision shall be based on the evidence presented. The decision shall state what rule was violated, the behavior constituting the violation and, if known, the date, time, and place of the violation.
- (c) Decisions of the Judicial Appeals Board shall be submitted to the president for review with copies to the Dean of Students Office, University Judicial Board, and the student(s)/student organization.
- (d) The president will make the final decision by accepting, modifying or rejecting the Judicial Appeals Board decision. If the decision is modified or rejected, then the president shall provide the student(s)/student organization and the Judicial Appeals Board with the reason(s) for the modification or rejection in writing.
- (e) Judicial Appeals Board and/or presidential decisions shall be in writing with specific factual findings, citing rule(s) violated and setting forth discipline to be imposed, if any.
- (f) For cases on which there has been no presidential action within five (5) working days after submission, the Judicial Appeals Board decision is deemed to be approved.
- (g) All decisions approved and permitted to stand shall become effective immediately.
- (h) Decisions shall be made in writing and made available to the student(s)/student organization on the first day following Judicial Appeals Board action and following acceptance by the president or his/her designee. In cases permitted to stand without presidential action, the decision shall be made available to the student(s)/student organization no later than the sixth (6th) working day following the submission for review of the decision of the Judicial Appeals Board.
- (i) Application for additional review and modification of the Judicial Appeals Board and presidential decision may be made to the Board of Regents through the secretary of the Board of Regents. The Board of Regents, at its discretion, may agree to review the findings and decision of the president or the Judicial Appeals Board.

L. Alternate Hearing Procedure

1. In the event the University Judicial Board shall fail to convene and/or act within a reasonable time, the president shall be authorized to refer the case directly to the Judicial Appeals Board.
In the event the Judicial Appeals Board shall fail to convene and/or act within a reasonable time, the president shall be authorized, after consultation with and approval by the Board of Regents, to appoint a hearing officer, not otherwise employed by the University, who shall conduct such hearings and perform the functions otherwise specified for the Judicial Appeals Board. The hearing officer shall submit his/her findings and recommendations to the president or his/her designee in the same manner and within the time as required for the Judicial Appeals Board.
2. Discipline by administrative action
It is the policy and practice of the University to handle disciplinary cases administratively without involvement of the student/student organization judicial systems when the judicial bodies are not in sessions.

Section IV. Penalties for misconduct

Discipline is intended to be corrective and educational as well as punitive. It is intended that the student(s)/student organization will learn from disciplinary experience and develop a more mature attitude toward group living problems. The penalties which may be incurred include, but are not limited to, the following:

A. Penalties for students

1. Reprimand
An official written statement of the University's disapproval of an individual or group action.
2. Administrative warning
Will be issued to students for lesser offenses than those subject to administrative probation. A breach of conduct will be viewed not only as the breach of conduct itself but a violation of this warning, which may result in dismissal.
3. Administrative probation
Defines the student's status to be conditional and may require exclusion from some programs and curricular or extracurricular activities. In each case, the length and nature of the exclusions, if any, shall be determined according to the nature of the offense. Any breach of conduct while on administrative probation will be viewed not only as the breach of conduct itself, but a violation of probation which may result in dismissal.
4. Suspension
Suspension is an involuntary separation of the student from the University which may extend for one semester, until a specified date, and/or until a stated condition is met.
5. Dismissal
Dismissal, like suspension, involves separation from the University but it is for an indefinite period of time.
In case of a judicial decision requiring that a commitment or action or other stated condition be met by a student, the person or body setting this condition shall be responsible for making their expectations clear to the student and for superintending and monitoring its implementation.

B. Penalties for Student Organizations

1. Reprimand
An official written statement of the University's disapproval of an individual or group action.
2. Administrative warning
Issued to student organizations for lesser offenses than those subject to administrative probation. Any breach of conduct will be viewed not only as the breach of conduct itself, but a violation of this warning, which may result in suspension of said organization's status as a student organization. The misconduct may be reported to said organization's national office, if applicable.
3. Administrative probation
Defines the student organization's status to be conditional and may require exclusion from campus activities, forfeiting of student monetary allocations, and withdrawal of Campus Life status for a minimum of one semester. Any breach of conduct while on administrative probation will be viewed not only as the breach of conduct itself, but a violation of probation that may result in suspension of said organization's status as a student organization.
4. Suspension or termination
The involuntary withdrawal of status of the student organization from the University permanently, for a specified period of time, and/or until a stated

condition is met. During this period the University will not in any way recognize nor support the continued operation of said organization. The student organization must re-apply to the Office of Campus Life for renewed recognition following any period of suspension. The suspension action shall be reported to said organization's national office, if applicable.

Action taken against a student organization also may result in separate action being taken against individual members of said group, when appropriate. In this case, the sections of the conduct code referring to student conduct will be applied.

Section V. Presidential Responsibility

A. Presidential Review

1. The authority to suspend or dismiss a student/student organization from the University for conduct in violation of University rules and regulations is vested in the president as the chief executive officer of the University or in his/her designated representative.
2. All disciplinary penalties assigned through the University judicial and review system that would result in suspension or dismissal of a student/student organization from the University shall be reviewed by the president or his/her designee.
3. The president or his/her designated representative may:
 - (a) Accept the decision of the judicial review system, or
 - (b) Reject the decision. If the decision rejected is:
 - 1) A dean of students decision, the rejection will constitute an automatic appeal to the University Judicial Board.
 - 2) A University Judicial Board decision, the rejection will constitute an automatic appeal to the Judicial Appeals Board.
 - 3) A Judicial Appeals Board decision, the procedure stated in Procedure of the Judicial Appeals Board, Item K, 3, b, c, will be followed.

B. Interim Suspension

The president, as the chief executive officer of the University, is directly responsible to the Board of Regents for the enforcement of the University policies, rules, and regulations and 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.

Although such authority has always existed in the Office of the President, it is herein made explicit that the president or his/her designated representative is authorized to suspend a student/student organization prior to a hearing and procedure through the University judicial process when in the judgment of the president or his/her designated representative, the misconduct of the student(s)/student organization threatens or endangers University property, and that such student's/student organization's continued presence on campus creates a clear and present danger to the safety of students, faculty, administrators, and University property and/or that constitutes an interference with the maintenance of the University's educational processes and missions.

The student(s)/student organization shall be notified of their suspension status orally, by written notice served on the student(s)/student organization, or written notice sent to the last address on record. Within five (5) days after the notice, the student(s)/student organization shall be provided with the op-

portunity for an informal hearing before the president or his/her designee. At this hearing, the student(s)/student organization shall be permitted to present their side of the story. After the hearing, the president or his/her designee may lift suspension and direct that a hearing follow within eight (8) days before the University Judicial Board, or maintain the student(s)/student organization on suspension status and direct that a hearing follow within eight (8) days before the University Judicial Board.

The above provisions concerning judicial power are the official policy of the University, subject to such specific amendments as shall hereafter be made and subject to those exceptions to these procedures implicit in the emergency powers of the president. Nothing in the above shall be construed as affecting the standard of conduct or rules of behavior as established by the regents.

All publications of the University that contain rules and procedures—other than the above that describes the judicial structure or the procedures of student/student organization courts, greek courts, or residence hall courts—shall not be construed as controlling those courts, but rather shall be merely descriptive of the system and procedures that the student(s)/student organization have themselves enacted as controlling their institutions.

C. Emergency Powers of the President

When faced with mass disruptions, activity of a violent and destructive nature, or other dangerous violations of University rules, the president may take note in a general statement of the seriousness of the threat to the University. As chief executive officer of the University, the president is charged with the maintenance of that degree of order necessary to the successful continuation of the University's lawful mission. Such responsibility carries with it the necessity for a certain degree of authority. Such authority has always existed in the Office of the President. It is herein made explicit but to the extent that the courts of the land may deem such authority to be inherent or implicit, it is not limited.

The president, after consultation with and approval of the Board of Regents, may:

1. Impose and have enforced a curfew on all or portions of the campus of the University.
2. Curtail or suspend services.
3. Close the University or portions of the University entirely for the period of emergency.
4. Suspend student(s)/student organizations and forbid their presence on campus if they have been sufficiently identified to him/her as participants in activities violative of University policy leading to the conditions described above. Suspensions shall continue for the period of emergency.
5. Appoint a hearing board on an ad hoc or extraordinary basis to make a recommendation as to whether individual interim suspension shall be continued. Such a hearing board shall convene and make its recommendations within ten (10) days from the effective date of the interim suspension.

In making more explicit the authority of the president to take necessary actions in the interest of the University, the Board of Regents in no way restricts its own powers and prerogative to carry out its obligations and duties as imposed by the constitution and laws of the State of Michigan.

ALCOHOL AND DRUG ABUSE PREVENTION PROGRAM AND POLICY

UNIVERSITY ALCOHOL AND 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 working 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 at 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 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 by civil authorities 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 about 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 will 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 Drugs: Health Risks:

Tobacco.

- 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 as many cavities of 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.

Alcohol (including beer, wine, liquor, and mixed beverages such as wine coolers, etc.).

- Physical and psychological dependence.
- Impaired driving ability—46,000 highway deaths in 1988—2 out of every 5 US citizens will be involved in an alcohol-related crash in their lifetimes.
- Increased family violence—child abuse and spouse abuse is frequently associated with alcohol use and abuse. 63% of women in one study of family violence reported that their husbands were drinking when they were violent.
- Increased chance of accidental death—alcohol is a contributing factor in at least 15,000 fatal and 6 million nonfatal injuries in non-highway settings.
- High risk sexual behavior is more likely and more frequent when under the influence of alcohol.
- Fetal Alcohol Syndrome is one of the 3 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 intestines, 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.
- Sexual 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.)

Marijuana (including Hash, Hash Oil, Tetrahydrocannabinol, THC, Cannabis).

- Diminished: short-term memory; motivation and cognition; coordination and concentration; oral communication; reaction time; and motivation to achieve.
- Anxiety and panic reactions.
- Lung and respiratory system damage from exposure to smoke.
- Psychological dependence.

Cocaine (including "Crack" Cocaine).

- Extremely addictive physically and psychologically.
- Sudden death 1 of 4 ways: collapsed respiratory system; arrested heartbeat; heart attack caused by narrowed blood vessels; or stroke caused by increased blood pressure.
- Increased risk taking.
- Seizures.
- Sleeplessness.
- Paranoia, delusions, and hallucinations—Cocaine psychosis.
- Mood swings with violent behavior.
- Malnutrition.
- Sexual dysfunction.
- Severe birth defects—physical damage and permanent emotional damage to babies born addicted to Cocaine.

Depressants (including tranquilizers, barbiturates, and Methaqualone).

- Physically 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.

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.

PCP (Phencyclidine).

- * Paranoia—panic and fear of death lasting several days.
- * Irregular heart beat and breathing.
- * Ongoing speech problems.
- * Depression and hallucinations.
- * Aggressive behavior.
- * Impaired memory and perception.
- * Unpredictable and sometimes intense mood disturbances and behavior changes.

Anabolic Steroids.

- * Psychological and physical dependence.
- * Violent behavior.
- * Intense mood swings—paranoia—disorientation.
- * Liver, heart, and kidney damage.
- * Withdrawal symptoms.
- * Birth defects.

Minor Tranquillizers (including Xanax, Tranxene, Valium, Librium, Ativan, Serax, Miltown, Dalmane, Halcion, Restoril, etc.).

- * Psychologically and physically addictive.
- * Withdrawal symptoms include: tremors, rapid heart beat, 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.

ASSISTANCE

Assistance Available at EMU to Faculty, Staff, and Their Families:

Employee Assistance Program.....(313) 487-1109
(Snow Health Center, Room 325)

Assistance Available at EMU for Students:

University Counseling Services
(at Snow Health Center).....(313) 487-1118
University Health Services Prevention
Office (at Snow)(313) 487-2226

Alcohol and Drug Abuse Treatment Services Available In Southeastern Michigan:

Adrian

Bixby Hospital—
Sage Center:(517) 423-2141

Ann Arbor/Ypsilanti Area

McAuley Chemical Dependency
Services:(313) 572-4308

Washtenaw Council on

Alcoholism:(313) 971-7900
Child and Family Services-
Clear House:(313) 663-2500
Ann Arbor Consultation
Services:(313) 996-9111

Brighton/Livingston County

Brighton Hospital:(313) 227-6143

Chelsea

Chelsea Hospital Chemical Dependency
Services:(313) 475-4100

Detroit Metropolitan Area

Eastwood Clinics:

Belleville:(313) 699-4212
Dearborn:(313) 561-2790
Detroit (Downtown):(313) 499-4314
Detroit (Gratiot & 6 Mi):(313) 521-0808
Detroit (Gratiot & 8 Mi):(313) 526-6000
East Detroit:(313) 445-2210
Fraser:(313) 792-5335
Harper Woods:(313) 526-2276
Huntington Woods:(313) 543-4680
Livonia:(313) 425-4070
Redford:(313) 537-1110
Trenton:(313) 676-8282
Troy:(313) 649-4480

Flint

Insight at Leemen Center(313) 733-0900

Howell/Livingston County

Livingston Council Alcohol &
Drug Services:(517) 546-7070

Jackson

Chelsea Hospital—Jackson Substance
Abuse Services:(517) 787-6577

Saline

Saline Hospital—Greenbrook Recovery
Center:(313) 429-1592

Tecumseh

Herrick Hospital Chemical Dependency
Program:(517) 423-2141

Toledo

Toledo Hospital Alcohol & Drug
Treatment Center:(419) 471-2300

COMMUNITY AND UNIVERSITY SANCTIONS:

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. Violation of these policies, rules, ordinances, and laws may result in misdemeanor and/or felony convictions with the imposition of legal sanctions which may include fines, probation and/or imprisonment.

Unlawful possession, use, or distribution of alcohol illicit drugs may also lead to a referral to the appropriate local, state,

and/or federal authorities for prosecution for a misdemeanor or a felony, depending on the nature of the offense.

Violation of University policies and rules may result in:

- Students: suspension or expulsion from the University and/or mandatory attendance at substance abuse intervention programs.
- Faculty and staff: disciplinary action up to and including termination of employment.

Violations of local, state, or federal laws may result in:

- Fines up to \$4 million.
- Imprisonment 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.
- Required attendance at substance abuse education or treatment program.

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 [313-487-0083] or Academic Affairs—Personnel [313-487-0076]), 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 DRUG ABUSE PREVENTION PROGRAM:

The University will review its Alcohol and Drug Abuse Prevention Program every 2 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.

FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT

In compliance with the Family Educational Rights and Privacy Act, Eastern Michigan University assures that any person who is or has been in attendance as a student at EMU has access to his/her educational records. Furthermore, such individual's rights to privacy are assured by limiting the transferability of records without the student's consent.

1. The following are matters of public record and may be included in publications or disclosed upon request without consent: the student's name, address, telephone listing, 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, degrees, and awards received, and the most recent previous educational agency or institution attended by the student.
2. Registration documents of student organizations that contain the names and addresses of the officers and the statement of purpose of the organization also are considered public information. These documents are available in the Campus Life Office, 221 Goodison Hall.

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 Registration Office within fourteen (14) days after each term begins.

UNIVERSITY CAMPUSES

Eastern Michigan University occupies 420 acres on the northwestern side of the city of Ypsilanti on high ground overlooking the Huron River valley.

The 217-acre main campus encompasses historic and new academic buildings, residence halls and physical education facilities including Bowen Field House and Olds Student Recreation Center. Nearby outdoor general recreational fields include the equivalent of four softball diamonds or two football fields—all under light for nighttime use—17 tennis courts, eight of which are lighted, and softball playing fields for women's sports.

The Clarence M. Loesell Field Laboratory, a 21-acre tract west of the main campus, was dedicated in 1958 in honor of the longtime head of the Natural Science Department (now the Biology Department). It provides an undeveloped, natural habitat for the study of wildlife, flora and fauna for teaching of natural sciences.

The west campus was created in 1965 and 1967 by the addition of 142 acres of land to allow expansion of the academic campus into the site of athletic areas. It includes a baseball stadium, football stadium, all-weather running track, six intramural fields, two practice football fields, apartment complexes and paved parking.

The Kresge Environmental Education Center at Fish Lake in Mayfield Township, Lapeer County, was created in 1965 as a resident field study center for experimentation and dissemination of environmental education programs. The 241-acre site is surrounded on three sides by 4,000 acres of the Lapeer State Game Area and has a wide variety of topography, a natural lake, a man-made impoundment and a bog for aquatic studies. Facilities include a 64-person dormitory, a dining commons that can feed 200, a remodeled one-room school-house, and four modular units that house the center office, provide staff housing and a lab-classroom.

UNIVERSITY BUILDINGS

University buildings continue to increase in number to serve the needs of educational growth and change. Remodeling of old buildings is continuous to update facilities and to accommodate departmental reorganization as well as growth. Almost all of EMU's major classroom, administration, and residence halls are named in honor of early administrators and dedicated faculty who laid the foundation for educational advancement or for donors who have assured the University's future.

Frederick M. Alexander Music Building, completed in 1980, houses the departments of Music and Foreign Languages and Bilingual Studies. It features three large rehearsal rooms (band, choir, and orchestra), a 150-seat recital hall, an organ teaching recital facility, and 64 individual practice rooms. Designer/architect Robert C. Wakely, Sr. employed the latest in acoustical and sound isolation techniques to provide for music instruction.

The Business and Finance Building, adjacent to Pease Auditorium, is utilized by the Division of Business and Finance to administer the business operations of the University.

Richard G. Boone Hall, built in 1914 as an administration building, now houses the College of Education offices and classrooms. It is named for the ninth president of the Normal College (1893-1899).

Wilbur P. Bowen Field House, completed in 1955 and named for the founder and long-time head of the Department of Physical Education, is the home of the Eagle basketball teams. It also has an eight-laps-to-the-mile track, locker facili-

ties, and a hard surfaced infield. Additions in recent years to both the south and north ends of the building have added to its ability to serve the needs of the University community.

Walter O. Briggs Hall was the first unit of the University's field house. The \$150,000 grant that provided the initial building was given by Briggs when he was owner of the Detroit Tigers baseball team.

The University Library, opened in 1967, has provided the University with more than five times the floor space and double the book capacity of the original Mark Jefferson Library (in what is now Ford Hall). The seating capacity is 1,800 and most library materials are on open shelves. The lower floors house the Media Services Center and the Instructional Support Center and include a computer laboratory for student use.

R. Clyde Ford Hall, created as the Mark Jefferson Library, bears the name of the modern literature professor who headed the library during his tenure from 1903-1940. It has been remodeled twice and since 1982 has provided office and classroom space and art galleries for the Art Department. The Department of Communication and Theatre Arts also holds most of its production classes in this building to utilize two television studios on a lower floor. The building was opened in 1929 and first remodeled in 1967.

Bertha M. Goodson Hall, dedicated in memory of the 1900-1937 Department of Art professor and head, houses the offices of Campus Life, Career Services, Continuing Education, Dean of Students, Faculty Council, Foreign Student Affairs, International Studies, Minority Affairs, Special Student Services, Student Government, student organizations, Student Media, Upward Bound, Veteran Services, and the Women's Commission.

J. M. Hover Laboratory, completed in 1941 and honoring the head of the Department of Natural Sciences and dean of admissions (1919-1940), holds the Department of Biology laboratories, a greenhouse and plant laboratory, plus the Biology Career Center.

Mark Jefferson Hall, new in 1970 and named for the internationally-known professor of geography (1896-1928), has completely equipped modern laboratories for the departments of Chemistry, Biology and Psychology, as well as classrooms and offices for teaching personnel.

Julia Anne King Hall, is the base of operations for the College of Health and Human Services, which uses a limited number of classrooms in this building as well as classrooms in Roosevelt Hall. It houses the offices of the dean of the College of Health and Human Services and the departments and programs of Nursing Education, Occupational Therapy, Social Work, Health Administration, Clinical Laboratory Sciences, and Gerontology. Other offices are those of the Institute for the Study of Children and Families, the National Center of Teaching and Learning, the director of Affirmative Action and the administrative offices of Human Resources. University Radio Station WEMU also is in this building.

Charles McKenny Hall, also named for a past president of EMU, is the student union and social center of the University. Completely remodeled in 1964-65, it is double its original size and now includes cafeteria and dining services, a snack bar, the Eastern Michigan University Bookstore, a bowling alley, a billiard room, offices for student organizations, lounges, meeting rooms, and a large ballroom. McKenny is currently undergoing renovations, which should be completed by Fall 1992.

The Lloyd W. Olds Student Recreation Center was dedicated in the fall of 1982. The \$18.2 million facility was named for the former faculty member and HPERD department head who founded the intramural program on campus in 1921.

It is funded by student fees and provides recreation and intramural facilities for the entire campus community. Its most distinctive feature is the 50-meter swimming pool which is one of the largest indoor pools in Michigan and has 7-, 8- and 10-meter diving platforms.

The Paint Research Laboratory, completed in 1987, is utilized by the Paint Research Association for scientific paint research activity.

The Parking Structure, west of Bowen Field House, will accommodate 800 cars and houses the University Public Safety Department offices. It has direct access to Washtenaw via Oakwood Avenue, is adjacent to Pittman and Ford roads, which bisect the campus, and is accessible from North Huron River Drive via West Tower Drive and Oakwood Avenue. Numerous parking lots for students and faculty surround the campus.

Frederick H. Pease Auditorium, completed in 1914 and named for the long-time head of the Conservatory of Music, is the center for many University and civic activities as well as music events. In the auditorium is the \$100,000 Frederick Alexander Memorial Organ. Pease is currently closed, awaiting state funding for renovations.

John D. Pierce Hall, which in 1948 replaced the original building on campus, honors the first superintendent of public instruction in the state of Michigan. It houses Admissions and Financial Aid, the Office of the Registrar, Equity Programs, Cashier's Office, and Student Accounting.

Pray-Harrold Hall provides classrooms and offices for the departments of English Language and Literature, History and Philosophy, Mathematics, Computer Science, Sociology, Economics, Political Science, and Women's Studies in the College of Arts and Sciences. The Administrative Computer Center is located on the first floor. Pray-Harrold recognizes the services of Carl E. Pray, head of the History Department from 1913-1927, and Charles F. Harrold, professor of English literature from 1925-1943.

Daniel L. Quirk Jr. Dramatic Arts Building, original funds for which were made available by the Quirk family of Ypsilanti, opened in 1959. The building provided an instructional theatre seating 381, a flexible laboratory theatre, scene and costume shops, radio facilities, an outdoor amphitheater, classrooms and offices for drama, speech and radio activities. In 1966, a classroom-office wing was added to accommodate increased needs in all areas, especially TV broadcasting and film. In 1983, the Department of Communication and Theatre Arts and the University launched a major capital fund raising campaign to enclose the 200-seat outdoor amphitheater and expand the capabilities of technical studios, costume and scene shops. Construction of these additions was complete in the summer of 1985. The **Sponberg Theatre**, named for former EMU President Harold Sponberg, was added a few years later.

The Horace H. Rackham School of Special Education, constructed in 1938 as one of many educational projects of the Detroit lawyer and philanthropist, became the first building of its kind in the state dedicated to the needs of special children. It houses a school for impaired children, the Department of Special Education, a speech and hearing clinic, a diagnostic prescriptive clinic for learning-disabled children and their families, and facilities for physical therapy.

Roosevelt Hall, built on campus in 1925 as a laboratory school for training student teachers and providing private education for children of area residents, has been remodeled to house the departments of Human, Environmental and Consumer Resources, Military Science and Health Administration. It was named for President Teddy Roosevelt.

The Sculpture Studio, located on the west campus, is utilized by the Art Department.

William H. Sherzer Hall, erected in 1903 and named for the professor of geology and head of the Department of Natural Sciences (1892-1932), now provides offices and classrooms for the Art Department and contains the University's observatory.

J. M. B. Sill Hall houses classrooms and offices of the College of Technology, founded in 1980. Its large lecture halls are available to other departments. The Art Department retains offices and facilities for its ceramics, jewelry, and multi-media courses on the lower floor.

Glenadine C. Snow Health Center, named for the first medical director of health services (1915-1947) who created the plans for the building, opened in 1959, includes a pharmacy, medical laboratory, X-ray department, physicians' clinical offices, nurses' consulting rooms, examination and treatment areas, mental health counselors' offices, and the Employee Assistance Program. The Children's Center is on the lower level.

Mary Ann Starkweather Hall, erected in 1897 and designated as a student Christian center by the Ypsilanti donor, was remodeled and modernized in 1961. It currently houses the Graduate School.

The Edwin A. Strong Physical Science Building, opened in 1957, houses the departments of Physics and Astronomy and Geography and Geology, providing both laboratory and large lecture halls. Strong was head of the Physical Science Department between 1885-1919.

The Joseph E. Warner Physical Education Building, completed in 1964, is immediately adjacent to Bowen Field House and connected to the Olds Student Recreation Center. It houses offices of the Department of Health, Physical Education, Recreation and Dance, classrooms, gymnasiums, special purpose rooms, and a swimming pool designated for intramural use. Warner, for whom the building is named, was state representative for Washtenaw County, 2nd District.

Adonijah S. Welch Hall, erected in 1896 and the oldest standing building on campus, is named for the first head of the University. It was originally a training school for teachers and a public school and until 1982 housed University business offices. This facility now houses the main administrative offices of the University, Alumni Relations, University Development, Public Information, and State/Federal/Community Relations.

The Corporate Education Center opened in May 1989. It and the nearby Huron Golf Club are owned and operated by EMU. The adjoining Radisson on the Lake Hotel is privately owned. The Corporate Education Center has 38,000 square feet of conference and seminar meeting space, is designed to serve multiple needs, and has the most advanced communications and audio-visual equipment available. The development includes a 133-acre, eighteen-hole championship golf course.

The Gary M. Owen Building, located on Michigan Avenue in downtown Ypsilanti, houses the College of Business and provides classrooms and offices for the departments of Accounting, Finance, Management, Marketing, and Operations Research and Information Systems. The building also contains a library, computer laboratories, and facilities for other programs operated by the College of Business. The building is named for Gary M. Owen, who was Speaker of the Michigan House of Representatives at the time of the building's construction.

Athletic Fields

Two major athletic facilities, in addition to main campus physical education buildings, attract students to the west campus for football and baseball events. Both stadiums also are sites of community, state, and national events such as annual

drum corps competitions, Special Olympics, and state high school baseball playoffs.

Rynearson Stadium, named for Elton J. Rynearson, Sr., who coached football for 26 years, is the football stadium. Rynearson is undergoing renovations that will increase the stadium's seating capacity to 30,000. Included are complete press box and locker room facilities.

The Ronald E. Oestrike Stadium, which in 1968 replaced Briggs Field (now the parking lot adjacent to McKenny Union), has a covered grandstand seating 2,500. It is among the finest baseball facilities in intercollegiate competition.

ADMINISTRATIVE OFFICERS

OFFICERS OF THE UNIVERSITY

President William E. Shelton
Executive Associate to the President and
Secretary to the Board of Regents Juanita Reid
Executive Vice President Roy Wilbanks
Provost and Vice President for
Academic Affairs Ronald W. Collins
Vice President for Business and Finance
and Treasurer to the Board (Interim) Patrick Doyle
Vice President for University Marketing
and Student Affairs Laurence N. Smith

ACADEMIC AFFAIRS DIVISION

Academic Administration:
Associate Provost Judith A. Johnson
Associate Vice President, Program
Development and Review Donald H. Bennion
Administrative Associate to the Provost Mary C. Lilley
Academic Budget Analyst Michael L. Chirio Jr.

College of Arts and Sciences:

Dean Barry Fish
Associate Dean Barbara Richardson
Acting Associate Dean James Waltz
Administrative Associate II Velma G. Clarke

Departments:

African American Studies, Head Ronald C. Woods
Art, Head John E. Van Haren
Biology, Head Douglas Y. Shapiro
Chemistry, Head Judith T. Levy
Communication and Theatre Arts, Head Dennis M. Beagen
Computer Science, Head George E. Haynam
Economics, Head Young-Iob Chung
English Language and Literature, Head Marcia A. Dalbey
Foreign Languages and Bilingual
Studies, Head Stephen Kirby
Bilingual Bicultural Program,
Director Phyllis A. Clemens Noda

Geography and Geology,

Head (Acting) Andrew A. Nazzaro
History and Philosophy, Head Margot M. Duley
Mathematics, Head Don R. Lick
Music, Head James B. Hause
Physics and Astronomy, Head Dan Trochet
Political Science, Head Joanna V. Scott
Psychology, Head Kenneth Rusiniak
Sociology, Head Gregg Barak

College of Business:

Dean Stewart L. Tubbs
Associate Dean (Interim) Curt Vail

Departments:

Accounting, Head Mohsen Sharifi
Finance and Computer Information
Systems, Head Asrat Tessema
Management, Head Ray Hill
Marketing, Head H. Robert Dodge

College of Education:

Dean Jerry H. Robbins
Associate Dean (Interim) Donna M. Schmidt
Director of Student Teaching Robbie A. Johnson

Departments:

Health, Physical Education, Recreation
and Dance, Head Patric L. Cavanaugh

Leadership and Counseling, Head Martha Tack
Special Education, Head Kathleen S. Quinn
Teacher Education, Head James Riley
Center for Community Education,
Director William Hetrick

College of Health and Human Services:

Dean Elizabeth C. King

Departments:

Associated Health Professions, Head Stephen A. Sonstein
Health Administration Richard L. Douglass
Clinical Laboratory Sciences, Director Jeanne M. Clerc
Occupational Therapy, Director Yvonne Teske
Human, Environmental and Consumer
Resources, Head Elizabeth J. Rhodes
Nursing Education, Head Regina Williams
Social Work, Head Donald M. Loppnow

COLLEGE OF TECHNOLOGY:

Dean (Interim) Robert A. Ristau

Departments:

Business and Industrial Education,
Head (Interim) Ann M. Remp
Industrial Technology, Head Everett N. Israel
Interdisciplinary Technology, Head Paul D. Kuwik
Military Science, Head David R. Klubeck

Academic Advising Center:

Associate Director Patricia Williams
Coordinators Barbara Durant, Joan Schiller, Mary Krieger

University Honors Program:

Director Robert Holkeboer
Assistant Director Karen Walker
Coordinator, Talented and Gifted Programs Lynn Proegler

Office of the Registrar:

Registrar Ann Kettles
Associate Registrar Paul L. Zabawa

Continuing Education:

Dean Paul T. McKelvey
Associate Dean Arthur N. McCafferty
Director, Academic Programs Abroad George J. Klein
Director, Independent Study Michael McPhillips
Director, Upward Bound Hildred J. Lewis
Associate Director Laura Foster
Coordinator, Weekend University Arthur Hoover

Graduate School:

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Associate Dean (Temporary) Jeanne Clerc
Associate Dean (Temporary) Jean Folkert
Assistant Dean (Interim) Thomas Bushey

Learning Resources and Technologies:

Dean Morell D. Boone
Associate Dean, Learning
Technologies Jennie Meyer Howard
Learning Resources, Head Sandra G. Yee

Office of Research Development:

Director David L. Clifford

EXECUTIVE DIVISION

Associate Executive Vice President Russell Wright
Assistant Executive Vice President Kathleen Tinney

Human Resources:

Executive Director Ted Heidloff
 Director, Employment and Affirmative
 Action Tamara Fackler
 Director, Compensation and Benefit
 Programs Craig Reidsma
 Benefit Programs Director Jeanette Hassan
 Director, Employee Relations Kevin Smart
 University Attorney Kenneth McKanders

University Computing:

Executive Director S. Alan McCord

University Planning, Budgeting and Analysis:

Executive Director George A. Johnston
 Director of Budget Management Alvin S. Levett
 Director of Institutional Analysis and
 Reporting Paul N. Moniodis
 Coordinator of Management Information
 Systems John Senko

University Development:

Associate Director (Acting) Beverly Farley
 Assistant Director (Acting) Sue McKenzie
 Development Officers Bruce Patterson
 Steve Ragan
 Mary Ann Staff

Alumni/Development Records and
 Research, Coordinator Linda Radke

Alumni Relations:

Director George Beaudette

Center for Entrepreneurship:

Director Patricia Weber

Corporate Education Center:

Director Marcia D. Harrison-Harris

Huron Golf Club:

Director Thomas Pendlebury

Intercollegiate Athletics:

Director Eugene Smith
 Associate Director Carole Huston
 Assistant Director-Business Bruce Zylstra
 Sports Information Director James L. Streeter

Internal Audit:

Director Peter Witker

Public Information and Publications:

Director, Public Information Susan Bairley
 Director, University Publications Debbie Kern

State, Federal and Community Relations:

Director Doris A. Komblevitz

WEMU Radio:

Director Arthur J. Timko
 News and Public Affairs Manager Clark Smith
 Marketing and Development Manager Mary Motherwell
 Music Program Manager Linda Yohn

BUSINESS AND FINANCE DIVISION

Controller Susan Merrick
 Assistant Controller John Beaghan
 Assistant Controller Dan Cooper
 Director, Physical Plant William Smart
 Principal Plant Engineer Glen Bolling
 Project Manager Daniel Klenczar
 Manager, Facilities Maintenance Ray Sowers
 Director, Public Safety John C. Garland
 Associate Director, Public Safety Cindy Hall
 Director, Risk Management, Procurement
 and Stores Mary C. Brooks
 Director, Purchasing Gary Reffitt
 Service Operations Manager Albert A. Robinson
 Resident Director, Kresge Environmental
 Education Center, Lapeer, Mich. Ben Czinski

UNIVERSITY MARKETING AND AFFAIRS DIVISION

Associate Vice President Courtney O. McAnuff
 Assistant Vice President Jim Vick

Admissions and Financial Aid:**Admissions:**

Director Dolan Evanovich
 Assistant Director, Internal Operations Patricia Molloy
 Assistant Director, Outreach Operations Alberto Perales

Equity Programs:

Director Lynette Findley
 Coordinator Patrick Pieh

Financial Aid:

Director Judy B. Tatum
 Associate Director Bernice Lindke
 Assistant Director, Operations Elaine Kinloch

Campus Life:

Director Glenna Frank Miller
 Program Coordinators William Barnett, Shelley Wilson

Career Services Center:

Director J. Michael Erwin
 Associate Director (Interim) Karen Simpkins
 Career Planning Manager Joanne Burns
 Career Development Associates Gloria August
 Jocelyn Clark
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Corporate Relations Manager Barbara Jones
 Employee Relations Associate Kenneth L. Meyer
 Assistant Manager of Operations James Locke

Dean of Students:

Dean Bette C. White
 Associate Dean Gregory A. Peoples
 Director, Foreign Student Affairs Paul Dean Webb
 Veterans Affairs Officer Robert Teehan

Health Services:

Director Ellen Gold
 Associate Director Linda Vengroff

Health Care:

Clinical Administrator Diane Sobell
 Staff Physicians James M. Reaume
 Brian Stanley

Counseling:

Associate Director Rosalyn Barclay

University Children's Institute:

Director Lindy Buch

Coordinator of Services Lorraine Paffenroth
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Housing, Dining, Union, Conferences:

Housing:

Director Rebecca J. Figura
Assistant Director, Facilities Neal Belitsky
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Dining Services:

Director Michael Crabb
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McKenny Union:

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Assistant Manager, Operations Jeff Dunbar
Assistant Manager, Sales/Scheduling P.J. Moffett

Auxiliary Enterprises:

Director Sandra Williams

Recreation/Intramurals:

Director Robert England
Associate Director Michael O'Connor
Assistant Directors Lou Gianina
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Student Media:

Director Christine Colcer

University Marketing:

Director Cynthia Lawson
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- Witten, Charles X.** (1969), Professor, Health, Physical Education, Recreation, and Dance. Ph.D., Ohio State University
- Witten, Winifred** (1979), Professor, Health, Physical Education, Recreation, and Dance. M.S., Eastern Michigan University
- Wolke, David O.** (1990), Assistant Professor, Music. Ph.D., Ohio State University
- Wojcik-Andrews, Ian** (1990), Assistant Professor, English Language and Literature. Ph.D., University of Connecticut, Storrs
- Woodland, Bill M.** (1981), Associate Professor, Economics. Ph.D., Purdue University

- Woodland, Linda M.** (1982), Associate Professor, Department of Accounting.
Ph.D., University of Michigan
- Woods, Ronald C** (1978), Department Head, Professor, African American Studies.
J.D., University of Michigan
- Wooley, Jon K.** (1967), Professor, Physics and Astronomy.
Ph.D., University of Michigan
- Work, Stewart D.** (1964), Professor, Chemistry.
Ph.D., Duke University
- Wright, Eleanor S.** (1979), Associate Professor, English Language and Literature.
M.S., Northwestern University
- Wu, Nesa L.J.** (1974), Professor, Finance and Computer Information Systems.
Ph.D., Purdue University
- Wylo, Bonnie L.** (1988), Assistant Professor, Physics and Astronomy.
M.S., Eastern Michigan University

Y

- Yager, Jay R.** (1968), Professor, Art.
M.F.A., University of Wisconsin
- Yahrmatter, Arthur J.** (1968), Associate Professor, Communication and Theatre Arts.
Ph.D., Southern Illinois University
- Yamauchi, Masanobu** (1965), Professor, Chemistry.
Ph.D., University of Michigan
- Yeakle, Myrna A.** (1965), Professor, Health, Physical Education, Recreation, and Dance.
Ph.D., Ohio State University
- Yee, Sandra G.** (1982), Library Department Head, Professor, Learning Resources and Technologies.
Ed.D., University of Michigan
- Yorke, Mary F.** (1982), Assistant Professor, Mathematics.
M.S., Kansas State University
- Yost, Mary Ida** (1968), Professor, Music.
A.Mus.D., University of Michigan
- Young, Kenneth C.** (1974), Associate Professor, Department of Accounting.
Ph.D., Purdue University
- Youssef, Zakhour I.** (1965), Professor, Psychology.
Ph.D., Wayne State University
- Yu, Shih-An** (1967), Professor, Biology.
Ph.D., University of New Hampshire

Z

- Zabawa, Paul L.** (1966), Associate Registrar, Academic Records and Certification.
Sp.A., Eastern Michigan University
- Zahratka, Michael C.** (1966), Professor, Art.
M.F.A., Syracuse University
- Zelger, Michael** (1979), Assistant Professor, Computer Science.
Ph.D., University of Michigan
- Ziefert, Marjorie** (1981), Professor, Social Work.
M.S.W., Columbia University
- Zimmer, Patricia M.** (1980), Associate Professor, Communication and Theatre Arts.
M.F.A., Florida State University
- Zirk, Willard D.** (1981), Associate Professor, Music.
M.M., Catholic University of America
- Zylstra, Bruce** (1982), Assistant Director, Athletics.
M.A., Western Michigan University

EMERITUS FACULTY

A

- Albritton, Thelma, B.A., M.A., M.Ed.** (1961-84) Associate Professor Emeritus, Special Education
- Anderson, Charles T., A.B., Ph.D.** (1955-86) Professor Emeritus, Chemistry
- Anderson, Frederick, B.A., M.A., Ph.D.** (1970-88) Professor Emeritus, History and Philosophy
- Anderson, Norma Jean I., A.M., B.S., B.C.S.** (1948-79) Associate Professor Emeritus, Administrative Services and Business Education
- Anderson, Robert L., B.A., M.A., Ph.D.** (1957-85) Professor Emeritus, Psychology
- Angelocci, Angelo, A. B.A., M.A., Ph.D.** (1965-87) Professor Emeritus, Special Education.
- Ashton, Charles R., A.B., M.B.A.** (1964-80) Associate Professor Emeritus, Marketing

B

- Baird, Ronald J., B.S., M.Ed., Ed.D.** (1966-93) Professor Emeritus, Industrial Technology
- Barnes, James M., B.S., M.S., Ph.D.** (1958-88) Professor Emeritus, Physics and Astronomy
- Belcher, Robert O., B.A., M.S., Ph.D.** (1946-80) Professor Emeritus, Biology
- Bell, Margaret E., B.S., M.S.** (1968-85) Assistant Professor Emeritus, Health, Physical Education, Recreation and Dance
- Bell, Mary I., B.S., M.A.** (1949-83) Associate Professor Emeritus, Health, Physical Education, Recreation and Dance
- Bensen, Alice R., A.B., M.A., Ph.D.** (1947-76) Professor Emeritus, English Language and Literature
- Berry, Leona P., A.B., M.S., M.A.L.S.** (1957-81) Associate Professor Emeritus, Learning Resources and Technologies
- Bidwell, Jean S., A.B., M.A., Ph.D.** (1962-89) Professor Emeritus, Foreign Languages and Bilingual Studies
- Blisky, Manuel, B.A., M.A., Ph.D.** (1960-80) Professor Emeritus, History and Philosophy
- Birleson, Clifford, B.A., M.A.** (1951-80) Associate Professor Emeritus, Curriculum and Instruction
- Bishop, Nadean, B.A., M.A., Ph.D.** (1966-92) Professor Emeritus, English Language and Literature
- Borusch, Barbara, B.S., A.M., Ph.D.** (1950-79) Professor Emeritus, Curriculum and Instruction
- Boyd, Janet Scott, B.S., M.A., Ph.D.** (1976-88) Professor Emeritus, Department Head, Nursing Education
- Breedlove, Charles B., B.S., M.S., Ed.D.** (1964-77) Professor Emeritus, Physics and Astronomy
- Brower, George, B.S., M.A., Ph.D.** (1954-83) Professor Emeritus, Educational Leadership
- Brown, Donald F., B.A., M.S., Ph.D.** (1956-83) Professor Emeritus, Biology
- Brown, Leland, A.B., M.A., Ph.D.** (1964-83) Professor Emeritus, Management
- Brownrigg, William J., B.S., A.M.** (1932-64) Director Emeritus, Academic Advising
- Bryan, William C., B.S., M.B.A.** (1954-74) Associate Professor Emeritus, Business and Finance
- Brylowski, Walter M., B.A., M.A., Ph.D.** (1955-89) Professor Emeritus, English Language and Literature

C

- Cabrera, Haydee M., B.S., M.P.H., A.M.L.S.** (1966-88) Assistant Professor Emeritus, Learning Resources and Technologies
- Calkins, Kingsley, B.S., M.A.** (1950-79) Professor Emeritus, Department Head, Art
- Canter, Francis M., B.A., Ph.D., M.P.H.** (1967-88) Professor Emeritus, Psychology

- Caputo, George E.**, B.S., M.Ed. (1965-85) Assistant Professor Emeritus, Special Education
- Carter, F. Giles**, Ph.D. (1967-91) Professor Emeritus, Chemistry
- Caswell, Herbert H., Jr.**, S.B., M.A., Ph.D. (1985-88) Professor Emeritus, Biology
- Collins, W. Oscar**, B.S., M.Ed., Ed.D. (1957-79) Professor Emeritus, Accounting and Finance
- Carter, F. Giles**, B.S., Ph.D. (1967-91) Professor Emeritus, Chemistry
- Compere, Edward L., Jr.**, B.S., M.S., Ph.D. (1964-92) Professor Emeritus, Chemistry
- Cooper, Virginia A.**, B.A., M.A. (1946-75) Associate Professor Emeritus, English Language and Literature

D

- Daly, Francis**, B.S., M.A., Ed.D. (1964-87) Professor Emeritus, Leadership and Counseling
- Dart, Jane M.**, B.F.A., M.A. (1942-78) Associate Professor Emeritus, Art
- Dellas, Marie**, Ph.D. (1969-91) Professor Emeritus, Teacher Education
- Disbrow, Donald W.**, A.B., Ph.D. (1956-79) Professor Emeritus, History and Philosophy
- Doll, Nelly E.**, B.A., M.S., A.M.L.S. (1970-89) Assistant Professor Emeritus, Learning Resources and Technologies
- Dornbos, Sanford J.**, A.B., M.A. (1963-86) Assistant Professor Emeritus, Health, Physical Education, Recreation and Dance
- Drake, Raymond**, B.S., M.B.A. (1965-82) Associate Professor Emeritus, Marketing
- Duncan, Charles H.**, Ed.D., Ph.D. (1965-84) Professor Emeritus, Business and Industrial Education
- Duvall, Elven E.**, B.A., M.A., Ed.D. (1968-79) Professor Emeritus, Educational Leadership

E

- Early, Madeline**, B.A., M.A., Ph.D. (1956-75) Professor Emeritus, Mathematics
- Einstadter, Werner J.**, A.B., M.Crim., D.Crim. (1967-92) Professor Emeritus, Sociology, Anthropology, and Criminology
- Erickson, Walfred E.**, B.Ed., B.S., M.A., Ph.D. (1952-70) Professor Emeritus, Head, Library

F

- Fauman, S. Joseph**, B.A., M.A., Ph.D. (1958-86) Professor Emeritus, Sociology
- Fenwick, Ruth G.**, B.S.M., M.A. (1952-74) Associate Professor Emeritus, Music
- Fenz, Emanuel**, B.A., M.A., Ph.D. (1969-91) Professor Emeritus, History and Philosophy
- Fielder, Anita L.**, B.Ed., M.S. Special Education (1955-80) Professor Emeritus, Home Economics
- Fisher, Robert J.**, A.B., M.A., Ed.D. (1955-89) Professor Emeritus, Teacher Education
- Fitch, William D.**, B.S., M.S., Ph.D. (1944-76) Professor Emeritus, Music
- Foster, Milton P.**, A.B., M.A., Ph.D. (1947-86) Professor Emeritus, English Language and Literature
- Found, Elaine R.**, Ph.D. (1971-89) Associate Professor Emeritus, Human, Environmental, and Consumer Resources
- French, Sophie L.**, A.B., M.A. (1948-76) Assistant Professor Emeritus, Special Education
- Fulton, C. Wayne**, B.A., M.A., Ph.D. (1956-88) Professor Emeritus, Special Education

G

- Galetti, Jeannine M.**, B.S., M.A. (1952-85) Associate Professor Emeritus, Health, Physical Education, Recreation and Dance
- Garfield, Juanita**, A.B., M.A., Ed.D. (1968-85) Professor Emeritus, Teacher Education
- Gaston, Hugh P.**, A.B., M.S. (1963-81) Assistant Professor Emeritus, Guidance and Counseling
- Gesler, Ralph A.**, B.S., M.A. (1952-74) Associate Director Emeritus, Field Services
- Gessert, Walter L.**, B.S., M.S., Ph.D. (1961-86) Professor Emeritus, Physics and Astronomy
- Gex, R. Stanley**, B.S., M.A., Ed.D. (1954-77) Dean Emeritus, College of Education; Professor Emeritus, Teacher Education
- Gibbons, James R.**, B.S., M.S., Ph.D. (1967-88) Associate Professor Emeritus, Economics
- Gilden, Ralph F.**, B.S., M.A. (1942-82) Dean Emeritus, Student Activities and Admissions; Associate Professor Emeritus, Industrial Education
- Giles, Richard A.**, B.S., M.S., Ph.D. (1947-74) Professor Emeritus, Department Head, Biology
- Glasgow, James H.**, B.Ed., M.A., Ph.D. (1939-70) Dean Emeritus, Graduate School; Professor Emeritus, Department Head, Geography and Geology
- Godfrey, Elaine**, B.S., M.A. (1962-83) Associate Professor Emeritus, Art
- Golings, Edmond W.**, A.B., M.S. (1946-76) Professor Emeritus, Mathematics, Instructional Computer Service
- Goldsmith, William E.**, B.A., M.A., Ed.D. (1962-83) Assistant Professor Emeritus, Teacher Education
- Gray, Ruth A.**, A.B.E.P., M.L.S. (1966-84) Assistant Professor Emeritus, Learning Resources and Technologies
- Green, Edward**, A.B., A.M., Ph.D. (1963-86) Professor Emeritus, Sociology
- Green, Mary A.**, B.A., M.A., Ph.D. (1961-92) Associate Dean Emeritus, College of Education; Professor Emeritus, Health, Physical Education, Recreation and Dance
- Grindstead, L. Kenneth**, Ph.D., (1964-91) Professor Emeritus, Leadership and Counseling

H

- Haddan, Eugene E.**, B.S., M.A., Ed.D. (1965-88) Professor Emeritus, Teacher Education
- Hansen, B. Joy**, (1971-91) Assistant Professor Emeritus, Human, Environmental and Consumer Resources
- Haun, Frederic Eugene**, B.A., M.A., Ph.D. (1966-88) Professor Emeritus, English Language and Literature
- Hebert, Catherine**, A.B., M.A., Ph.D. (1947-83) Professor Emeritus, English Language and Literature
- Hefley, J. Theodore**, B.S., M.A., Ph.D. (1956-88) Professor Emeritus, History and Philosophy
- Hester, Kathleen B.**, B.S., M.A., Ph.D., Litt.D. (Hon) (1945-70) Professor Emeritus, Education
- Hill, Helen**, B.A., M.A. (1963-83) Professor Emeritus, English Language and Literature
- Hislop, Robert I.**, L.L.B., L.L.M., Ph.D. (1970-81) Professor Emeritus, Marketing and Law
- Hoitash, F. Charles**, Ph.D., (1971-91) Professor Emeritus, Management
- Howe, George M.**, B.S., M.A., Ph.D. (1968-87) Professor Emeritus, Geography and Geology
- Howe, Marvin C.**, B.M., B.Sch.Mus., M.S., M.F.A., Ph.D. (1966-80) Professor Emeritus, Music
- Hubbell, Paul E.**, A.B., A.M., Ph.D. (1923-58) Professor Emeritus, History

I

- Ikehara, Hide**, B.A., A.M.L.S., A.M., Ph.D. (1963-84) Associate Professor Emeritus, Learning Resources and Technologies
- Irwin, E. Martha**, Ed.D. (1964-91) Professor Emeritus, Teacher Education

J

- Jackson, Donald**, B.A., M.A., Ph.D. (1967-89) Professor Emeritus, Psychology
- Jacobson, Elaine R.**, B.M., M.M. (1968-89) Professor Emeritus, Music
- Johnson, Fred T.**, A.B., Ph.D. (1967-84) Professor Emeritus, Physics and Astronomy
- Jones, Edgar L., Jr.**, B.S., M.A. (1957-92) Assistant Professor Emeritus, English Language and Literature
- Jones, Hebert**, B.S., M.A., Ed.D. (1964-86) Associate Professor Emeritus, Teacher Education
- Jones, Vernon H.**, B.Ed., M.A. (1952-78) Associate Professor Emeritus, Pre-Student Teaching
- Jordan, Hoover H.**, B.A., M.A., Ph.D., Ed.D. (Hon) (1939-76) Professor Emeritus, English Language and Literature

K

- Kallenbach, Jessamine**, B.A., M.A., M.A.L.S. (1962-83) Professor Emeritus, Learning Resources and Technologies
- Killanski, Doris M.**, B.A., M.A., Sp.A., Ph.D. (1970-82) Associate Professor Emeritus, Educational Leadership
- Kloosterman, Winton A.**, B.A., M.A., Ed.D. (1962-83) Professor Emeritus, Educational Leadership
- Kornbluth, Martin L.**, A.B., A.M., Ph.D. (1966-92) Professor Emeritus, English Language and Literature
- Koste, Virginia**, B.A., M.A. (1962-86) Professor Emeritus, Communication and Theatre Arts
- Kraushaar, Donald**, B.S., M.B.A., M.D., M.S. (1982-87) Assistant Professor Emeritus, Associated Health Professions
- Krebs, Robert**, B.S., M.A., Ed.D. (1968-86) Professor Emeritus, Teacher Education
- Kureth, Elwood J.C.**, B.A., A.M., Ph.D. (1968-87) Professor Emeritus and Department Head, Geography and Geology

L

- LaBounty, Raymond A.**, B.S., M.A., Ed.S. (1945-81) Professor Emeritus, Industrial Education; Vice President Emeritus, Administration
- Lamkin, Ervin G.**, B.S., M.S. (1946-69) Associate Professor Emeritus, Chemistry
- Laney, Maurice L.**, B.A., M.M., Ph.D. (1968-90), Professor Emeritus, Music
- Lansing, Marjorie J.**, B.A., M.A., Ph.D. (1968-86) Professor Emeritus, Political Science
- Larsen, Delmar**, B.A., M.A. (1964-84) Professor Emeritus, Business and Industrial Education
- Linn, George**, B.A., M.A., Ph.D. (1955-86) Director Emeritus, Academic Records and Certification
- Lowe, B. Emily**, B.A. (1961-91) Professor Emeritus, Music

M

- MacDonald, Allster**, B.A., M.A. (1948-78) Associate Professor Emeritus, Curriculum and Instruction
- MacDonald, Mary Lee**, A.B., M.A., Ph.D. (1965-88) Assistant Professor Emeritus, English Language and Literature
- Madgett, Naomi Long**, B.A., M.A. (1968-83) Professor Emeritus, English Language and Literature
- Magoon, Donald W.**, B.S., M.E., M.S., M.B.A. (1965-80) Associate Professor Emeritus, Management
- Marshall, Albert P.**, A.B., B.L.S., M.A. (1969-80) Professor Emeritus, Learning Resources and Technologies
- Marshall, Everett L.**, B.Ed., M.A., Ph.D., L.H.D. (Hon) (1938-79) Professor Emeritus, Education; Dean Emeritus, Academic Records and Certification
- Maxfield, Grace K.**, A.B., B.S.L.S. (1958-78) Associate Professor Emeritus, Learning Resources and Technologies
- May, George S.**, A.B., A.M., Ph.D. (1966-86) Professor Emeritus, History and Philosophy
- McCalla, Helen** (1922-71) Controller Emeritus

- McDaniel, Thelma**, B.F.A., M.A. (1964-86) Professor Emeritus, Communication and Theatre Arts
- McElya, Mitchell R.**, B.S., M.F.A. (1967-92) Professor Emeritus, Communication and Theatre Arts
- McGee, Charles** (1969-87) Associate Professor Emeritus, Art
- McHugh, Frank**, A.B., M.A. (1958-85) Professor Emeritus, English Language and Literature
- McWilliams, Robert O.**, A.B., M.P.A., Ph.D. (1956-86) Professor Emeritus, Political Science
- Menzi, Elizabeth A.**, B.A., M.A., Ph.D. (1964-86) Professor Emeritus, Health, Physical Education, Recreation and Dance
- Mlnzey; D. Jack**, Ed.D., (1968-91) Director Emeritus, Center for Community Education, Professor Emeritus, Leadership and Counseling
- Moffett, Valerie T.**, B.S., M.A. (1961-88) Associate Professor Emeritus, Health, Physical Education, Recreation and Dance
- Monahan, Thomas**, B.A., M.A., Ed.D. (1953-83) Professor Emeritus, Teacher Education
- Moore, Noel S.**, B.A., M.A., Ed.D. (1965-84) Associate Professor Emeritus, Teacher Education
- Morgan, Willie B.**, B.A., M.A. (1967-92) Professor Emeritus, Communication and Theatre Arts
- Muller, Brigitte D.**, B.A., M.A., Ph.D. (1965-89) Professor Emeritus, Foreign Languages and Bilingual Studies
- Myers, Allen**, B.M., M.M., M.A., Ph.D. (1958-77) Dean Emeritus, College of Education; Professor Emeritus, Special Education

N

- Nau, Paul A.**, B.S., M.Ed., Ph.D. (1967-90) Professor Emeritus, Leadership and Counseling
- Nelson, Alfred**, A.B., A.M., Ph.D. (1965-84) Professor Emeritus, English Language and Literature
- Nelson, Bruce K.**, B.A., M.A., Ph.D. (1956-81) Professor Emeritus, Educational Leadership; Vice President Emeritus, Instruction
- Nelson, Herbert L.**, B.S., M.A. (1965-80) Assistant Professor Emeritus, Industrial Education and Technology
- Niesen, Norman**, B.S., M.A., Ed.D. (1977-87) Professor Emeritus and Department Head, Leadership and Counseling

O

- Ogden, Lawrence**, B.S., M.S., D.Sc. (1963-89) Professor Emeritus, Geography and Geology
- Oltmanns, Richard G.**, B.S., M.A., M.S. (1956-86) Associate Professor Emeritus, Learning Resources and Technologies
- Osadchuk, Mitchell M.**, B.A., M.M. (1956-80) Associate Professor Emeritus, Music
- Osborn, Carroll A.**, B.A., B.S., M.A. (1955-81) Professor Emeritus, Industrial Education

P

- PaDelford, Harold E.**, Ph.D. (1970-91) Professor Emeritus, Business and Industrial Education
- Parris, Arthur**, B.S., M.A., Ph.D. (1970-88) Professor Emeritus, Music
- Parsons, Karl A.**, A.B., M.S. (1950-77) Professor Emeritus, Physics and Astronomy
- Perkins, Agnes A.**, B.A., M.A. (1965-86) Professor Emeritus, English Language and Literature
- Peterson, Ralph G.**, B.S., M.A. (1946-74) Associate Professor Emeritus, Curriculum and Instruction
- Pillsbury, Paul W.**, A.B., M.A., M.A., Ph.D. (1961-87) Professor Emeritus, English Language and Literature
- Porretta, Louls**, B.A., M.Ed., Ed.D. (1959-83) Professor Emeritus, Teacher Education
- Pyle, Hershah O.**, B.M., M.A. (1945-78) Professor Emeritus, Music

Q

- Quayle, Robert G.**, B.S., M.M. (1964-84) Associate Professor Emeritus, Music

R

- Richards, Larence P.**, A.B., Ph.D. (1965-88) Professor Emeritus, Biology
- Riley, Maurice W.**, A.B., M.A., M.M., Ph.D. (1947-77) Professor Emeritus, Music
- Risk, Norman W.**, B.S., M.A. (1949-74) Professor Emeritus, Industrial Education
- Robbins, Omer E., Jr.**, B.S., M.S., Ph.D. (1961-81) Dean Emeritus, Graduate School; Professor Emeritus, Chemistry
- Robinson, Julius M.**, B.S., M.A., Ed.D. (1947-72) Dean Emeritus, Summer and Evening Sessions; Professor Emeritus, Business Studies
- Rogers, Agnes L.**, B.A., M.A., M.S. (1955-72) Associate Professor Emeritus, Special Education and Occupational Therapy
- Roser, Gertrude**, B.A., A.M. (1926-61) Assistant Professor Emeritus, Special Education; Principal Emeritus, Rackham School of Special Education
- Ross, Frank E.**, B.S., M.A. (1966-84) Professor Emeritus, English Language and Literature
- Roth, Earl A.**, B.S., A.M., Ed.D. (1954-78) Dean Emeritus, College of Business; Professor Emeritus, Marketing
- Rudin, Helen B.**, B.S., M.A. (1947-71) Counselor Emeritus, Counseling Center
- Ruihley, Glenn**, B.A., M.A., M.A., Ph.D. (1968-87) Associate Professor Emeritus, English Language and Literature

S

- Sattler, John W.**, B.A., M.A., Ph.D. (1947-74) Professor Emeritus, Department Head, Speech and Dramatic Arts
- Saupe, Frances H.**, B.S., M.S.L.S. (1952-83) Assistant Professor Emeritus, Learning Resources and Technologies
- Schatz, Lillian**, A.B., Ph.M. (1950-70) Assistant Professor Emeritus, Lincoln School
- Schreiber, O. Ivan**, B.A., M.A. (1950-83) Professor Emeritus, English Language and Literature
- Scott, Jean O.**, B.A., M.A. (1964-80) Assistant Professor Emeritus, Curriculum and Instruction
- Shankwiler, Beverly**, B.S.A., M.A. (1971-89) Associate Professor, Art
- Silver, Robert**, Ph.D. (1966-91) Professor Emeritus, Physics and Astronomy
- Simmons, Harold**, A.B., M.A. (1960-88) Assistant Professor Emeritus, Economics
- Sinclair, Frank L.**, B.S., M.S., M.A. (1955-86) Professor Emeritus, Biology
- Smith, Doris A.**, B.D., M.S.D. (1958-91) Professor Emeritus, Art
- Smith, Marguerite J.**, M.S.W. (1972-91) Associate Professor Emeritus, Social Work
- Snyder, Carl D.**, B.S., A.M., D.S.Sc. (1957-79) Professor Emeritus, Economics
- Solomon, Samuel R.**, A.B., A.M., Ph.D. (1960-79) Professor Emeritus, Political Science
- Spelbring, Lyla**, B.S., M.A., Ph.D. (1974-84) Professor Emeritus, Associated Health Professions
- Sperling, William D.**, B.S., M.A. (1960-83) Assistant Professor Emeritus, Biology
- Spike, Clark G.**, B.S., M.S., Ph.D. (1958-83) Professor Emeritus, Chemistry
- Spitz, Edward A.**, Ph.D. (1970-91) Professor Emeritus, Marketing
- Steig, Peggy A.**, B.S., M.A., Ph.D. (1956-86) Professor Emeritus, Health, Physical Education, Recreation and Dance
- Stephenson, Susanne G.**, M.F.A. (1963-86) Professor Emeritus, Art
- Stevens, Erma M.**, B.S., M.A., Ph.D. (1963-77) Professor Emeritus, Director, International Studies
- Stevens, Florence L.**, B.S., A.M., M.A.L.S. (1948-76) Associate Professor Emeritus, Learning Resources and Technologies
- Street, Scott W.**, B.S., M.A., Ed.D. (1961-83) Professor Emeritus, Teacher Education
- Studt, Earl K.**, B.A., M.S. (1936-76) Assistant Professor Emeritus, Educational Leadership; Director Emeritus, Field Services
- Swalles, Frances H.**, A.B., B.S., M.A. (1950-75) Professor Emeritus, Director, Occupational Therapy

T

- Thomas, Clinton E.**, B.S., M.S. (1959-84) Associate Professor Emeritus, Physics and Astronomy
- Tirtha, Ranjit**, B.A., M.A., Ph.D. (1970-89) Professor Emeritus, Geography and Geology
- Trosko, Fred**, B.S., M.A. (1952-81) Associate Professor Emeritus, Health, Physical Education, Recreation and Dance
- Turner, Daniel S.**, Ph.B., Ph.M., Ph.D. (1965-84) Professor Emeritus, Geography and Geology

V

- Van Riper, Benjamin W.**, Ph.D. (1968-91) Professor Emeritus, Leadership and Counseling

W

- Wallace, Dale C.**, B.A., M.A., Ph.D. (1969-89) Professor Emeritus, Biology
- Waugh, Edgar W.**, A.B., M.A., L.L.D. (Hon) (1927-68) Professor Emeritus, History and Social Sciences
- Wawrzaszek, Frank J.**, B.S., M.Ed. (1956-86) Professor Emeritus, Special Education
- Weber, LaVerne W.**, B.A., M.A., Ph.D. (1961-83) Professor Emeritus, Media Services
- Wells, Phillip G.**, B.S., M.S., Ed.D. (1959-80) Professor Emeritus, Social Foundations
- Westerman, Scott W. Jr.**, Ph.D. (1971-91) Dean Emeritus, College of Education
- Wheatley Ira M.**, B.A., B.D., Ph.D. (1966-92) Professor Emeritus and Department Head, History and Philosophy
- Wilkinson, Helen M.**, B.A., B.L.S. (1969-88) Assistant Professor Emeritus, Center of Educational Resources
- Williams, Robert J.**, Ph.D. (1966-91) Professor Emeritus, Marketing
- Willoughby, Robert J.**, (1956-91) Professor Emeritus, Health, Physical Education, Recreation and Dance
- Wilson, Lucile**, B.S., M.Ed. (1947-68) Assistant Professor Emeritus, Lincoln School
- Wilt, Ellen B.**, A.B., M.A. (1969-85) Associate Professor Emeritus, Art
- Wittke, Reinhard**, A.B., M.A., Ph.D. (1956-91) Professor Emeritus, History and Philosophy
- Wixom, Charlotte K.**, B.S., M.A. (1954-89) Assistant Professor Emeritus, Health, Physical Education, Recreation and Dance
- Woronoff, Israel**, Ph.D. (1990-91) Professor Emeritus, Teacher Education
- Wright, Sara E.**, B.S., M.A. (1945-73) Professor Emeritus, Special Education and Occupational Therapy

Z

- Zambito, Stephen**, A.B., Ph.D. (1955-86) Professor Emeritus, Teacher Education
- Zellers, Parker R.**, B.A., M.A., Ph.D. (1964-92) Professor Emeritus, Communication and Theatre Arts



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COURSE SELECTIONS FOR BASIC STUDIES REQUIREMENTS

Basic Studies

- I-B-1.** ENG 121 English Composition (3)
- I-B-2.** *One of:*
CTA 121 Fundamentals of Speech (2)
CTA 124 Fundamentals of Speech (3)
- I-B-3.** **A course from one of the following options:**
- a. **Upper-level written composition**, from among:
ENG 225 Intermediate English Composition (3)
ENG 324 Principles of Technical Communication (3)
ENG 326 Research Writing (3)
- b. **Upper-level speech communication**, from among:
CTA 224 Public Speaking (3)
CTA 225 Listening Behavior (3)
CTA 226 Non-Verbal Communication (3)
CTA 227 Interpersonal Communication (3)
*CTA 374 Intercultural Communication (3)
- c. **Foreign language composition**, from among:
FRN 121/122 Beginning French (5)
FRN 233/234 Intermediate French (Reading) (3)
GER 121/122 Beginning German (5)
GER 233/234 Intermediate German Reading (3)
GRK 121/122 Beginning Ancient Greek I/II (5)
LAT 121/122 Beginning Latin I/II (5)
JPN 121/122 Beginning Japanese (5)
JPN 211/212 Intermediate Japanese (3)
SPN 121/122 Beginning Spanish (5)
SPN 201/202 Intermediate Spanish (3)
- I-B-4.** *One of:*
MTH 109 Functional Mathematics II (3)
MTH 118 Mathematical Analysis for Social Sciences I (3)
MTH 119 Mathematical Analysis for Social Sciences II (3)
MTH 120 Calculus I (4)
MTH 121 Calculus II (4)
MTH 122 Elementary Linear Algebra (3)
MTH 150 Mathematical Reasoning (3)
MTH 270 Elementary Statistics (3)
MTH 341 College Geometry (3)
SOC 250 Social Statistics I (3)
- I-B-5.** *One of:*
BE 201 Microcomputers for Business Applications (3)
CSC 136 Computers for the Non-Specialist (3)
CSC 137 Introduction to FORTRAN Programming (3)
CSC 138 Computer Science I (3)
CSC 237 Computer Programming and Numeric Methods (3)
HHS 226 Computers for Health and Human Services (3)
IDT 201 Microcomputer Applications in Technology (3)
IT 105 Computer Applications for Industry (3)
ORI 215 End-User Computing (3)
- II-B-1.** **Physical Science**, (at least one course must have a laboratory component (4 hours); no two courses may be from the same department) from among:
- a. **Physical science courses open to all students meeting course requirements**
CHM 105 Survey of Chemistry (5)
CHM 115 Chemistry and Society (3)
CHM 115, 116 Chemistry and Society (4)
CHM 119 Fundamentals of Chemistry (4)
CHM 120 Fundamentals of Organic and Biochemistry (4)
CHM 121, 122 General Chemistry I (4)
PHY 110 Physical Science (4)
PHY 221 Mechanics, Sound, and Heat (4)
PHY 223 Mechanics, Sound, and Heat (5)
- b. **Additional courses 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**
AST 203 Exploration of the Universe (3)
AST 204 Astronomical Investigations (1)
AST 205 Principles of Astronomy (4)
GES 108 Earth Science (4)
GLG 120 The Fossil Record (3)
GLG 160 Physical Geology (4)
- II-B-2.** *One of:*
PSY 101 General Psychology (3)
PSY 102 General Psychology (4)
- II-B-3.** *One of:*
BIO 105 Biology and the Human Species (4)
BOT 221 General Botany (4)
IDT 150 Understanding Technology (3)
IT 240 Science, Technology, and People (3)
PSY 102 General Psychology (4)
ZOO 222 General Zoology (4)
Any other course listed in group II-B-1 above
- III-B-1.** *One of:*
PLS 112 American Government (3)
PLS 113 American Government Honors (3)
- III-B-2.** *One of:*
HIS 101 Western Civilization to 1648 (3)
HIS 102 Western Civilization, 1648 to World War I (3)
HIS 103 Twentieth Century Civilization (3)
HIS 106 Asian and African Civilizations (3)
HIS 123 The United States to 1877 (3)
HIS 124 The United States, 1877 to the Present (3)
- III-B-3.** *One of:*
ANT 135 Introduction to Cultural Anthropology (3)
ECO 201 Principles of Economics I (3)
GEO 107 Introduction to Geography (3)
GEO 110 World Regions (3)
SOC 105 Introductory Sociology (3)
- III-B-4.** **Complete a course from one of the following options:**
- a. **A second course in a two-course history sequence**
HIS 102 (follows 101) Western Civilization, 1648 to World War I (3)
HIS 103 (follows 102) Twentieth Century Civilization (3)
HIS 124 (follows 123) The United States, 1877 to the Present (3)
- b. **A second course in a two-course sequence in anthropology, economics, geography, or sociology**
ANT 140 (follows 135) Introduction to Prehistoric Anthropology (3)
ECO 202 (follows 201) Principles of Economics II (3)
GEO 111 (follows 110) Regions and Resources (3)
SOC 202 (follows 105) Social Problems (3)
- c. **A course in cross-cultural or international studies**
*AAS 101 Introduction to African American Studies (3)
*ANT 205 Minority Women in the United States (3)
*ANT 233 Peoples and Cultures of Mexico (3)
*ANT 236 Peoples and Cultures of Africa (3)
*ANT 237 Indians of North America (3)

COURSE SELECTIONS FOR BASIC STUDIES REQUIREMENTS

- *ANT 245 Culture of Japan (3)
 - *ANT 214 Racial and Cultural Minorities (3)
 - *ANT 355 Anthropology of Women (3)
 - *ECO 321 Minority Workers in the Labor Market (3)
 - *ECO 328 Economics of Women (3)
 - *HIS 305 Indians of the United States (3)
 - *HIS 315 History of Black Americans (3)
 - *HIS 336 History of Women in the United States and Great Britain, 1800 to the Present (3)
 - *HIS 341 The Middle East, 1798 to Present (3)
 - *HIS 342 North Africa, 1798 to Present (3)
 - *HIS 348 Twentieth Century Africa (3)
 - *HIS 356 Latin America: National Period (3)
 - *HIS 375 Modern India (3)
 - *SOC 205 Minority Women in the United States (3)
 - *SOC 214 Racial and Cultural Minorities (3)
 - *SOC 344 Sociology of Sex Roles (3)
 - *WMS 200 Introduction to Women's Studies (3)
 - IV-B-1. Complete a course from one of the following options:**
 - a. English-language literature**
 - LIT 100 The Reading of Literature (3)
 - LIT 101 The Reading of Literature: Fiction (3)
 - LIT 102 The Reading of Literature: Poetry (3)
 - LIT 103 The Reading of Literature: Drama (3)
 - b. Foreign-language literature**
 - FRN 221/222 Intermediate French (Reading) (3)
 - FRN 341/342 Survey of French Literature (3)
 - GER 221/222 Intermediate German Reading (3)
 - GER 341/342 Survey of German Literature (3)
 - SPN 221/222 Intermediate Spanish Reading (3)
 - SPN 341/342 Survey of Spanish Literature (3)
 - SPN 351/352 Survey of Spanish American Literature (3)
 - IV-B-2. Cross-cultural or international studies**
 - *FLA 215 The Culture of the Latino Groups in the United States (3)
 - *LIT 204 Native American Literature (3)
 - *LIT 260 African American Literature (3)
 - IV-B-3. One of:**
 - HIS 100 The Comparative Study of Religion (3)
 - PHI 100 Introduction to Philosophy (3)
 - PHI 110 Philosophies of Life (3)
 - PHI 130 Introduction to Logic (3)
 - PHI 132 Introduction to Critical Reasoning (3)
 - PHI 212 Philosophy of Art (3)
 - PHI 215 Philosophy of Religion (3)
 - PHI 220 Ethics (3)
 - PHI 221 Business Ethics (3)
 - PHI 225 Political Philosophy (3)
 - *PHI 226 Philosophy of Women (3)
 - PSY 225 Psychology of Religion (3)
 - IV-B-4. One of:**
 - CTA 222 Drama and Play in Human Experience (3)
 - CTA 106 Introduction to the Performing Arts (3)
 - CTA 150 Introduction to Theatre (3)
 - *CTA 151 Black Theatre: An Introduction (3)
 - CTA 158 Fundamentals of Acting (3)
 - CTA 145 Introduction to Film Appreciation (3)
 - DAN 106 Introduction to the Performing Arts (3)
 - FA 100 Art Appreciation (3)
 - FA 101 Introduction to Art (3)
 - FA 107 Art History Survey I (3)
 - FA 108 Art History Survey II (3)
 - FA 122 Two-Dimensional Design (3)
 - FA 123 Drawing I (3)
 - FA 165 Graphic Design for Non-Majors (3)
 - FA 166 Ceramics for Non-Majors (3)
 - FA 167 Jewelry for Non-Majors (3)
 - *FA 222 African and African American Art (3)
 - MUS 100 Introduction to Music Theory (3)
 - MUS 106 Introduction to the Performing Arts (3)
 - MUS 107 Music Appreciation (2)
- Physical education, military science, or equivalent (2)**